



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.

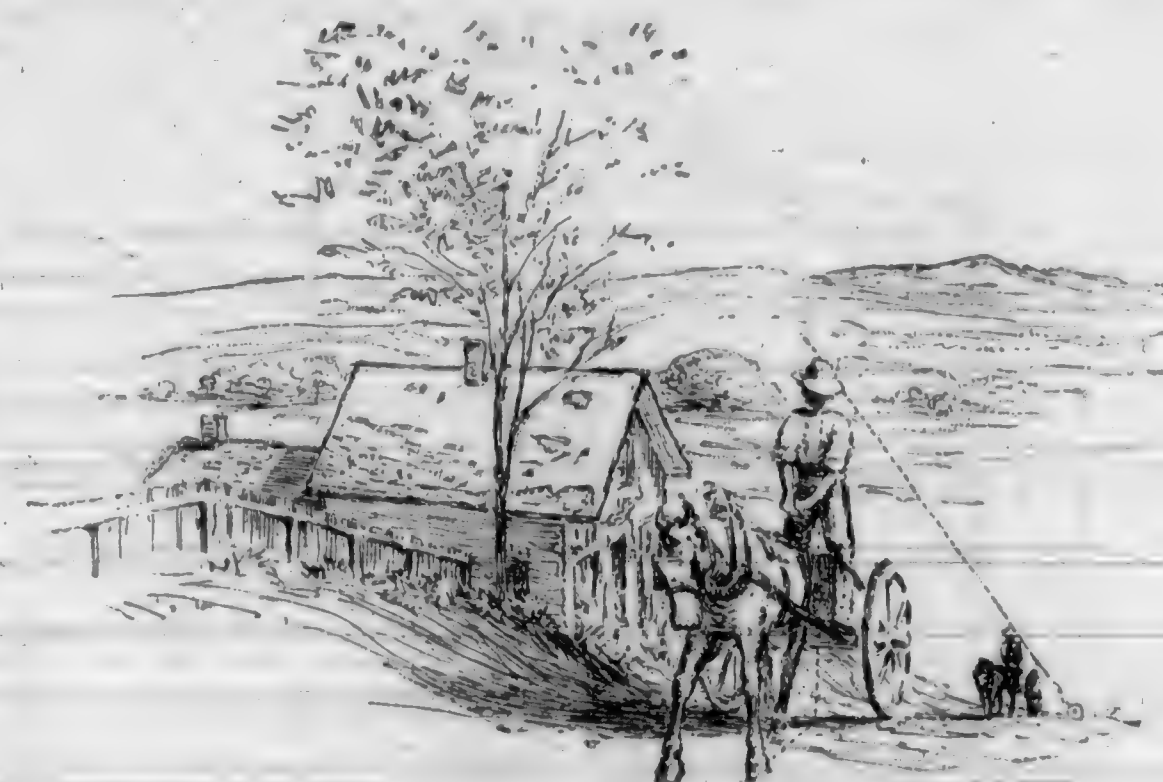
The Essentials of Perspective.

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.



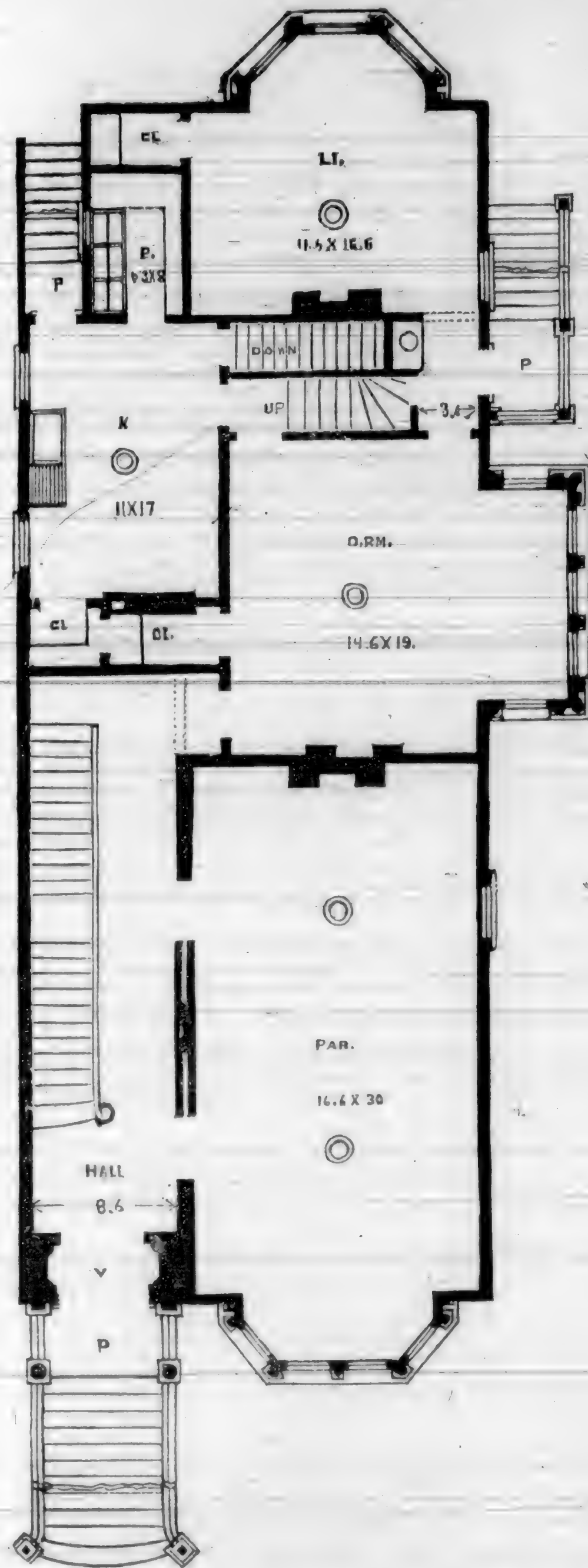
Look at the small engraving at top of page. It is quite a different, and a very much easier, matter to determine how high one driver's head ought to be, as compared with the other's, than it would be to measure the distance between the two. Now the length of the house might be compared with that of another 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.

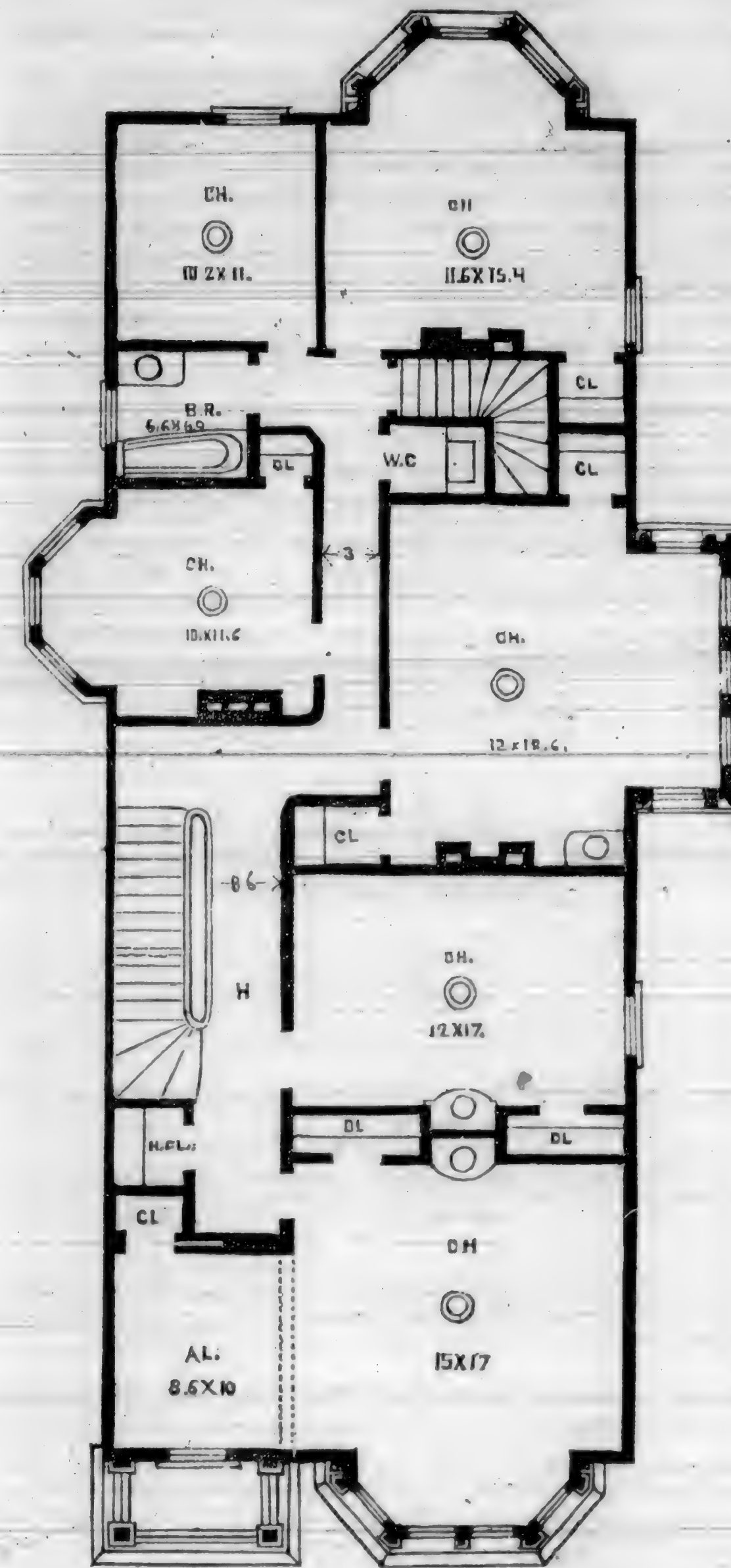
The above is taken from a new work (by publisher's permission) entitled, "The Essentials of Perspective." We have carefully read the book and can confidentially recommend the same to anyone desiring to become proficient in perspective drawing.

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 soaking 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 60x150 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.

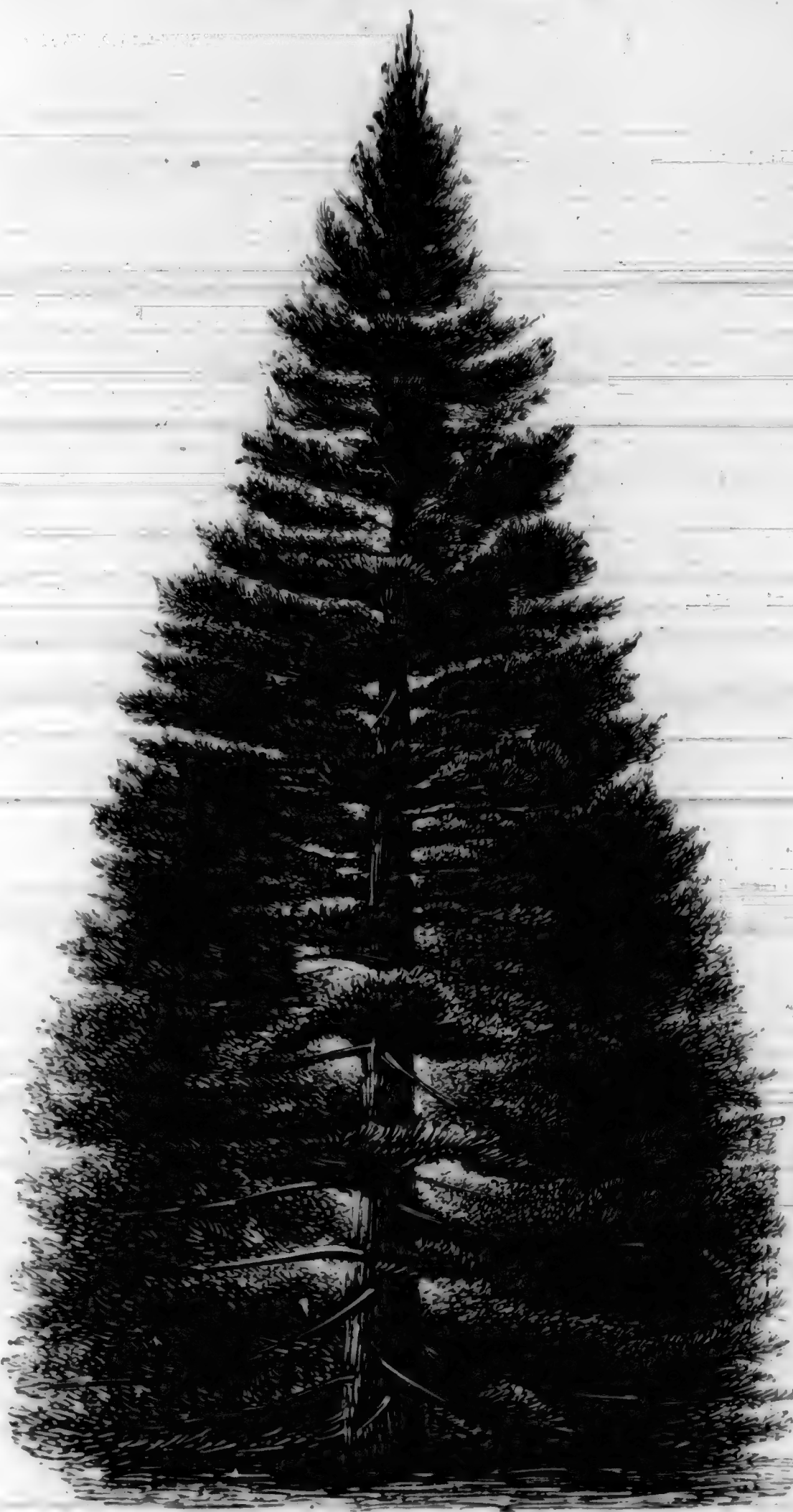
It is a remarkable fact that anything taken from the specifications, after the contract has been signed, you can get no allowance for, but anything added to them greatly increases the cost. Why this should be so, only the contractor can tell you, and he generally will not. Hence, you must plan beforehand 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 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.

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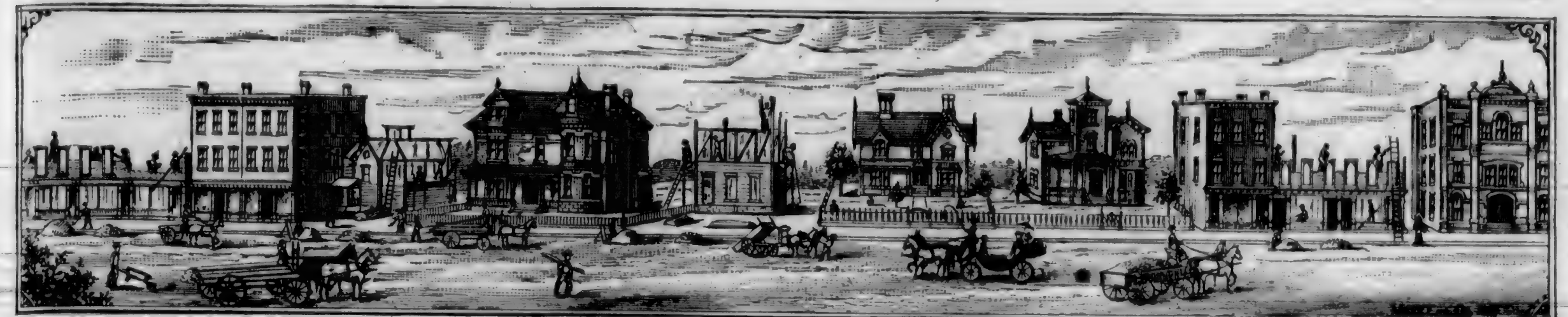
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COUNTRY
BUILDING INTELLIGENCE

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. C. 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 Alen; 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 Dr. Griffin; architect, John C. Pelton, Jr.; 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. Dameron; 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.

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

Two-story frame block. Owner, M. Schwenz; architect, R. H. Dorn & Son. Cost, \$3,500.

Woodward's Country Homes, for \$1.50.
Science of Carpentry, for \$4.00.

Two-story frame residence. Owner, J. M. Riley; architect, 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. Eekstrom; architect, J. W. Forsyth; contractor, T. M. Plottis. 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.

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

Two-story frame residence. Owner, Fredrick Mohr; architect, John Hall; contractor, B. F. French. Cost, \$5,000.

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

Two-story frame residence. Owner, Herm. F. Baer; architect, John C. Pelton, Jr.; contractor, D. Hennessey. Cost, \$8,000.

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

Olympia.

Mr. Chalmers has let the contract for a brick building to Patunde & Co.

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

Pasadena.

Addition to two-story frame residence. Owner, E. C. Webster; architect, J. L. Frank; contractor, Geo. Webster. Cost, \$7,000.

Builders' Construction (three volumes, very fine), for \$14.00.
Plaster, How to Make it, for \$1.00.

The opera house is an assured thing. It will cost \$80,000. Address, Col. A. M. Gray.

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

SAN FRANCISCO BUILDING NEWS.

A
Army, nr. Guerrero. Two one-story frames.
O. and B.—J. M. Comerford.
\$3,000.

B
Buchanan, bet. Union and Filbert. One-story frame.
O.—Louis Zimmerman.
A.—W. Schrof.
C.—I. Merry.
\$1,400.

Balmy, nr. Twenty-fourth. Two-story frame.
O.—Deering.
Day work.
\$1,500.

Bush, No. 2233. Additions.
\$1,600.

Bartlett, bet. Twenty-fourth and Twenty-fifth. Additions.
\$1,200.

Belcher, bet. Ridley and Fourteenth. Two-story and basement frame.
O.—G. W. Moore.
A. and B.—G. W. Wright.
Day work.
\$4,000.

Broadway, cor. Buchanan. Frame building.
O.—A. A. Adler.
A.—Macy & Jordan.
M.—J. Haaf.
C.—J. M. Kelly.
\$17,000.

Bartlett, bet. Twenty-fifth and Twenty-sixth. Additions.
O.—Gibbs.
\$3,500.

Bush, nr. Hyde. Two-story frame.
O.—J. Eliaser.
C.—R. Parker.
\$4,000.

C
Clementina. Alterations.
O.—L. G. Somp.
A.—G. E. Voelkel.
C.—J. H. McKay.
\$6,000.

Pomona.

One-story frame cottage. Owner, J. H. Adams; architects, Costerisan & Merithew; contractor, day work. Cost, \$1,500.

Shavings and Sawdust, for \$1.50.
People's Encyclopedia (three large volumes) for \$20.00.

One and a half story frame cottage. Owner, Dr. F. D. W. Crank; architect, J. W. Forsyth; contractor, Henry Hanson. Cost, \$3,000.

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

Santa Monica.

One-story frame cottage. Owners, Potts & Carlisle; architect, J. W. Forsyth; contractor, T. M. Plotts. Cost, \$1,800.

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

Salinas.

A brick hotel is being built by Jas. Jeffery.

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

San Lorenzo.

Two-story frame. Owner, Elias Llewellyn; architect, Matthews; contractor, Dahl. Cost, \$6,500.

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

Ventura.

Three-story brick hotel. Owners, Rose & Fargo; architects, Curlett, Eisen & Cuthbertson; contractor, David Perry. Cost, \$60,000.

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

Walla Walla.

Architect Babcock has let the contracts for the \$10,000 Ennis Block.

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

Winters.

J. Cradwick and H. Seaman are each building a two-story brick building. They will spend about \$5,000. A. Ritchie was their architect.

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

D. P. Edwards is having built a cozy \$2,000 cottage. T. D. Ball is doing the work.

[Our correspondent claims that the lumber combination will deter many from making improvements, owing to the recent advancement in prices.—Ed.]

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

Clay, bet. Van Ness and Franklin. Additions.
O.—L. Schwabacher.
A.—O. Kenitzer.
C.—Thos. Mannix.
\$1,300.

Castro, cor. Nineteenth. Two-story frame.
O.—E. Ring.
A.—T. J. Welsh.
C.—C. M. Arnold.
\$5,500.

Clay, nr. Franklin. Alterations.
O.—W. M. Hoag.
A.—J. J. Newsom.
C.—Martin & Maquiro.
\$3,200.

Chattanooga. Three one-story frames.
O. and B.—J. M. Comerford.
\$5,000.

Capp, nr. Twenty-fifth. One-story frame.
O.—C. O. Smith.
\$2,200.

Capp, cor. Twenty-second. Alterations.
O.—D. B. Murphy.
A.—S. and J. Newsom.
C.—Knowles & Wetmore.
\$3,500.

California, cor. Jones. Carpenter work, etc.
O.—Chas. Crocker.
A.—Curlett & Culbertson.
C.—Mahoney Bros.
\$50,000.

California, bet. Scott and Devisadero. Two-story frame.
O.—H. M. Levy.
A.—P. R. Schmidt.
C.—P. Crichton.
\$8,000.

California, cor. Jones. Two-story and attic frame.
O.—Mrs. F. F. Moulton.
A.—Clinton Day.
C.—R. P. Herbert.
\$15,000.

California, cor. Stockton. Church building.
O.—Congregation Shari, Zedek Israel.
A.—Salfeld & Kohlberg.
C.—L. Weisman.
\$9,000.

D
Devisadero, bet. Haight and Waller. Two one-story frames.
O.—Marchand.
C.—Hatfield.
\$8,000.

Dolores, bet. Twenty-second and Twenty-third. Alterations.
O.—S. Hueller.
C.—F. Kern.
\$1,600.

E
Eighteenth, cor. Jessie. Two two-story frames.
O.—Anna Dunn.
A.—H. Wharf.
C.—O. E. White.
\$6,500.

F
Folsom, cor. Twenty-fourth. Two-story frame.
O.—Mr. Kern.
Day work.
\$3,500.

Folsom, cor. Stuart. Two-story frame.
O.—J. Schulte.
A.—P. R. Schmidt.
C.—Kent.
\$12,000.

Fulton, nr. Broderick. Two-story frame.
O.—A. Dorrity.
C.—G. Houston.
\$2,600.

Fourth, cor. Louisa. Alterations.
O.—J. H. Richard.
A.—W. Mooser.
C.—H. Munster.
\$1,300.

Fillmore, bet. Tyler and McAllister. Two-story frame.
O.—E. O. Turner.
A.—M. Balczynski.
C.—R. O. Chandler.
\$5,500.

First, cor. Tehama. Additions.
O.—Rix & Firth.
C.—J. R. Wilcox.
\$7,000.

C
Geary, nr. Mason. Three-story frame.
O.—H. Mathews.
A.—H. T. Rector.
C.—C. M. Mason.
\$13,000.

Guerrero, nr. Twenty-sixth. One-story frame.
O. and B.—J. M. Comerford.
\$1,500.

Guerrero, nr. Army. Three two-story frames.
O. and B.—J. M. Comerford.
\$9,000.

Golden Gate Park. Building for children—play-house.
A.—Percy & Hamilton.
C.—M. J. Kelly.
\$40,000.

Golden Gate Avenue, bet. Jones and Leavenworth. Additions.
O.—Rev. G. Becher.
A.—Rev. Bro. Adrian.
C.—J. Klein.
\$11,000.

Gough, cor. Pine. Additions.
\$800.

Golden Gate Avenue, nr. Octavia. One-story frame.
\$1,000.

H
Haight, nr. Devisadero. Two-story frame.
O.—McCarthy.
A.—Welsh.
C.—Sullivan.
\$3,000.

[JULY 15, 1887.]

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

Haight, bet. Webster and Fillmore. Two-story frame.
O.—L. Friedlander.
A.—P. S. Barber.
C.—H. Inwood.
\$3,800.

Hampshire, cor. Twenty-fifth. Alterations.
O.—Mrs. McKenny.
A.—J. J. Newsom and J. W. Wessinger.
\$2,000.

Haight, nr. Broderick. Two-story frame.
O.—J. Hughes.
A.—J. J. Clark.
C.—H. Keenan.
\$4,200.

J
Jackson, cor. Devisadero. Two-story frame.
O.—Hallafy.
A.—Swain.
C.—S. M. Hills.
\$7,000.

L
Lyon, nr. Sacramento. Two-story frame.
O.—A. Balaner.
C.—Van Wei.
\$5,000.

Lyon, cor. Sacramento. Two one-story frames.
O.—D. R. Collins.
\$4,000.

Larkin, nr. McAllister. Alterations.
O.—H. Plagman.
A.—John & Zimmerman.
C.—B. Dreyer.
\$3,000.

Liberty, nr. Valencia. Two-story frame.
O.—B. Schloss.
A.—A. J. Barnett.
C.—D. F. McGraw.
\$4,500.

Larkin, nr. Turk. Additions.
\$1,000.

M
Mission, bet. Twenty-second and Twenty-third. One-story frame.
\$2,500.

Mission, nr. Nineteenth. Three-story frame.
O.—A. McElroy.
A.—T. J. Welsh.
C.—R. Doyle.
\$7,500.

Market, cor. Fell. Four-story and attic.
O.—M. C. De Laveaga.
A.—P. R. Schmidt.
C.—Mahoney Bros.
\$130,000.

Mission, bet. Fourth and Fifth. Two-story brick and basement.
O.—E. McGary.
A.—J. J. Barnett.
C.—O. A. White.
Brick mason—Richardson.
\$45,000.

Masonic Cemetery. Brick vaults.
O.—B. A. Becker.
A.—W. Mooser.
C.—W. Matthews.
\$7,500.

O
Oak, bet. Octavia and Laguna. Additions.
O.—J. Carbery.
\$3,000.

Oak, nr. Scott. Two-story frame.
O. and B.—W. Plums.
\$4,500.

P
Powell, nr. Francisco. Three-story frame.
O.—J. J. Thueren.
A.—W. Schrof.
C.—Knopf.
\$4,400.

Polk, cor. Sutter. Alterations.
A.—P. R. Schmidt.
C.—Wilson & Son.
\$3,000.

Pine, cor. Franklin. Alterations.
O.—H. Simon.
A.—Pissis & Moore.
C.—Langstaff.
\$5,000.

Post, nr. Baker. Two-story frame.
O.—Sheehan.
\$1,800.

Page, bet. Scott and Devisadero. Eight two-story frames.
O. and B.—W. Hinckle.
\$35,000.

Page, bet. Octavia and Laguna. Two-story frame.
O.—Mrs. McBernott.
\$4,000.

Page, nr. Webster. Two-story frame.
O.—Black.
A.—A. J. Barnell.
C.—Commury.
\$5,500.

Post, cor. Franklin. Two-story frame.
O.—H. M. Levy.
A.—P. R. Schmidt.
C.—P. Crichton.
\$7,800.

Pine, bet. Van Ness and Franklin. Two-story frame.
O.—J. Deutsch.
A.—W. H. Wharf.
C.—H. E. Hatch.
\$4,500.

Pine, bet. Van Ness and Franklin. Two-story frame.
O.—A. Oberdena.
A.—W. H. Wharf.
C.—H. E. Hatch.
\$4,500.

S
Stevenson, nr. Seventh. Repairs.
\$1,000.

Stuart, nr. Folsom. Two-story frame.
O.—Scott.
C.—Kincaid & Thompson.
\$2,500.

Stuart, nr. Folsom. Two-story frame.
O.—Rider.
C.—J. P. Smith.
\$3,000.

Stuart, nr. Folsom. Two-story frame.
O.—Scott & McCord.
C.—J. P. Smith.
\$3,000.

Steiner, nr. Pine. Additions.
O.—Mrs. Kafka.
\$1,500.

Sutter, nr. Broderick. Two-story frame.
O.—Stowell.
A.—W. P. Moore.
C.—D. F. McGraw.
\$6,500.

T
Twenty-sixth, nr. Dolores. One-story frame.
O. and B.—J. M. Comerford.
\$1,500.

Twenty-fifth, cor. Harrison. One-story frame.
O.—P. Gleeson.
A.—T. J. Welsh.
C.—R. Sinott.
\$2,000.

Twenty-second, cor. Treat Avenue. One-story frame.
O.—J. H. Handley.
C.—J. Dyer.
\$2,500.

Turk, cor. Laguna. Two-story frame.
O.—D. Silverstein.
A.—H. D. Mitchell.
C.—G. H. Walker.
\$5,000.

V
Van Ness, cor. O'Farrell. One-story frame.
O.—St. Mary's Cathedral.
M.—Butler & McGowan.
C.—Mahoney Bros.
\$130,000.

W
Willow Avenue, nr. Mission. Two two-story frames.
O.—A. Deerie.
A.—W. Schrof.
\$10,000.

Washington, nr. Scott. Two-story frame.
O.—M. Poltzen.
C.—W. Plums.
\$3,000.

Washington, nr. Scott. One-story frame.
O.—W. Plums.
\$3,000.

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.

ESSENTIALS OF PERSPECTIVE. By L. W. Miller. Price, \$1.00. 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.

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.

Union Artificial Stone Paving Co.

THEO. VAN TASSELL is the manager of this newly-incorporated company. He is fully prepared to furnish all kinds of cement and artificial stone work. See new ad.

Labor Becoming Tyrannic.

PERSONS who watch the movements of various labor organizations of the present day cannot help seeing the evident tendency of those organizations to become monopolistic, to refuse freedom to others, to tyrannize over laborers in various disagreeable ways, and to attempt to acquire control of things not properly within their jurisdiction. For instance, not long ago there was a convention of glass-blowers at Atlantic City, New Jersey, and during the session a resolution was adopted abolishing the apprentice system in glass-factories. The matter has, perhaps, small importance, but it is significant of the tendency of the labor movement, and it has an interest beyond the narrow boundaries of the glass industry, because similar action has already been taken by other trades. The point involved is this: Men who are earning their bread at skilled labor formally declare that no American boy shall be allowed to acquire the skill required to perform that labor. They turn their backs on the five or six million young men and boys in this country and deny them their right to become expert mechanics. The purpose, of course, is to make skilled labor scarce, and so to keep up wages. The result is to exclude the young from the chance to earn good wages, to force many of them into idleness, and to tempt others into crime. Against such a system the people of the country have a right to make vigorous protest. It is a matter that affects society at large. It touches directly every man who has children, and indirectly every human being from the lowest to the highest. The right of a boy to learn any honest trade that he desires to learn is positively indisputable; and to this is joined the clear right of every employer to take a boy into his shop to help him to acquire knowledge and skill. The denial of these rights by a trade union is tyranny, and it ought to be resisted to the last extremity. We assert that the solitary chance of the success of the labor movement, so called, lies in its obedience to the requirements of justice. When it sets justice at defiance, it is doomed. The people of this country are not going to permit any body of men to trample the most ordinary human rights under their feet.

On the same subject a Chicago journal says: "A father might to-day tramp all over Chicago with a son who wanted to learn an honest trade, so as to become a useful citizen, and fail, unless he took him to the Manual Training School and paid tuition for him. Hundreds of boys are now thus taught handicraft at the expense of fathers who can afford to pay for it. But let a poor man's son try it, and he will be met at the door of the factory or shop by a walking delegate of the Knights of Labor and turned away. If that does not do, his young face will be bruised by brutal fists, and so will the faces of those who stand by him. If anyone supposes that there is any limit to this kind of opposition, any point at which the would-be monopolists of labor would draw the line of limitation upon themselves, he does not understand depraved human nature. If individual liberty to acquire skill and earn bread and control earnings is not protected by law and by resolute public sentiment behind that law, then a reign of absolute lawlessness is visible not very distant in the future. The disbarred classes on one hand, and the employing classes on the other, will join hands and fight for their rights. The violence will not very long be all upon one side, and the violence which has human liberty and rights back of it will win. We are always glad to see a tyrannical and heartless employer forced to do right by 'organized labor,' but when organized labor determines to rob the American boy of his birthright, then it is evoking moral and material forces against itself which will not fail to beat it to pieces.—*Lumber World*."

Household Conveniences.

NOTHING astonishes an American abroad more than the backwardness of foreigners in adopting the little household conveniences which with us are matters almost of necessity. On the Continent, where people seem to live generally in the streets, and to have well-founded objections to staying in their houses any more than they can help, it is not so surprising that great pains should not be taken to render domestic life easy and convenient; but in England, the country, above all others, of beautiful and happy homes, one is often distressed to see the labor habitually expended upon work which in this country would be done almost automatically by some sort of ingenious appliance. We remember once going over the Belgravian mansion of Sir George Grey, ex-viceroy of India, and finding the kitchen in this aristocratic abode furnished with an enormous open fire-place, in which swung a crane, with pot-hooks and hangers, the whole, with the addition of a brick oven, forming the only cooking apparatus of

the establishment; and every traveler can give plenty of illustrations of the discomforts of English houses. Even where American devices are transported across the water, they are received with suspicion, and are regarded as eccentric novelties for years after they have come into universal use with us. The last of these inventions to be introduced to the British public seems to be the well-known electric gas-lighting apparatus. Few houses, even of very modest pretensions, would now be built in or near any of our Northern cities without this indispensable feature; but it appears to gain ground very slowly in England. The *Builder* says, rather doubtfully, after describing the system by which the gas can either be turned on, lighted, or turned off by pushing a button, with the automatic burner, or turned on by hand and lighted by a pull at a pendant chain, that the apparatus appears to it "rather a pleasing toy than a serious convenience," going on to explain that "it is hardly worth while to have a special electric mechanism merely to light the gas." This sounds very funny to people who never think of using matches or tapers to light the gas in their houses, and who would not on any account go back to that old-fashioned and dangerous practice. Even if the *Builder* thinks it of no advantage to be able to light the gas in the room by pulling a chain, or touching a button, instead of feeling in the dark on the mantel for the match-box, at the peril of upsetting the bric-a-brac behind which it lies concealed, and then succeeding in reaching the key, and turning on the gas just in time to have the red-hot remnant of the match drop into one's sleeve, while the gas, unlighted, pours into the room, it must, we should imagine, acknowledge that there is practical utility in an apparatus by which the gas in any room can be lighted from any other. In thousands of American houses the entrance-halls and vestibules are now lighted by the touch of a button in the rooms above, so that a ring at night, or an unusual noise below stairs, is immediately answered by lighting up the rooms, as a preliminary to a descent to see what is the matter; while in hundreds more the lanterns in the carriage, porch, or along the driveway are lighted and extinguished from the house in the same manner. With us the use of this simple and effective system is rapidly extending. We know a house where not only the gas-lights, but the fires are kindled and extinguished by the touch of a button; and the best of all systems of burglar alarm is that under which the house-breaker, on crawling through the basement windows, instead of frightening the family out of their wits by sounding a bell and displaying a sign in the bedrooms to the effect that ferocious criminals have arrived in the kitchen, sets in motion an apparatus which begins by suddenly illuminating with great brilliancy the place in which he had intended to do his deeds of darkness, at the same time deafening him by ringing an immense gong close to his head until the attention of the police is attracted to the place; the whole of the little drama going on without interrupting the slumbers of the unconscious master of the house in his room above.—*American Architect and Building News*.

LATH OR LATHS?—Lath or laths is the question. Most of the newspapers print it in the plural. At the East it is commonly called laths. In the West one scarcely ever hears a lumberman talking about laths; simple lath in a collective sense is good enough for the wild and untutored Western merchant. Webster's dictionary says that laths is right, and that is sufficient for the Eastern lumbermen who have graduated from college or high school to the lumber yard. Webster has doubtless decided that if it is right to say boards, pickets, and shingles, it is the proper thing to say laths. By the same rule corn should be corns, because beans are beans, and trout should be trouts. Words are as usage makes them. The *Lumberman* says lath, thus taking the liberty to disagree from the dictionary, choosing rather to conform to common sense and side with the great mass of men who handle the stuff.

"Oak is the grand, everlasting wood of the ages," quotes a lumber journal.

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.

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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., AUGUST 15, 1887.

Improving the System.

THE building contracting business in San Francisco, and more or less throughout the State, within the past twenty-five years or more, in all the mechanical branches, has been conducted in a manner anything but satisfactory as a whole to architects, material men, or the responsible and better class of contractors. The true history of the business during the past quarter of a century presents a deplorable state of facts. Incompetent and irresponsible men, and withal men enjoying no fair degree of honest intent and purpose, have from time to time crowded in and operated as contractors, monopolizing a large proportion of the work offering, taking it at taking prices, with but little concern as to involvements, consequences, or results, thereby rendering it difficult and almost impossible for honest contractors to compete, and in thousands of cases ending in compromise, and, in short, *pro rata* settlements.

The effect of this has been sadly disastrous all around. The really competent and good men have been prevented from realizing what was and is their due—engagements at living prices, and fair compensation for the skill and service required of them in conducting and executing honest work. Material men have suffered severely by short payments, millions of dollars within the time named being lost through trusting men who had all to gain and nothing to lose by contracts undertaken at ruinous prices, and but for the fact that building materials, especially lumber, the chief commodity used in building construction in California, has always, except at special times when breaks in combinations and fierce competition for a period has "knocked the bottom out" of regular trade, paid, as it is now doing, large margins of profits, many of the dealers would have been forced to succumb under the severe losses which have at times followed in quick succession.

And while architects have not been involved in the direct

losses growing out of this state of things, they have been severely contingent losers in time, annoyances, and vexations, as every engagement made with inferior contractors involves trouble and expense to the man of plans, who is expected to combat and counteract the short-comings of those under his supervision, and in the event of failure of any kind he is expected to be a Solomon, meeting the antagonizing views of everyone involved in the transaction, and satisfying the demands of all contending parties, or else meet the denunciations of those who may feel themselves aggrieved. While those who suffer more financially are greater losers in dollars and cents, the architect is by far the worst punished party concerned, in the misrepresentations and vexatious annoyances that attach to every case of failure by a contractor.

All this suggests, Who is most to blame? As a rule, those who lose place the *onus* upon the architect, who has, unfortunately to himself, yet innocently, allowed the contract to fall into improper hands. But a single second thought must bring the conviction that no sane or sensible architect would willingly permit himself to be the victim of such circumstances as generally follow engagements with men of known disrepute and dishonor. And when contractors present the credentials of ample credit, and their material men as bondsmen, it is not an easy matter for the architect to convince the owner that he should pass the lowest man, and pay from ten to twenty-five per cent more to the second or third higher bidder. Consequently, architects reply, and the majority of the better classes of contractors chime in, No; the fault lies in the fact that incompetent men are granted credit without regard to their financial or moral responsibility. The doors of trade are too easy upon their hinges, and the custom has been next to universal that any man, no matter what his actual pecuniary or moral status might be, could find all required credit and bonds necessary to enable him to claim his rights as a contractor, and undertake the work of construction, whether large or small.

But with the many-sided views existing in the issue, it is not likely that a unanimous agreement can possibly be reached as to who is most chargeable, nor is it now necessary, if all interested contractors, material men, and architects, will combine upon a plan that will serve every best interest, and substitute for the bad that has been, a condition of things that will be just to all concerned, and best alike for contractors, material men, architects, and owners, leaving the possibilities of failures and *pro rata* in the future to extreme and incidental cases, averaging, at most, fairly within the limits of experience in the commercial world, and, we hope, far less.

But some will say, Have not owners profited by the state of things referred to? Yes; they have. But in reply, Have they not done just as all other men have done in other connections, availed themselves of the benefits appearing from this condition of affairs? It is a universal law among mankind to make the best bargain possible, and he who would refuse acceptance of a proposition purporting to lighten the drafts upon his exchequer, would not be estimated in the business world as sagacious and prudent, the results promised being the same. Hence to remedy the evils that have been in the building line, material men, contractors, and architects must advise the method, and by faithful, honest understanding carry into practice such rules and systems as will insure integrity and justice to all parties.

THE REMEDY IN HAND.

A movement is on foot among the material men, and others concerned in the risks and responsibilities of the building trades, which we hope will be worked to a successful issue, the object of which is to close the doors that have been open too wide, and bar them against the ingress of impecunious interlopers, by making reputation, competency, and responsibility a necessary passport to credit. Let this be done and strictly adhered to, and it will not be long ere the skunk-weed class will disappear.

Building Summary for August.

THE past month has been a brisk one as far as building improvements are concerned. The number of improvements now under way is much greater than the same period of last year. Recapitulation for the month is as follows:—

Constitution of the Builders' Association of California.

ARTICLE I.

SECTION 1. This Association shall be known as THE BUILDERS' ASSOCIATION OF CALIFORNIA.

SEC. 2. Its object shall be to encourage a more intimate acquaintance and cultivate a feeling of friendship among its members; to make them better acquainted with the wants and necessities of the building business; to arbitrate and settle disputes, if any arise among the members, and generally to advance and protect their business interests as contracting builders.

ARTICLE II.

SECTION 1. Any carpenter residing and doing business as a general contractor and builder in the State of California, and who has announced his willingness to join this Association prior to the adoption of this Constitution, shall be eligible to membership herein without vote, upon the payment of the fee, as provided in this Constitution and the By-Laws.

SEC. 2. Any carpenter residing and doing business as aforesaid may become a member, upon being proposed by two members and receiving the affirmative vote of two-thirds of the members present at a regular meeting, and paying the fee as prescribed in the By-Laws.

ARTICLE III.

SECTION 1. The regular meetings shall be held at least once a month upon the day and hour fixed in the By-Laws and in the City of San Francisco.

SEC. 2. Special meetings may be called by the President (and in his absence by the Vice-President) at his discretion, and shall be called by him, at the written request of the Executive Committee or of five other members.

SEC. 3. The President shall state the object of the special meeting in the call thereof, and no business shall be transacted, except such as appertains to the business specified.

SEC. 4. Adjourned meetings may be held at any time by authority of a majority vote of a quorum at a regular meeting, notice being given of such meeting as provided in the By-Laws, stating the business for which the meeting is to be held, and no other business shall be transacted thereat, except such as is stated in the notice.

ARTICLE IV.

SECTION 1. Nine members shall constitute a quorum for the transaction of business at all meetings.

ARTICLE V.

SECTION 1. Each individual member shall pay an admission fee of not less than twenty-five dollars, which fee shall accompany the application for membership.

SEC. 2. The dues to be paid by each member shall not be less than one dollar and fifty cents per month, payable in advance.

ARTICLE VI.

SECTION 1. The elective officers shall be a President, a Vice-President, a Recording Secretary, a Financial Secretary, a Treasurer, and an Executive Committee of seven members.

SEC. 2. The appointed officers shall be such as are prescribed in the By-Laws.

SEC. 3. Four members of the Executive Committee shall at all times be residents of the City and County of San Francisco. Four members of said committee shall constitute a quorum thereof.

SEC. 4. The President shall preside at the meetings, preserve order, see that the rules and laws are enforced, sign all drafts for money voted by the Association, appoint all committees unless otherwise ordered or provided for, and have the care and custody of all bonds which may be required of the other officers.

He shall see that all other officers and committees perform their respective duties, and shall report any neglect or delinquency forthwith to the Association. He shall not speak upon any question except one of order without calling the Vice-President, or in his absence some other member, to the chair.

He shall vote only upon applications for membership or upon questions requiring a two-thirds vote, except to give the casting vote when the members are equally divided. He shall at the commencement of his term appoint a Finance Committee consisting of three members not having charge of the Association Funds, and perform such other and further duties as may be imposed by the By-Laws.

SEC. 5. The Vice-President shall, during the absence or inability of the President to act, perform all the duties of that officer. He shall preside when called upon by the President, and perform such other duties as may be imposed upon him by the laws or rules.

SEC. 6. The Recording Secretary shall keep correct minutes of the proceedings of the Association, file and preserve all papers and documents belonging thereto, conduct the correspondence, draw and attest all drafts for monies voted and perform all other duties usually devolving upon a secretary, or which may hereafter be imposed by law or rule.

SEC. 7. The Financial Secretary shall keep correctly the accounts between the Association and its members and others, in proper books to be provided for that purpose. He shall collect and receipt for all money due from any source, and pay the same to the Treasurer at each meeting, when practicable, but at least once each month, taking his receipt for the same. He shall report at the first stated meeting in each month the amount of all monies received during the preceding month, and the source from which received, together with the amounts paid out and for what paid. His books and accounts shall be kept in such a manner that the financial condition of the Association and the state of each account can be determined at any time. He shall render the Finance Committee all the facility required in the examination of his accounts, and upon retiring from office, deliver to his successor, or other person designated by the Association, all money, books, papers, or other property belonging thereto.

SEC. 8. The Treasurer shall receive and receipt for all money received by him as such and deposit the same, or all amounts in his hands exceeding fifty dollars, in some bank designated by the Association or the Executive Committee, in his name as Treasurer of the Builders' Association, with the distinct understanding that the said account shall be transferred to his successor in office, upon notice from the Association, through the President and Secretary thereof, stating the person who has been elected to succeed him.

The money, when so deposited, shall be paid out by said bank, only upon drafts or checks signed by the President, attested by the Secretary, and countersigned by the Treasurer.

The Treasurer shall keep a correct account of all monies received, deposited and paid out, and render a correct report thereof, at the first stated meeting in each month.

Upon retiring from office he shall deliver to his successor or such person as the Association shall designate, all money, books, papers, and property in his hands belonging thereto.

SEC. 9. The Executive Committee shall have and exercise a general supervisory care over the affairs of the Association. They shall designate the bank in which the funds of the Association shall be deposited, unless the same shall have been done by a vote of the Association, and require the officers to change the same, when in their judgment the safety thereof requires it. They shall hear, examine into, and, if possible, settle all disputes between members, when they can do so to the satisfaction of all parties concerned; otherwise report the facts, testimony, and their conclusions thereon, to the Association for their action.

All amendments to the Constitution and By-Laws or Rules, and all agreements to be entered into by and between the members affecting the building business, shall be referred to them to examine and report thereon before action.

ARTICLE VII.

SECTION 1. The regular elections for officers of the Association shall be held semi-annually at the second meetings in January and July in each year, and they shall be installed at the first regular meetings in February and August following their election.

SEC. 2. The elections shall be by ballot and the majority of all the votes cast shall be necessary to elect, except where there is only one nominee for an office, when the election may be by acclamation.

SEC. 3. The time and manner of making nominations and matters pertaining to the qualifications, etc., of officers may be provided for by the By-Laws.

ARTICLE VIII.

SECTION 1. The money of the Association shall be kept in one General Fund.

SEC. 2. Rent, salaries, and other necessary current expenses may be paid by a majority vote of a quorum at any regular meeting. But no money shall be otherwise appropriated or paid out in amounts exceeding twenty-five dollars for any one purpose, except by resolution signed and introduced by a member, which shall be laid over at least one week and then passed by a two-thirds vote of the members present.

ARTICLE IX.

SECTION 1. Any amendments to this Constitution must be proposed by a member at a regular meeting, each section proposed to be amended written out in full as it will read when amended. Such proposition shall then be laid over for two weeks, and when acted on must receive the affirmative vote

of two-thirds of the members present, except as provided in section 2 of this Article.

SEC. 2. By-Laws not in conflict herewith may be adopted from time to time as the Association shall determine, and may be repealed or amended as provided in said By-Laws. But no By-Laws or Rules shall be passed abridging the right of any member to carry on or transact his business in such manner as he shall deem just and proper, unless such law or rule shall have received the affirmative consent of at least three-fourths of all the members of this Association. Due notice of the passage of any such By-Law or Rule shall be given to each member in writing at least two weeks before the same shall take effect and be in force.

This Section shall not be repealed except by a three-fourths vote of all the members of the Association.

BY-LAWS.

SECTION 1. The regular business meetings of this Association shall be held on the second and fourth Wednesdays of each month in the City and County of San Francisco, at 8 o'clock P.M.

SEC. 2. Notice of all special or adjourned meetings shall be given either by postal card or by advertisement in two or more daily papers of the City and County of San Francisco. The notice must state the nature of the business to be transacted thereat.

SEC. 3. The fee for admission to membership shall be twenty-five dollars. The dues shall be one dollar and fifty cents per month, payable in advance.

SEC. 4. Any member who shall be in arrears for three months dues shall be notified by the Financial Secretary, and if he fails to pay the same, or such part thereof as shall bring him less than two months in arrears, during the space of two months thereafter, he shall be suspended from the rights and privileges of membership, and so notified.

SEC. 5. Any member guilty of a violation of his agreement entered into and signed by him with the other members, or of a violation of the Constitution, By-Laws or Rules of the Association, first having been duly tried by the Executive Committee (or by a Special Committee duly appointed in case the Executive Committee or any member thereof are disqualified from acting), and duly convicted by their report and a vote of the Association, shall be fined, suspended or expelled, as shall be adjudged by a two-thirds vote of the members present.

SEC. 6. Any member desiring to bring charges against another shall reduce the same to writing, specifying clearly and explicitly the nature of the same, with time, place and circumstances connected therewith and signed by him and delivered to the Association or Executive Committee.

SEC. 7. A copy of the charges shall be immediately served upon the member against whom they are made by the Recording Secretary or some person selected by him or by the Executive Committee, and at least five days' notice given him of the time and place of trial.

SEC. 8. The testimony shall be taken in writing by the committee and signed by the witness. The committee may adjourn from time to time and a quorum may proceed at any meeting.

SEC. 9. When the testimony is all in on both sides they shall consider the same and see if they can settle the matter to the satisfaction of all parties. If they fail to do this they shall report the testimony, together with their conclusions thereon, to the Association for their action and decision.

SEC. 10. The Association shall then proceed to take action thereon and may have the testimony read if desired by either party. During the reading and discussion of the testimony both parties shall be entitled to be present and to be heard. But when the Association proceeds to act thereon all parties interested shall be excluded from the room.

SEC. 11. If the Association finds the accused guilty, it shall forthwith proceed to fix the penalty, first voting upon expulsion. If two-thirds of the members vote in favor of that penalty, the member shall stand expelled. If not, the next vote shall be upon suspension. If two-thirds of the members vote in favor of suspension that shall be the penalty, and the Association shall proceed to fix the time or duration thereof by vote of that penalty, which time shall not exceed six months. If two-thirds of the members do not vote in favor of suspension, the penalty shall be a fine, and the Association shall then proceed to fix the amount of the fine (unless the same shall have been previously fixed in the By-Laws for like offenses), which may be done by a majority vote, but shall in no case exceed the sum of two hundred dollars.

SEC. 12. The President, in his discretion or when directed by the Association, shall appoint a Sergeant-at-Arms to serve during his pleasure, who shall have charge of the room, furniture, etc. He shall serve papers when required by the Association or by the Executive Committee, assist in preserving order at the meetings, and perform such other duties as may be required of him by the Association or the presiding officer thereof.

SEC. 13. The Finance Committee shall examine and audit all demands against the Association; examine and report upon the books of the officers at the end of each term, and at such other times as the Association may require.

SEC. 14. The President may appoint a special committee of investigation at any time he may deem the same necessary or when required by vote of the Association; said committee shall consist of one or more members who shall examine and report upon the matter referred to them.

SEC. 15. The Association may at any time require its officers who have the charge or collection of its funds to give bonds for the faithful discharge of their duties, which bonds (when required) shall be made payable to the President, in trust for and for the benefit of the Association.

SEC. 16. The Association may employ a clerk to take charge of its rooms, who may also act as Secretary, or it may assign either of its Secretaries to that duty. It may pay any of its officers or employees for their services such sums as it may from time to time determine by By-Law or Rule.

SEC. 17. Nominations for officers shall be made at the first regular meetings in January and July of each year, but nominations may be made on the night of election, if the nominees all decline or if ordered by a two-thirds vote of the members present.

SEC. 18. These By-Laws may be repealed or amended in any manner not in conflict with Section 2 of Article VIII of the Constitution, by designating the Section proposed to be repealed or by writing out in full the Section proposed to be amended as it will read when amended, such proposition being signed by the member offering the same, the proposition being first laid over for one meeting and adopted by a two-thirds vote of the members present.

Carved Signs.

CARVING is practically an art as well as a craft, not merely in interior woodwork but in sign work. Carving well executed in these gives an enriching effect. Soft wood is generally selected for ease of working, this being stained, painted, or gilded. Many fanciful contours are produced, and much taste is frequently displayed in these productions which have laid hold of popular taste. Good carving in the undulations it exhibits will afford not only contrast of form to the general surface but an attractive play of light and shade. The forms at the same time should be well defined, for a mere medley of protuberances and depressions is confusing and unattractive. Right proportion and disposition of parts will impart an aspect of completeness to the design that will not fail to please.

As regards the technique of carving it may be classified in four divisions: 1. The ornamentation of a plane or curved surface with designs in slight relief. 2. The ornamentation of a plane or curved surface in high relief, the *alto rilievo* of the Italians. 3. Work entirely curved or wholly in relief. 4. Figures in the round. The first division includes all carving which follows the contour of the sign-board, or forms the contour itself. Undercutting, as a rule, should be sparingly used.

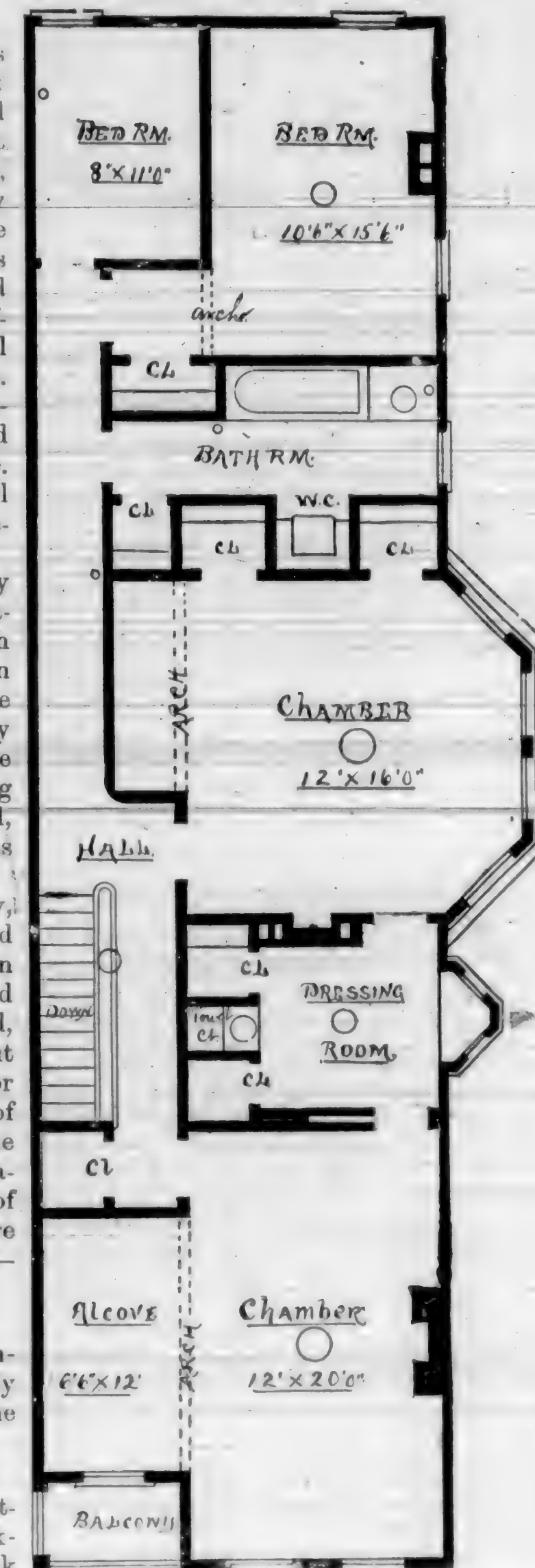
The wood selected for carving, that is to say, the portion to be operated on, should be rubbed over with chalk and the design outlined in strong, dark lines. The depth of the ground of the relief work having been determined, care must be taken that the tools do not cut beneath this. The amount of detachment or absolute relief will depend on the degree of skill required to be exercised in securing due proportions, proper spaces to clusters of ornament if introduced, and the proper degree of prominence and depression to the figure. There must be an observance of right proportions.—*Painters' Magazine.*

It is estimated by a leading Chicago commission house that 8,000,000 cross-ties, mainly cedar, were cut in territory contiguous to the great lakes the past winter.

Owing to the increased growth of the fruit-growing industry on the Pacific Coast, box making in California and Oregon has been very brisk this season.



FIRST FLOOR PLAN OF \$5,500 DWELLING.



SECOND FLOOR PLAN OF \$5,500 DWELLING.

Valuable Hints.

If varnish or oil does not flow easily, add powdered camphor.

SHELLAC and borax boiled in water produces a good stain for floors.

DON'T inclose the sink—no place in a kitchen is so much neglected.

PORCH floors should be of narrow stuff and the joints laid in white lead.

LIME-WATER is fire-proof protection for shingles or any light wood-work.

COMMON brick absorb a pint of water each, and make a very damp house.

THE lowest-priced builder is not always the cheapest, as poor work will testify.

A CLOSET finished with red cedar shelves and drawers is death to moths and insects.

Do not locate a furnace register next to a mantel, that is, if you wish to utilize the heat.

TERRA-COTTA flue linings are a great improvement over the old roughly-plastered chimney.

For basement flooring, oak is preferred to maple because it will stand dampness better.

To properly select the colors applicable to the proper place, consult an educated painter.

A VENTILATING flue from the kitchen into the chimney often does away with atmospheric meals.

STOPS to doors and windows should be fastened with round-head screws, so as to be easily moved.

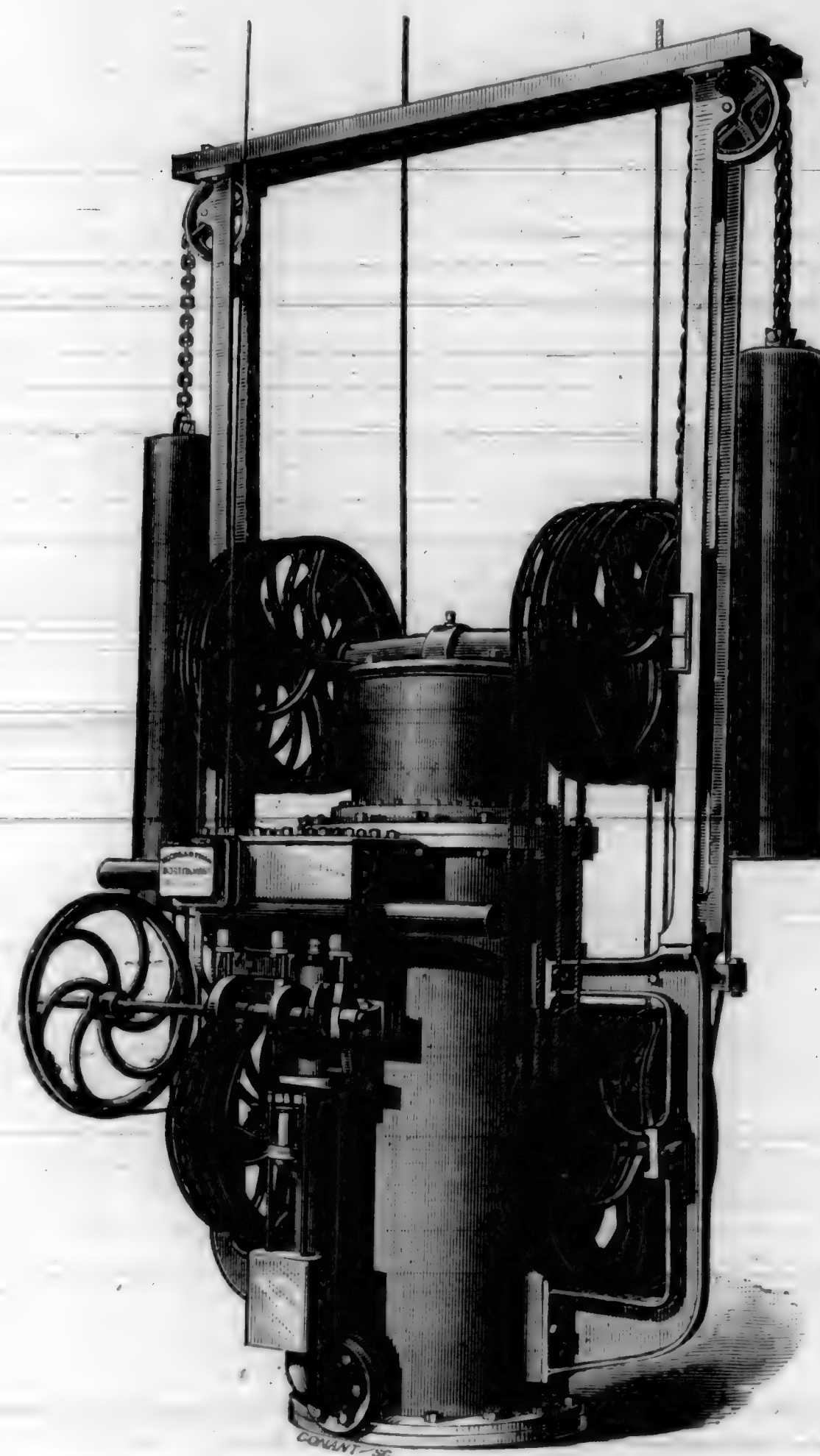
It is better to oil floors than to paint them—a monthly rubbing will make them as good as new.

Do not use one chimney-flue for two stove-pipes—the draught of one will counteract that of the other.

Do not finish windows to the floor—the circulation across the floor is one of the causes of cold houses.

ASH-PITS in cellars under fire-places and mantels save taking up ashes, for they may be raked down through a hopper.

Do not construct solid doors of two kinds of hard wood—the action of the atmosphere on one or the other will cause the door to warp.



Elevators.

IN considering the many new patents for elevators, and the appliances connected with the same, two essential requisites are necessary. The first one is in regard to the absolute safety of the devices; the second relates to the cost of running expenses. It is a fact that many are more interested in the last proposition than the first, taking it for granted that an elevator is safe as long as it is well built and supplied with any of the modern safety appliances to guard against accidents.

An elevator that thoroughly combines the above two essentials, should receive the consideration of all those who require, either in public, mercantile, or private buildings, an elevator that is simple in all its details, easily understood, and the running expenses of which are considerably less than those of any other machine now in use.

Our attention has recently been called to a new double capacity patent hydraulic elevator, which certainly seems to embody these desired qualities.

The object of this double capacity hydraulic elevator is economy in the use of water. It can be operated by water-pressure from the city main, or from a tank in upper story of building; is always ready for use, night or day, and costs nothing when not in operation. No engineer, steam boiler, or tanks required when city pressure can be obtained.

This machine has one capacity for light loads, and another which, combined with the first, will lift heavier loads. The loads to be lifted may be varied to suit.

A double-capacity hydraulic elevator divides the water into two parts, and uses water in proportion to the loads lifted. Consequently if the lighter load is lifted a less quantity of water is used than though the maximum load is lifted. A single capacity elevator requires as much water to lift the empty car as to lift the maximum load.

In practice it has been found that the loads are constantly varying, and in an ordinary day's use, they will average about one-half the maximum. It is therefore desirable to have an auxiliary power instantly available for any increased load which may be put upon the car, especially if this auxiliary power costs nothing when not in use. The double-capacity machine fills this requisite, and is practically two elevators combined in one, either of which can be used when required. It stops automatically at each end of its stroke, and may be called from one floor to another by pulling the hand-rope at the floor where wanted.

A very important feature, and one not possessed by other machines, is the patent automatic lock or regulator, which avoids a waste of water by preventing the use of the larger capacity when the smaller capacity is competent for the load. Its action is entirely automatic, and dependent upon the load in the car; and it is impossible for a careless or unskilled operator to use more water than is required. The ordinary method of operating double-capacity elevators heretofore has been for the conductor to pull on the valve-rope until, in his judgment, he has opened the valve; but should he pull too far, the full quantity of water, though not needed, is admitted, and the desired economy is not obtained. A double-capacity machine without an automatic lock is little better than a single-capacity machine, and when it is known that elevators are often operated by those who know little or nothing of their construction, and that at each trip there may be a saving or loss of from fifty to seventy-five gallons of water, dependent upon the variation in pulling of the hand-rope, the object of this invention will be apparent.

This machine is guaranteed to be safe, economical, and durable, all parts being strongly and substantially built and made of the best material; when repairs are needed, the arrangement is such that each and every portion is accessible.

The Bancroft History building has been supplied with these elevators, and it is worth the time and attention of those about to build, to thoroughly examine the workings and cost of running these in actual use, before adopting any other style.

Information in regard to the above will be furnished upon application—either in person or by letter—to the San Francisco Tool Co., corner of First and Stevenson Streets, they being prepared to construct freight or passenger elevators of this style to lift any required load.

In towns and cities having electric plants furnishing light and power the economy of these elevators is still further increased by using pumping apparatus accessory to the elevator, consisting of a tank on top and one at the base of the building, with a pump connecting the two and run by an electric motor actuated by electric power. The pressure and quantity of water are obtained from the upper tank. The elevator discharges into the lower tank, from whence the water is pumped to the upper. The water is thus used over continually without waste.

The San Francisco Tool Co. make such electric motors, under the Keith system, pumps, tanks, etc. The Company is now outfitting the Pacific Power Co., of San Francisco, with a complete large electric plant for distributing power by electricity for elevator and other purposes. It is now running a small plant furnishing power for manufacturing purposes. All interested in this matter are invited to call and inspect the apparatus.

The Y. M. C. A. Block.

IN this number of the ARCHITECT we give a cut of the new Young Men's Christian Association building now being erected by Messrs. Gilbert & Sons, contractors and builders, of Woodland, Yolo County. The foundations of the structure, for in reality there are three buildings in one, are laid firmly in brick, each building having its own foundation and own separate studding, so that each structure is independent, although in the block, and can be sold separately or as a whole. The total frontage is 70 feet, depth 108 feet, height to the top of the mansard tower 75 feet 6 inches. The three buildings contain three floors. The one on the right is rented to a doctor for a residence, the first floor of which is arranged especially for Turkish and Russian baths, after the famous Hammam, of San Francisco. This enterprise will give Woodland what few towns of its size East or West can boast of—first-class scientifically arranged and managed steam baths. The building on the left is arranged for a private residence and has been rented to one of Woodland's enterprising merchants. The architecture of the three buildings, as seen in the front elevation, is distinct in each, yet not so striking



THE Y. M. C. A. BLOCK.

as to destroy the effect of a harmonious whole. The building on the right will take after the Eastlake style in finish, the center one, the Young Men's Christian Association building, which projects and is surmounted by the mansard tower, will be finished nicely after the Queen Anne style. The building on the left is rather quaint, being a modification of the Eastlake and suggestive of the Italian. The first floor of the Young Men's Christian Association building will be introduced by a spacious recess under an arch, at the left of which is the ticket office, and directly opposite is the Association bulletin board and directory. From this corridor you enter a private office to the left and the large store in the center, which will be sub-let by the Association. At the right you enter the hall-way leading to the stairs and rooms above, also to the gymnasium in the rear, with its bowling alley, walking track, gallery, tub and shower baths, and with all the improved gymnasium apparatus. It will be one of the finest equipped gymnasiums on the coast. The reading-room and library, the reception parlors and main hall, also the secretary's office, are located on the second floor and are models of convenience, and will be fitted up in a most attractive manner. The third floor is divided up into class-rooms, ladies' central committee kitchen, rooms for boys' branch, and quite a number of lodging-rooms for young men. These apartments will be airy and commodious and

will afford the Society delightful quarters. These three buildings are each provided with front and back stairways. They will have all modern improvements and lack no really essential feature to make them complete for their purposes. The probable cost of the block will be \$25,000 when finished, and will be a credit to the enterprising builders. The Association is fortunate in getting the second Association building erected on this coast, and no doubt its usefulness will be increased a hundred-fold when it gets into the new building. Surely the business men cannot invest their money in anything where it will do as much good and bring larger returns than in the Young Men's Christian Association.

Sobriety in the Saw-Mill.

A GREAT deal is said about total abstinence in different directions of labor, as to the lack of it, or the necessity for it, and the railroads, especially, have been widely commended for their increasing efforts toward its establishment among their employees, who not only have their own lives in their hands, but those of countless others, as well as the safety of all kinds of property. The importance of a level head, under such circumstances, cannot be overestimated, and it is more or less a requisite in any vocation.

But if there is any place more than another where drunkenness has no business whatever, it is in a saw-mill; and what is more, it is a very notable and undeniable fact that an intoxicated man at work in a saw-mill is a rarity. It is a place where everything goes with precision; where an error may mean limbs or lives, and where bad judgment might in a second wreck a piece of complicated machinery and occasion great damage. With sobriety and the best of care the accidents that occur in saw-mills are of shocking character and alarming frequency. The injury that might be done in a mill or factory of any kind if a man's functions were upset by drink is, of course, apparent, but a saw-mill seems to present the greater details of danger, and to involve unusual exactness. Give a drunken man full swing of the lever, clear the mill of other workmen, and there is no limit to the havoc he would probably create. If the inebriated sawyer did no other damage, what would be the character of the lumber he sawed? If one log looked like three to him, and he could see a double saw, with no ability to tell an inch from a foot, the product he turned out from a log would be a sight to behold.

It would not do to say that an intoxicated man, or one partially under the influence of strong drink, never could or never did run a saw-mill. It would be incredible to suppose there had not been several such cases, but it is the rule that the men who operate saw-mill machinery are sober. Some men have an ability to drink a certain amount of whisky and still control their functions, we reflect, and a man who was a little shot, and a devil-may-care fellow, might pull through a good many tough places.

But the saw-mill owner and the men who labor in it appreciate the situation. They know it means business; they know the danger, and the nicety with which everything must be handled. If they get careless they may pay dearly for it. As a result intemperate men largely keep away from saw-mill labor, either from choice or as a matter of compulsion. It is the exception when it is told that an accident in a saw-mill was caused by intoxication. That the rule of sobriety so generally prevails among saw-mills, while largely a question of direct necessity, is a fact for which lumber manufacturers deserve to be commended, for it takes determination to enforce it, and demands a recognition of merit, which, to a considerable extent, has been granted. The best engineers, fitters, and sawyers are men whose industry, exemplary habits, and consequent skill entitle them to good wages, which they receive, and nobody ought to begrudge them what they get.—*Northwestern Lumberman.*

SLIDING-DOORS into small apartments are to be preferred in place of folding.

IN building frame houses, fill the studding one foot high above the sill with brick—this discounts the use of rat-traps.



Recipe for a Cement for Repairing Worn Places in Stone Steps.

LA SEMAINE DES CONSTRUCTEURS, in reply to a correspondent who asked for the recipe of a cement for repairing the worn places in stone steps, gives the composition of the famous "ciment Sorel," which has for many years been used by a few contractors, who make a great secret of their process, for filling cavities and restoring abrasions in stone or marble. The first person to use the cement, Sorel, was the inventor of the so-called process of "galvanizing" iron, by covering it with a protecting film of zinc. In the course of his experiments he found that the oxide of zinc, mixed with a solution of the chloride of the same metal, gave a substance which soon became in air as hard as marble; and with slight variations, this mixture is the one employed by all his successors. Sorel, in practice, either used the washed residues from the manufactories of zinc white, which are perhaps heavier and less pure than the white pigment, or heated the ordinary zinc white of commerce to redness to increase its density, upon which the hardness of the cement depends. This, when intended for use, he mixed with a rather concentrated solution of chloride of zinc, having a density of fifty to sixty degrees by Beaume's hydrometer, usually adding about three per cent of borax or sal-ammoniac to lessen the rapidity of setting. So prepared, the "ciment Sorel," after setting, soon becomes as hard as marble. It adheres very strongly to stone, and resists heat, cold, moisture, and even the action of acids, and may be colored. To reduce the cost, and assimilate it to stone, powdered granite, marble, or hard limestone may be mixed with it, but soft, earthy substances should not be used. As at present manufactured in Paris, various additions are made to the powdered zinc oxide, to give certain colors or textures, and the chloride solution is sent separately in bottles, the price of the whole, ready for mixing, being about seven cents a pound. The basis of the cement is in all cases the same, some trifling differences in the mode of preparation, such as washing the zinc white with water containing borax before calcining it, or using protochloride of iron, or chlorohydric acid, in the solution, in place of zinc chloride, serving mainly to support the claims of particular manufacturers to a special method of fabrication. In general, the heavier the zinc oxide, and the more concentrated the chloride, the stronger is the cement. To repair stone, either

in the shape of statues or steps, the portion to be operated upon should first be scraped to a fresh, clean surface, and then moistened with the liquid chloride. A sufficient quantity of the dry cement is mixed with enough liquid to form a stiff paste, and placed in position, and after being allowed to set a few days, is trimmed off, and smoothed by rubbing with a piece of stone. In summer it will become hard enough to rub down in two days; in winter five or six days are necessary. While setting it must be protected from rain, and two weeks should elapse before a staircase repaired with it is opened to general use. Some of our readers, whose recollections of their experiences in the dentist's chair are fresh, will probably be struck by the similarity of the operations described to those which the dentist goes through in repairing a large cavity with cement filling, and in fact the cement used by dentists is nothing else than the "ciment Sorel," prepared with care for their purposes.

Strength the Great Factor.

THE architect or builder who can look back upon a long and honorable career with no element of failure to blot its history can boast of either great prudence and care, or an extreme amount of that commodity called "luck." But few extensive builders have passed through life without recalling some piece of construction where the element of failure was paramount to that of safety. We believe in the truism that it is better to be on the safe side in all our structures. The want of size in timber, the simple absence of a bolt, a few inches in the thickness of a wall, have often brought about elements of danger in buildings that call for the strongest condemnation. There are two reasons for this state of affairs: one is an imperfect knowledge of the strength and capacity of building materials, and the other is a self-confident conviction of a belief born of a hasty and careless consideration of the subject.

The failure of roof trusses, of girders, and joists, the cracking of walls, the settlement of buildings, all may be indirectly traced to the above causes.

In all constructive architecture the first and important factor to be carefully considered is strength. Where doubt exists, well-known authorities should be consulted and living examples examined. The experience of any architect or builder of extended practice is worthy of consideration.

Especially to the young architect and builder is this a serious matter, and although he may, in self-confidence, assume that he has mastered his profession, he will soon learn that after years of practice he has just begun to learn, and it is at this stage he begins to practice carefulness and give some study—perhaps when it is too late—to the factor of safety. Especially is this applicable to the construction of masonry. That great common product of every locality, bricks, used in all our great structures, have in them not only the element of safety, but danger to an extensive degree, if not properly and carefully used.

A brick of medium quality will withstand a great pressure to crush it, if properly laid. From 400 to 1,000 pounds per square inch will crush ordinary brick-work, if laid carelessly. Of course we understand that the figures vary according to the quality of the brick, but the manner of laying has more to do with the safety of brick-work than the strength of the material itself. Not only the manner of laying and bonding, but the mortar goes far to render the work free from failure. The liability to crush and grind, communicated from one brick to another, is much reduced by a bed of good mortar, for the mass, upon becoming compact and homogeneous, is as a solid body upon which movement and crushing effect cannot act; and although the weight of a high wall would seem to bear more upon the bottom courses, yet if we consider the fact that by good mortar and workmanship we cement the work into one common mass, we bring it to the condition of a post or column, bearing the weight of a superstructure equally the same at the bottom as at the top. The fact that much of the brick manufactured by hand in small districts is soft and unburned, renders their use dangerous unless extra care is taken in laying them. Very seldom should brick work be used in isolated or high piers, for the support of great loads; but if used at all, they should be of the best quality, hard-burned, and laid in cement divided by good bond-stone. High piers are liable to buckle or spring out of plumb before crushing, and should in all cases be avoided if we have any regard for the great factor of all good construction—STRENGTH.—*Hill's National Builder.*

In Kansas and Nebraska, where something neat yet cheap is demanded, whitewood has the call over pine for house finish.

Southern California Sandstone.

A FINE specimen of sandstone from quarries near Los Angeles has been left at the office of this journal, than which in texture and color we have seen nothing finer in this State. The deposit is within a mile or two of Los Angeles City, and the ledge is found in stratas of from six to sixty inches in thickness. Even the heavier stratas are said to be entirely free from seams and fractures, with marked uniformity in color. It appears not to be affected by exposure to the atmosphere, except to improve it in hardness. The proprietors of the quarry propose its introduction for building purposes in San Francisco as soon as transportation facilities are completed.

It is certainly gratifying to notice the unearthing of these natural finer products of our State in building materials. With the sandstone of Santa Clara County, and the more recently discovered Los Angeles stone, an ample supply of beautiful building stone of the kind is at hand, serving all present purposes, with the great probability that other counties of the State will in turn unbosom deposits of sand and other fine stones for building purposes, which will reduce the propensity of a certain class of owners who feel disposed to "send East" for the brown sandstone of Connecticut, to a simple exhibition of folly.

The American Glossary of Architectural Terms.

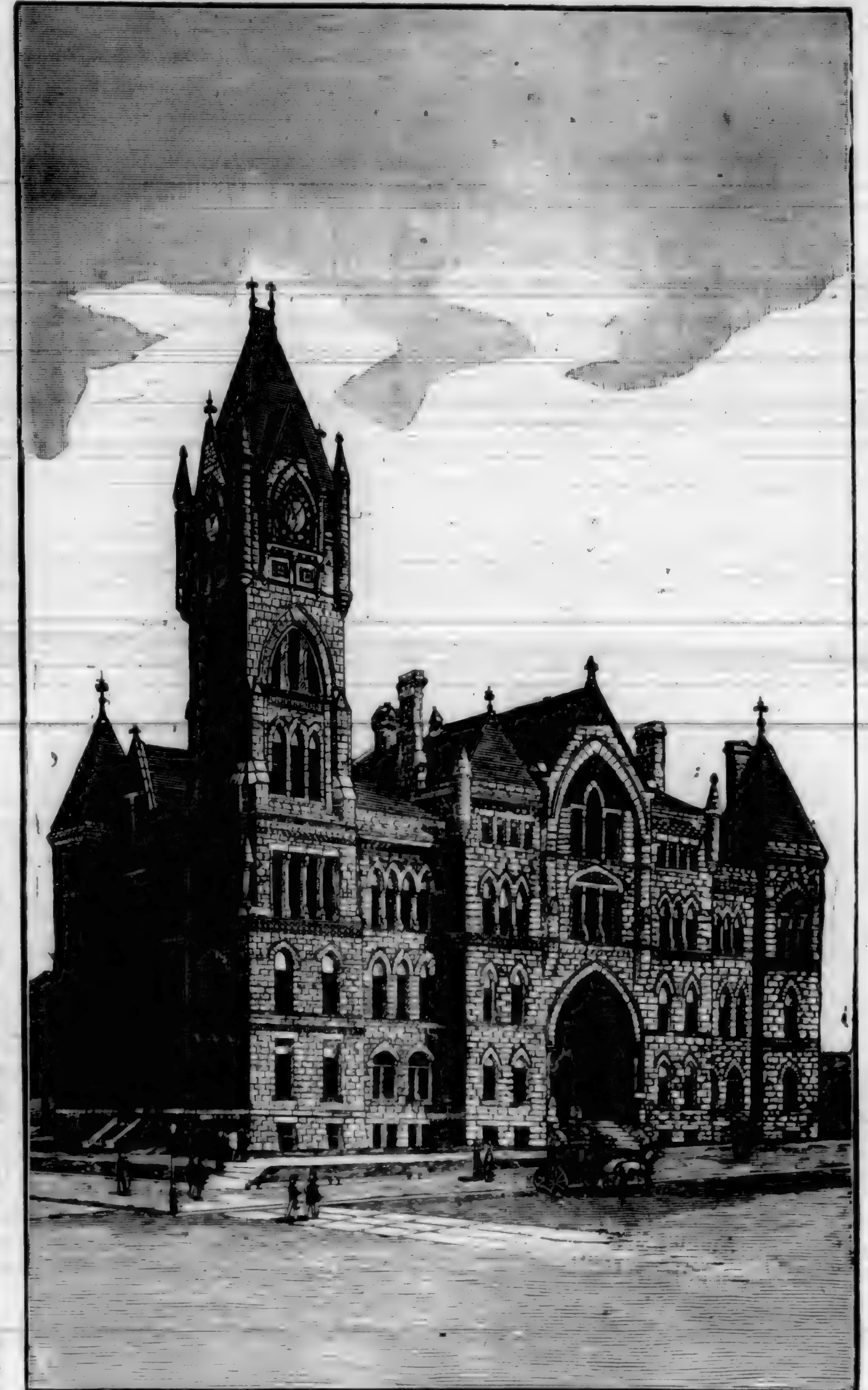
THE object of this new work has been to prepare a concise dictionary of all proper terms used in America and England, but not to treat of words whose etymology is uncertain. It is the only work of the kind ever issued adapted to the wants of the American architect and builder, arranged from a professional and practical standpoint. The illustrations are the most perfect and complete ever presented in any work of a similar standing, and the method used to exemplify on one page the meaning of the terms on the opposite page certainly recommends itself to all. Architectural students of all degrees should order a copy of this work. It is beautifully bound and printed, and will be sent to any address upon receipt of \$2.50.

Steam and Water Radiators.

IT will be news to some to know that three-fourths of all the radiators in use in the East are those manufactured by the A. Griffin Iron Co. Not content with supplying over one-half of America, they are making great efforts to secure the entire control of the Pacific Coast, and to this end are shipping weekly car-load lots, so as to fully meet all requirements of the trade. Their very best goods are shipped to this city, and in quantities to suit any demand, no matter how large they may be. C. D. Harvey is the agent on this coast, and may be found at 30 New Montgomery, corner Stevenson Street.

THE curious fact that the usual heat produced by friction is absent when the articles are magnetized, is just now being discussed by scientists who are seeking an explanation. Very striking examples are described in a late number of a scientific periodical. A workman fastened a couple of powerful magnets to his lathe to hold more securely a piece of metal which he wished to drill and turn. The presence of the magnets kept the metal so cold that no water was needed to keep the drill moist and cool. This unusual circumstance may lead to important mechanical advantages. It is such circumstances as the one noted above that lead to valuable discoveries. The scientists, who are looking for a reason why the heat should be absent, may not hit upon any valuable idea, but some practical mechanic probably will.

In arranging the openings of a room, do not forget the wall space. It is sometimes advisable to build a house to suit the furniture.



DESIGN FOR A PUBLIC BUILDING TO BE BUILT OF STONE.

New Inventions and Improvements.

MESSERS. E. C. STEARNS & Co., of Syracuse, N. Y., manufacturers of hardware specialties, ever responding to the demand for labor-saving tools and improvements generally, have recently produced and added to their constantly increasing line, several new articles, three of which are now ready for the trade. These consist of an improved "Silent Saw Vice," entirely new in design; an excellent door clamp, also entirely new in design, being a departure from the old style iron clamp, and a register and ventilator added to "The McGuire Star Thimble."

These three articles are soon to be handsomely illustrated in our columns.

Garland Trap.

WE are pleased to note that the "Garland Trap" is being used in all our boom towns and cities. It is superseding, in this city, all other patents, from the fact that its wonderful efficiency as a preventive of sewer gas obtaining access to buildings, has been over and over again thoroughly proven. See that your architect calls for the "Garland Trap."

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.



Finials in Sheet Metal.

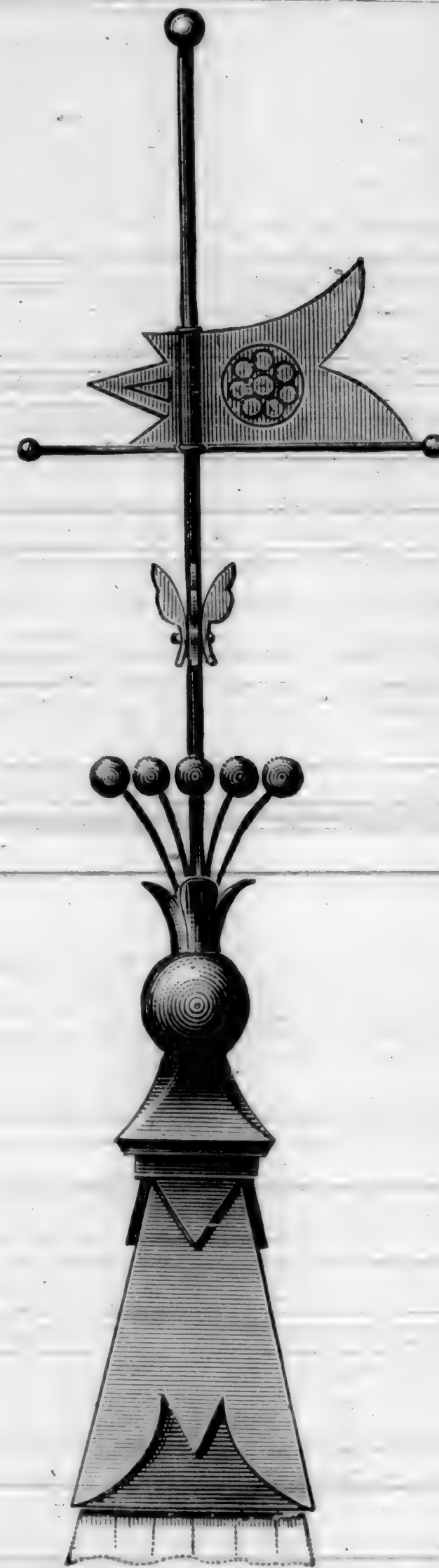
THE vagaries in designs with which architects are wont to trim public and private buildings at the present time are almost without parallel. There is no portion of a building perhaps where odd conceits are so often shown than in the finials surmounting towers. Two pieces of work of this kind are shown in the accompanying engravings. One is a very neat design of a finial carrying a vane, and may be asserted to belong to the conventional order of work of this nature. The other, in addition to the orthodox architectural features of the lower part, has a non-descript beast with wings and forked tongue, hanging to the neck. Whatever may be the

designs of finials, the question of the material out of which they are to be constructed is a matter of considerable importance to the builder. Sheet metal work is gradually being recognized as the most appropriate article and there are comparatively few pieces of work of this kind at the present time in which this material does not figure as an important element. The designs here shown are selections from a new catalogue recently issued by Bakewell & Mullins, of Salon, Ohio. The work is a volume of 200 pages and contains a thousand or more engravings representing architectural trimmings of almost every conceivable kind ranging on the one side from ambitious allegorical groups and statuary, heroic size, to leaves, rosettes, scrolls, etc. on the other. While the book is only a trade catalogue and intended primarily for the use of the customers of the establishment named, it is more of interest to architects, builders, and sheet metal workers in general on account of the number of designs it contains, more particularly because it shows work that has actually been executed and in many cases indicates the buildings upon which it has been employed. The work is one which will doubtless have a wide circulation.

New Books.

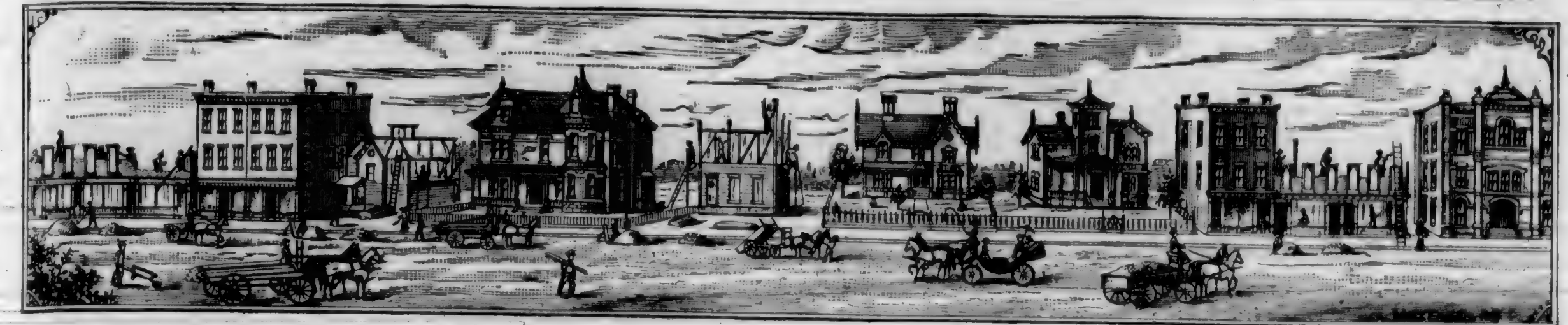
We have on hand the following books, which will be sent to any address upon receipt of the price.

Essentials of Perspective.....	\$ 1 50
Modern Architectural Designs and Details.....	10 00
Detail Cottage Architecture.....	6 00
Leffel's House Plans.....	3 00
Science of Carpentry.....	5 00
Mechanic's Geometry.....	5 00
Artisan.....	5 00
Artistic Homes.....	3 50
Mechanical Drawing.....	1 00
American House Carpenter.....	5 00
Building Superintendence.....	3 00
Builder's Companion.....	1 50
Cutting Tools.....	1 50
Cottages.....	1 00
Ornamental Drawing.....	1 00
Grimshaw on Saws.....	4 00
Universal Assistant.....	2 50
Limes, Cements, and Mortars.....	4 00
Builder's Guide.....	2 00
Gould's Carpentry.....	2 50
Trussed Roofs, Ricker.....	3 00
Amateur Mechanic's Workshop.....	3 00
Handbook of Legendary Art.....	3 00
Dwellings, Reed.....	3 00
Plumbing Appliances.....	1 50
Modern House Painting.....	5 00
Stair Building Made Easy.....	1 00
Cabinet Maker's Companion.....	1 25
Manual for Furniture Men.....	1 00
Rural Architecture.....	1 50
Architecture, Horton.....	1 50
Wonders of Art.....	1 25
Common Sense in Church Building.....	1 00
Old Homes Made New.....	1 50
Hints on Household Tastes, by Eastlake.....	3 00
American Cottage Builder.....	3 50
The Suburban Cottage.....	1 50
Homes for the People.....	2 00
Country Homes, Woodward.....	1 50



Cottage and Farm House, Woodward.....	\$1 50
Suburban Homes, Woodward.....	1 50
Rural Homes, Wheeler.....	1 50
Manual of Industrial Drawing for Carpenters.....	2 00
Illustrated Drawing Book.....	1 00
Mathematical Drawing Instruments.....	1 50
Drawing for Carpenters.....	1 75
Shavings and Saw Dust.....	1 50
Linear Drawing.....	1 00
Practical Draughting.....	1 00
Drawing for Cabinet Makers.....	1 50
Handrailing and Staircasing.....	1 50
Painter, Gilder, and Varnisher.....	1 50
Water Closets.....	1 00
Sewer Gas.....	1 25
Steam Engine Catechism.....	1 00
Paper Hanger's Companion.....	1 25
Principles of House Drainage.....	1 00
How To Paint.....	1 00
Practical Geometry.....	1 00
Lumberman's Hand Book.....	2 00
Lien Law.....	50
Cozy Homes.....	25
Every Man His Own Mechanic.....	3 50

**CIVIL ARCHITECTURE,
A SPLENDID WORK,
PRICE, \$10.00.**



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.

H. K. Starkweather is having built a \$2,000 house on Pearl Street.
Science of Carpentry, for \$4.00.
Universal Assistant, for \$2.50.

Alhambra.

Completion of school-house frame. Architect, B. J. Reeve; cost, \$2,000.
Cutting Tools, for \$1.50.
Home Hand-Book, for \$10.00.

Covina.

M. E. Church, frame. Owner, M. E. Church; architect, Reynolds; contractor, day work. Cost, \$7,000.
Cutting Tools, for \$1.50.
Cummings' Details, for \$5.00.

Coronado Beach.

The foundation for a new house, the property of Architect Falkenar, has been laid.
Grimshaw on Saws, for \$4.00.
Mechanics' Geometry, for \$4.00.

The laying of the brick foundation for the new building to be erected by the Methodist Society, on the corner of D and Fourth streets, is commenced. A very handsome three-story brick is projected. The ultimate cost will reach \$60,000.

Coronado will have a fine school-house, on a lot 300x500 feet, bounded by E and F Avenues, and Sixth and Seventh Streets, being the second block west of the plaza.
Shavings and Sawdust, for \$1.50.
People's Cyclopedia (three large volumes), for \$20.00.

Earlham.

A Friends College, to cost \$50,000, is projected.
Ruskin's Works (four volumes), for \$6.00.
Industrial Drawing for Carpenters, for \$2.00.

East Oakland.

Highland Park. Owner, Highland Park College; architect, S. & J. Newson; contractor, Knowles & Wetmore. Cost, \$5,500.
Drawing for Bricklayers, for \$1.50.
Drawing for Cabinet Makers, for \$1.50.

Garvanzo.

A planing-mill is now erected here.
Woodward's Farm Homes, for \$1.00.
Woodward's Graperies, for \$1.00.
A brick-yard is already at work.
Building Superintendence, for \$3.00.
American Cottage Homes, for \$3.00.
The town boasts a new telegraph office.
Painter, Gilder, and Varnisher, for \$1.50.
Architects' Companion, for \$2.50.
A large number of houses are under contract and building in Garvanzo.

Limes, Cements, and Mortars, for \$4.00.
Wonders of Art, for \$1.25.
Judge Hatch is building a \$7,000 house.
Woodward's Farm Homes, for \$1.00.
Woodward's Graperies, for \$1.00.
A large addition will be built to the Garvanzo Park Hotel.
Building Superintendence, for \$3.00.
American Cottage Homes, for \$3.00.

Los Angeles.

Three-story and basement brick. Owner, J. Mullally; architect, B. J. Reeve. Cost, \$25,000.
Album of Mantels, for \$8.00.
Architects' Companion, for \$2.50.
Two-story and basement brick. Owner, P. Gainer; architect, B. J. Reeve. Cost, \$11,500.
Manual for Furniture Men, for \$1.00.
Common-Sense Church Architecture, for \$1.00.
Three-story frame. Owner, Gamable; architect, B. J. Reeve. Cost, \$14,000.
Artistic Homes, for \$3.50.
Modern House Painting, for \$5.00.
Two-story frame residence. Owner, W. S. Hutton; architect, John Hall. Cost, \$200.

Pavilion frame, brick. Owner, D. R. Waldon; architect, H. R. Leonard; contractor, R. W. McIntosh. Cost, \$3,500.

Every Man His Own Mechanic, for \$3.50.
Tredgold's Carpentry, for \$7.50.
Three-story and basement brick. Owner, L. Phillips; architect, B. J. Reeve. Cost, \$500,000.

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

One-story frame and brick. Owner, Mr. S. Callaghan; architect, John Hall; contractor, J. M. Tibbets. Cost, \$500.

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

Four-story and basement brick. Owner, L. Phillips; architect, B. J. Reeve. Cost, \$100,000.

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

Two-story frame residence. Owner, M. E. Church; architect, Reynolds; contractors, Monroe & Co. Cost, \$2,000.

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

Four-story and basement brick. Owner, L. Phillips; architect, B. J. Reeve; contractor, Grant. Cost, \$160,000.

Woodward's Country Homes, for \$1.50.
Science of Carpentry, for \$4.00.

One-story frame cottage, brick. Owner, N. J. Rowan; architect, John Hall. Cost, \$2,500.

Monrovia.

There are between thirty and forty buildings being erected in Monrovia at the present time.

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

Several more contracts are now being let, some of them for very fine residences.

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

One-story frame cottage. Owner, Mrs. Hutchinson; architect, E. A. Coxhead; contractor, Leitch. Cost, \$2,500.

National City.

Griffith & Heat are building a large brick block on Eighth Avenue. The contract is for \$9,000.

Practical Perspective, for \$5.00.
Builders' Companion, for \$1.50.

L. E. Brown has prepared plans for another \$15,000 house.

Ontario.

Two two-story brick blocks. Owner, C. P. Lyndal; architect, Geo. Fyfe; contractor, John Geary. Cost, \$3,400.

Two-story brick block. Owner, H. O. Bryan; architect, Geo. Fyfe; contractors, McIntyre & Newman. Cost, \$2,900.

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

Pomona.

The demand for building material is so great that a number of carpenters are compelled to suspend operations, awaiting the arrival of some kinds of lumber.

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

W. H. Sailor is building a house in the Garthside tract.

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

J. W. Heckman is building for L. W. Carpenter a \$1,600 house on Holt Avenue.

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

Henry Warren is building a \$1,500 house on Centre Street.

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

Completing Catholic Church. Architect, B. J. Reeve; cost, \$1,500.

Builders' Work, for \$5.00.
Building Superintendence, for \$3.00.

Redlands.

Jas. F. Drake is having a two-story house built.

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

Rialto.

W. H. Wickersham, of Los Angeles, has been given the contract for building the large hotel at Rialto. George B. Robinson, from El Paso, Texas, has taken the contract for doing the brick work. Work on the building will begin at once. The house will cost in the neighborhood of \$125,000.

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

Riverside.

H. A. Westbrook is building a residence on Brockton Square. The edifice will cost \$10,000.

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

A new chapel is being erected on Sixth Street for the United Brethren.

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

T. J. Wood has matured his plans for the erection of a large brick block on Orange Street. It is to be 26x80 feet, two, and perhaps three stories high.

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

Rosecrans.

A large hotel is to be built at once.

San Bernardino.

Architect C. H. Jones has made plans for a one-story building for E. Katz.

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

The corner-stone of the new \$20,000 M. E. Church was laid with appropriate exercises.

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

The Anderson building, opposite the St. Charles Hotel, will be the largest in the city. It will cost \$52,870.

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

The laundry building for the Southern California Road, at this place, will soon be ready for occupancy.

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

One-story brick for Katz, \$5,000.

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

Two-story frame for R. H. Skelly, \$2,300.

American Cottage Homes, for \$3.00.
Builders' Work, for \$5.00.

Two-story frame for J. E. Drake, \$2,500.

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

One-story brick for S. Haile, \$6,000.

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

Two-story office for Russ Lumber Co., \$3,000.

Six cottages for S. Weil, \$3,000.

San Diego.

An Agricultural Hall is about to be built.

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

An opera house to cost \$300,000 is to be built in the near future.

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

The bricklayers are at work upon the foundation of the new railroad depot at the foot of D Street.

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

The masons have commenced work upon the foundation of the Methodist Church, corner Fourth and D Streets.

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

Two million dollars' worth of buildings have been lately contracted for, of which half are in the way of construction.

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

Work on the railroad depot at the foot of D Street is being pushed rapidly. A portion of the frame is already in place. The building is to be 40x100 feet.

San Pedro.

Two-story frame. Owner, Mr. Bloomfield; architect, John Hall. Cost, \$3,000.

Santa Ana.

Two-story brick. Owner, Dr. Medlock; architect, B. J. Reeve. Cost, \$12,000.

Santa Monica.

Episcopal Church, brick. Architect, E. A. Coxhead; contractors, Davidson & Johnston. Cost, \$3,000.

San Luis Obispo.

A \$200,000 hotel is shortly to be erected, some three miles south of this town, by a company, and ground for the enterprise has already been broken, water pipes are laid, and erection is to be commenced at once.

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

Santa Paula.

Three brick buildings are soon to be erected at Santa Paula, one of which will be occupied by a banking firm.

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

The Alvarado Bridge.

The contract of the county of Alameda with the California Bridge Company to construct an iron bridge at Alvarado, was approved recently by the Board of Supervisors. The contract price is \$7,440. The contract for the construction of the new Receiving Hospital was awarded to C. L. Crissman. The contract price is \$3,878.

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

Miscellaneous.

Captain Flavel, of Astoria, will build two fine brick buildings in that city this season. Each will be three stories high; one on the corner of Chenamus and Main, the other on the corner of Chenamus and Cass Streets. The cost of both will be \$60,000.

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

A \$10,000 flouring mill is to be built in Heppner, Or., this summer.

Woodward's Country Homes, for \$1.50.
Plaster, How to Make it, for \$1.00.

J. P. Allen will build a large family residence for Will Shoemaker, on the northwest corner of Twelfth and K Streets, Modesto. The building will cost, when completed, between \$4,000 and \$5,000.

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

Contract has been let for construction of the Despain Block in Pendleton, Or. It will be of brick, and cost nearly \$18,000.

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

Hoffman & Bates, of Portland, Or., have been awarded the contract for building snowsheds on the Northern Pacific road west of the Cascades, and Hugh Glenn & Co., of The Dalles, for the one on the east side. Both contracts will consume about 11,000,000 feet of lumber.

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

Mr. H. F. Larrabee is drawing plans for a two-story brick hotel, 48x86 feet, to be erected by Mrs. Kornmeyer, on the east side of Railroad Avenue, Oakdale, Cal.

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

M. J. Mertens has purchased, and will soon erect a fine residence thereon, the lot on the northwest corner of Alameda Avenue and Union Street.

Builders' Companion, for \$1.50.
Artistic Homes, for \$3.50.

SAN FRANCISCO BUILDING NEWS.

B
Broderick, nr. Fulton. One-story frame.
O.—Mrs. M. Clark.
C.—Thos. Elan.
\$2,500.

Broderick, nr. Fulton. Alterations.
O.—H. R. Levy.
A.—J. P. Chadwick.
C.—H. Ritchie.
\$1,000.

Bryant, bet. Second and Third. Three-story frame.
O.—Thos. Green.
A.—W. H. Armitage.
C.—W. E. B. Stiles.
\$5,500.

Broadway. Buchanan. Three-story frame.
O.—A. Adler.
A.—Macy & Jordan.
C.—J. M. Kelly.
\$18,000.

Bush, nr. Pierce. Alterations.
O.—S. Nicoll.
\$1,500.

Bush and Steiner. Alterations.
O.—Mrs. Goull.
C.—Haner.
\$1,800.

Buchanan, cor. Filbert. One-story frame.
O.—L. Zimmerman.
A.—W. Schrof.
C.—T. Merry.
\$1,700.

Clay, nr. Mason. Additions.
Cost, \$600.

California, bet. Kearny and Montgomery Streets. Alterations.
Cost, \$1,000.

California, cor. Steiner. Two-story frame.
O.—J. G. Broemmeh.
A.—P. R. Schmidt.
C.—C. Hisholm.
\$12,000.

California, cor. Baker. Alterations.
O.—P. McGinn.
A.—Mooser.
C.—Hayes.
\$2,000.

California, nr. Laguna. Alterations.
O.—O. F. Willey.
A.—J. J. Newsom.
C.—Lynch.
\$3,500.

Chattanooga, nr. Church. Four one-story frames.
O.—Comertford.
\$6,000.

Devisadero, bet. Pine and Bush. Two two-story frames.
O.—Mrs. F. G. Miller.
A.—C. Kenitzer.
C.—C. T. Ruppel.
\$8,000.

Davis, bet. Sacramento and Commercial. Four-story brick and basement.
O.—Mrs. A. M. Parrott.
A.—Pississ & Moore.
Mason—Riley & Loane.
Carp.—Langstaff.
\$75,000.

E
Eighteenth, cor. Howard; three-story frame.
O.—J. E. A. Helms.
A.—Salfeld & Kohlberg.
C.—J. J. Dunn.
\$9,000.

Eighteenth, nr. Diamond. One-story frame.
O.—R. McGillan.
A.—J. J. Devlin.
C.—F. A. Williams.
\$1,500.

F
Fifth, nr. Bryant. Two-story frame.
O.—Klemm.
\$1,500.

Fulton, cor. Baker. One-story frame.
O.—B.—T. H. Day.
\$2,000.

Fulton, cor. Baker. One-story frame.
O.—Mr. Doyle.
C.—Houston.
\$2,500.

Folsom, nr. Fourth. Additions.
Cost, \$500.

Fremont, nr. Market. Four-story brick building.
O.—C. R. Bishop.
A.—W. F. Smith.
Mason—C. B. Merrill.
Carpenter—T. H. Day.
\$45,000.

Fourteenth, nr. Howard. Two-story frame.
O.—K. Muller.
A.—Salfeld & Kohlberg.
C.—A. Klahn.
\$2,800.

Fillmore, nr. Hayes. Additions.
O.—Miss A. Hill.
A.—Townsend & Wyneken.
C.—C. F. Coady.
\$2,000.

Fourteenth, nr. Guerrero; three two-story frames.
O.—Con McCarthy.
A.—T. J. Welsh.
C.—P. Maloney.
\$10,000.

Franklin, cor. Post. Additions, plumbing and painting.
O.—H. Levy.
\$4,250.

C
Greenwich, bet. Mason and Taylor. Three-story frame.
O.—Mrs. O'Connell.
A.—G. E. Voelkel.
C.—F. W. Graham.
\$3,500.

Green, bet. Octavia and Laguna. Two-story frame.
O.—J. Jennings.
A.—A. J. Barnett.
C.—T. Sullivan.
\$3,500.

Geary, nr. Gough. Two-story frame.
O.—Mrs. A. Taft.
A.—H. Geiffuss.
C.—C. E. Dunshee.
\$4,500.

Geary, cor. Webster. Additions.
O.—Mrs. Hydenfeldt.
C.—McDougall & Son.
\$1,500.

Geary, nr. Webster. Additions.
O.—W. Hunt.
A.—H. D. Mitchell.
C.—G. Pattison.
\$2,000.

Green, cor. Octavia. Two-story frame.
O.—Jennines.
A.—A. J. Barnett.
C.—Sullivan.
\$3,500.

Green, cor. Octavia. One-story frame.
O.—Mr. Mahoney.
A.—W. Mooser.
C.—F. Grimm.
\$2,000.

Golden Gate, south side, bet. Octavia and Laguna. Two-story frame.
O.—A. Fassman.
A.—Copeland & Banks.
A.—P. R. Schmidt.
\$11,800.

Gough, cor. Oak. Five flats, stores and cottages.
O.—Geo. Raphael.
A.—Macy & Jordan.
C.—N. R. Ellis.
\$12,000.

Green, cor. Octavia. One-story frame.
O.—B.—M. Webber.
\$1,400.

Golden Gate Avenue, cor. Larkin. Alterations.
O.—P. Spreckles.
\$800.

Golden Gate Avenue, cor. Franklin. Two three-story frames.
O.—W. Gleason.
A.—J. Bestor.
\$6,000.

H
Howard, near Twenty-fourth. Frame building.
O.—M. P. Jennings.
C.—Geo. Houston.
\$1,700.

Howard, bet. Tenth and Eleventh. Additions.
O.—Sarah Mier.
C.—P. Farrar.
\$2,200.

Howard, nr. Thirteenth. Additions.
\$1,500.

Haight, nr. Webster. Two-story frame.
O.—M. Kolbing.
A.—John & Zimmerman.
C.—F. W. Kern.
\$3,500.

Harrison, cor. Fourth. Additions.
\$800.

Haight, nr. Devisadero. Two-story frame.
O.—W. Hayes.
C.—Newbert.
\$3,500.

Hollis, nr. Ellis. Alterations.
O.—W. A. Searls.
A.—Townsend & Wyneken.
C.—T. Roth.
\$1,000.

Hayes, nr. Scott. Two-story frame.
O.—W. Whitefield.
A.—McDougall & Son.
C.—A. Klahn.
\$3,500.

Haight, nr. Webster. Two-story frame.
O.—Friedland.
C.—H. Elmwood.
\$3,000.

Haight, bet. Fillmore and Steiner. Two-story frame.
O.—J. P. Devine.
A.—Chas. Giddes.
C.—J. and M. Rountree.
\$3,000.

Hayes, nr. Broderick. Two-story frame.
O.—B.—C. Keenan.
\$3,000.

Haight, nr. Buchanan. Two-story frame.
O.—Mary Deering.
A.—M. J. Welsh.
C.—R. Sinnott.
\$5,000.

Hawthorne, nr. Folsom. Two-story frame.
O.—Kenyon.
C.—Dutton.
\$2,500.

Hampshire, nr. Twenty-first. One-story frame.
O.—C. H. Munster.
\$1,400.

Howard, nr. Thirteenth. Additions.
\$1,500.

Howard, cor. Eighteenth. Two-story frame.
O.—J. Davis.
A.—Copeland & Banks.
C.—Wm. Plana.
\$6,000.

Hermann, cor. Jessie. Two two-story frames.
O.—Mrs. A. Kemme.
A.—T. J. Welsh.
C.—P. J. & M. Brennan.
\$9,000.

J
Jessie, nr. Second. Three-story brick.
O.—Sharon Estate.
Builder—S. M. Hills.
\$8,000.

M
Market, bet. Fifth and Sixth. Additions.
O.—P. F. Butler.
A.—T. J. Welsh.
C.—J. J. Dunn.
\$5,500.

Mint Avenue, nr. Fifth. Two-story brick.
O.—J. F. Leve.
C.—R. Kingrose.
\$2,000.

Mission, nr. Eighth. Three-story frame.
O.—McGeary.
A.—Townsend & Wyneken.
C.—McGeary.
\$8,000.

Mission, nr. Twenty-fifth. Additions.
\$700.

Mission, bet. Twenty-fourth and Twenty-fifth. One-story frame.
\$600.

McAllister, cor. Steiner. Two-story frame.
O.—A. J. Turner.
A.—H. Geiffuss.
C.—R. P. Hurlburt.
\$7,000.

McAllister, cor. Fillmore. Two-story frame.
O.—E. Turner.
A.—Balcynski.
C.—R. O. Chandler.
\$5,600.

Mission, bet. Twenty-third and Twenty-fourth. Frame building.
O.—J. M. Tully.
A.—M. J. Welsh.
C.—Sticker & Son.
\$2,000.

Mission, nr. Twenty-eighth. Two-story frame.
O.—M. Boyd.
Day work.
\$900.

N
Noe, cor. Castro. One-story frame.
O.—W. Schroeder.
C.—O. E. White.
\$1,900.

O
Oak, nr. Laguna. Two-story frame.
O.—J. Kennedy.
A.—J. Marquis.
C.—Martin & Maguire.
\$5,800.

P
Page, nr. Fillmore. Two-story frame.
O.—E. W. Spencer.
A.—G. M. Salisbury.
\$3,600.

Post, nr. Broderick. One-story frame.
O.—John Murphy.
B.—P. Lynch.
\$1,500.

Post, bet. Buchanan and Webster. Two two-story frames.
O.—B. Getz.
A.—J. J. Clark.
C.—C. E. Dunshee.
\$7,500.

Post, cor. Broderick. One-story frame.
O.—E. Nightingale.
\$1,500.

Pine, cor. Baker. Three two-story frames.
O.—B.—G. Hinkle.
\$12,000.

Pacific, nr. Leavenworth. Two-story frame.
O.—Wm. Kelm.
A.—Miller & Armitage.
C.—H. Jensen.
\$3,000.

Page, cor. Steiner, two-story frame.
O. Devine.
A.—C. Geddes.
C.—Rountree.
\$3,500.

Pine, nr. Broderick. Two-story frame.
O. and B.—D. F. McIraw.
\$3,500.

Pine, nr. Broderick. Two-story frame.
O.—H. Welker.
C.—F. A. Steinman.
\$3,500.

Pine, corner Baker. Two-story frame.
O. L. Feder.
A.—McDougall & Son.
C.—Townsend.
\$5,000.

Post, nr. Franklin. Alterations.
O.—Mr. Blum.
\$1,500.

S

San Jose Avenue, bet. Twenty-third and Twenty-fourth. Two-story frame.
O.—W. J. Tillman.
A.—M. J. Welsh.
C.—J. W. Smith.
\$3,500.

Seventeenth, cor. Sanchez; one-story frame.
O. and B.—M. Loftus.
\$1,200.

Seventeenth, nr. Noe. One-story frame.
\$1,000.

Stevenson, bet. Nineteenth and Twentieth. Additions.
O.—M. and H. Beverson.
C.—J. W. Maher.
\$1,300.

Stevenson, bet. First and Second. Four-story brick.
O.—W. Campbell.
A.—Pissis & Moore.
C.—Jas. Geary.
\$12,000.

Seventh, nr. Jessie. Two two-story frames.
\$3,500.

Sacramento, bet. Polk and Larkin. Two-story frame.
O.—H. Tietjen.
A.—H. Geilfuss.
C.—T. Von Berstel.
\$4,500.

Stockton, bet. Broadway and Vallejo. Four-story frame.
O.—A. Aronson.
A.—W. H. Armitage.
Mason.—C. J. Harney.
Carp.—L. Weisman.
\$11,000.

Stuart, cor. Folsom. Two-story frame.
O.—J. B. Rider.
Day work.
\$4,500.

Sacramento, bet. Steiner and Pierce. Alterations.
O.—Schmidt.
A.—Chas. Geddes.
C.—Geo. R. Lang.
\$4,500.

T

Turk, bet. Pierce and Scott. Alterations.
O. L. Turner.
A.—John & Zimmerman.
C.—B. Knaus.
\$4,000.

Twenty-second, nr. Valencia. Two-story frame.
O.—B. Flaherty.
A.—C. J. Devlin.
C.—H. Foote.
\$4,500.

Twenty-fourth, nr. Capps; one-story frame.
O.—Mr. Lang.
B.—Comerford.
\$2,000.

Twenty-first, nr. Harrison; two one-story frames.
O.—Mr. Watson.
C.—C. O. Smith.
\$4,200.

Twenty-first, nr. Folsom. Additions.
\$900.

Tenth, nr. Market. Two-story frame.
\$900.

Turk, cor. Scott. One-story frame.
O. and B.—T. Rouke.
\$1,500.

Turk, cor. Laguna. Two-story frame.
O.—A. M. Silverstein.
A.—H. D. Mitchell.
C.—G. H. Walker.
\$4,000.

Turk, bet. Buchanan and Laguna. Two two-story frames.
O.—J. Davis.
A.—Copeland & Banks.
C.—W. Plums.
\$6,500.

Turk, bet. Pierce and Scott. Two-story frame.
O.—Mrs. L. Trunker.
A.—John & Zimmerman.
C.—B. Knaus.
\$4,000.

U

Union, nr. Laguna. Two one-story frames.
O.—J. W. Cudworth.
A.—G. E. Voelkel.
\$4,000.

Union, cor. Buchanan. One-story frame.
O.—J. W. Cottle.
A.—G. E. Voelkel.
Day work.
\$2,500.

Union, cor. Polk. Two-story frame.
O.—J. Cantrell.
C.—M. Shay.
\$2,600.

Union, cor. Octavia. Frame building.
O.—F. Stempke.
C.—P. T. Fleary.
\$900.

V

Vallejo, nr. Stockton. Two-story frame.
O.—J. Dans.
A.—Cappelletti.
C.—F. C. Adams.
\$2,500.

Van Ness, cor. Jackson. Two-story frame.
O.—Nolan.
Day work.
\$10,000.

Vallejo, nr. Battery. Two-story frame.
O.—Mrs. J. Campbell.
A.—Townsend & Wyneken.
C.—A. McDonald.
\$2,000.

W

Washington, cor. Hyde. Six two-story frames.
O.—Captain Burns.
A.—Clinton Day.
C.—G. Lang.
\$32,000.

Washington, nr. Devisadero. Two-story frame.
O.—D. M. Richards.
A.—C. I. Havens.
C.—C. Quinn.
\$3,800.

Wood, cor. Point Lobos Road. One-story frame.
O.—J. Murphy.
Day work.
\$1,800.

Washington, cor. Larkin. One-story frame.
O.—J. F. Stuart.
C.—R. M. Murry.
\$3,000.

Y

York, nr. Twentieth. Two-story brick.
O. and B.—B. Vincent.
\$8,000.

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 mail, prepaid.

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NEW FORM OF SPECIFICATIONS,

Especially adapted for the Pacific Coast.

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C. A. BARKER, WALTER DICKINS, Assistant Managers.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOLUME VIII.

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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., SEPT. 15, 1887.

Weekly Building Edition OF THE California Architect & Building News.

For some time past, we have been making careful arrangements by which we could present to our subscribers a **WEEKLY SUMMARY OF BUILDING ACTIVITIES**. Our plans are almost perfected, and in a short time we will supply, **WEEKLY**, a list of all buildings in progress in the city, and also in every portion of the coast. Various agencies have been established in different parts of the State, through which building news will be sent direct to this office.

In this weekly edition, there will **POSITIVELY BE NO ADVERTISEMENTS INSERTED**. Its columns will be strictly given to the furnishing of city and county building news, and for absolutely no other purpose.

Architects from every portion of the coast can have notices of contemplated building improvements, upon which they desire bids from city contractors, published **FREE** in this Weekly Edition. There also will be no charge for county notices of proposed public improvements. In fact, this **WEEKLY** is intended to cover the whole subject as a reliable gazetteer of public and private building information. Of course it must be expected that it will take a little time to make this weekly perfect in every particular, but it will have the same energy and perseverance to back it up as has been shown in building the "California Architect" from almost nothing to its present high standard.

TERMS.

This **WEEKLY** edition will be furnished **FREE** to all yearly subscribers to the "California Architect and Building News." Material men will at once recognize the great value of a weekly building list that can be relied upon as being as near correct as it is possible to obtain information.

NINE YEARS ago this Journal was started by the present Proprietor, and its appearance to-day, with crowded advertising columns, and entertaining reading matter, is a sufficient endorsement of its merits as the leading Journal of its class on the Pacific slope. Without being egotistical, we can safely say that the circulation of the "California Architect" is larger than that of all the rest of similar journals put together, published this side of the Rocky Mountains.

Remember, this Weekly Edition is furnished free to all subscribers to the "California Architect." We will also give the remaining numbers of this year free to all new subscribers for 1888.

The Boom.

THAT there has been a large amount of booming done in California within the last past few months, is beyond question; and although the fever is not so high now as it has been, it is still sufficiently active for all practical purposes. The larger proportion of the booming has been intrinsically legitimate, while much has been fictitious, strained, and overwrought, to an extent that numerous silly transactions have been consummated by which excited men and women have paid for single building lots, a mile or miles away from business centers, as much, and in cases ten times more, than a whole acre of the same land could have been bought for six months prior.

Every county and section of the State has participated in the boom sentiment, and more or less inflation indulged in, notwithstanding the entire absence of any new development in scores of localities to justify or sustain advance in values over those which have existed, other than the fact that the population of the State is being greatly increased by large immigration, which should have the effect of strengthening and confirming land values, but not of exciting them ten or a hundred-fold, except where the increase of population has concentrated in great force, as at Los Angeles, San Diego, and some other places in the southern counties.

But as matters have gone, owners of land in every county of the State have assumed, whistled their courage up to believe, and have used means and measures as each deemed wisest and best, to persuade others that the only thing necessary to a realization of ten to a thousand per cent advance on moneys invested was to "buy right here."

Transactions stimulated and sustained by solid, intrinsically good and well-assured backings, will in the future compensate fully for all present seeming chances taken, for all signs and facts are pregnant with greatness for the future developments and advancement of the Golden State in all that is calculated to make it one of the very grandest and greatest in the sisterhood of the American Union. But, unfortunately, not all who have plunged into the booming tide have done so wisely or well; and the limit of inflation having been reached, and the shadows of reaction being plainly discernible, and the fact becoming transparent that many of those rampant natures who have been misled by the gaudy butterfly offerings have begun to realize that as long as there were simple-minded men and women to buy anything in the shape of lands and lots that were well and sufficiently mapped and boomed, there were individuals and syndicates to bond or buy parcels and tracts, and subdivide the same to suit and accommodate eager buyers at prices yielding to the sellers from one to three hundred per cent profit, and leaving the buyers to wish they had not been so hasty in pur-

chasing, and wondering when or how long ere the amount paid could be again realized.

THE EFFECT UPON BUILDING IN SAN FRANCISCO.

The tens of thousands of building lots, and the miles in acres of agricultural lands sold and purchased, has necessarily diverted many hundreds of thousands of dollars in that channel, which, under the prior usual order of things, would have been spent in building improvements in San Francisco. Hence building operations have considerably quieted down, and much of the drawn-off moneys being tied up in purchases which will not soon advance beyond the prices paid, nor at present return the purchase money, the effect of the boom is likely to be felt for some time to come, except so far as those who have reaped the golden harvest from the lands sold may feel inclined to invest their gains in property improvements.

SOME OF ITS FRUITS.

1. As a consequence of the "Southern California boom," a majority of the horde of impecunious, defaulting, unreliable building contractors, who used to infest this city, have gone to that inviting section, either to ply and repeat their unwise methods, or seek in pastures new to make for themselves an honorable reputation and a fair fortune.

2. Some of our best contractors have also gone South. For these there need be no fear. Judgment and integrity having marked their San Francisco career, it is safe to say that nothing less, with good fortune added, will follow them.

3. The demand for draughtsmen has been such that the draughtsman's bureau of this journal has been overtaxed to supply the demand. Orders are on file for still more draughtsmen.

4. Journeymen carpenters and brick-layers have been, and still are, in demand, both in San Francisco and Southern California, at advanced wages, \$3.50 to 4.00 for carpenters, and \$6.00 for brick-layers.

The lumber market, and more or less other materials, have been affected by the lively demand in Southern California for building materials. Many classes of lumber in San Francisco are, and have been, scarce, and prices strong. Still, the San Francisco building outlook is beautiful. There is not one drop of discouragement to a whole ocean of fine prospects and promises for the queen city of the Pacific.

California Architecture—Typical Nothingness.

A CORRESPONDENT in the *Carpentry and Building*, styling himself "C. K., Long Beach, Cal.," forwards to the journal referred to the "elevation and ground plan of a typical California house." A more typical representation of nothingness was never forwarded to a journal to print, and how it ever came to be inserted in the one mentioned, claiming, as it does, to only insert ideas and illustrations that may be relied upon, is more than we can conceive.

There is not a chimney nor wash-basin shown in the house. Not a single bedroom has a closet connected with it, and the 10x14 kitchen is without a pantry, closet, chimney, or any other convenience. The dining-room as arranged is so deficient in the method of being lighted by windows that on a dark day a lamp would needs be kept lighted continually. The shape of the parlor would disgrace an old backwoods cabin. With the exterior appearance, the less said the better. The rail and balustrade as they appear in the engraving, are simply the design of a school-boy who is hardly old enough to spell the word *proportions*, let alone the ability to interpret the meaning of the word.

There is absolutely no wonder why "C. K." adds to his description, "I have thought that perhaps some of your readers might not only be interested in the plan and view that I send, but that they also may be able to suggest some variations," etc. Truly a nice way to get a plan that is architecturally correct, for the small sum required for a year's subscription.

We are always pleased to see illustrations of architecture on this coast, represented in the Eastern journals. But we must protest against such incongruous specimens as the one referred to as a sample of typical California architecture.

Summary for September.

UNTIL the commencement of the real estate boom, building activities were very brisk. The past month has witnessed quite a falling off in the number of improvements, although values are considerably larger than those of last year. Our record for the month is as follows:—

69 frame buildings, value.....\$402,850
32 alterations, value.....161,100
4 brick buildings, value.....44,000

95 \$607,950
During the first nine months of 1886 the record shows 947 buildings, value.....\$4,876,922
During the first nine months of 1887, 839 buildings, value.....5,211,914
Showing a decrease in number of 108, and a gain in value of.....334,992
Prospects ahead for the winter months are very favorable and much of the disparity shown in numbers between the two years quoted will be overcome before our yearly report in December.

Building Activity in Los Angeles.

MANY HOUSES AND BUSINESS BLOCKS IN PROCESS OF ERECTION.

AT the present time there is a remarkable activity going on in building, and especially is this true of the heart of the city. A glance down the principal thoroughfares discloses the fact that there is scarcely a block between the Plaza and Fifth Street in which one or more buildings are not being erected or additions being built on those already standing. This activity in building will create a great change in the appearance of the city before the winter sets in, for instead of the streets being lined with one- and two-story buildings, most of them will have been transformed into four-story houses, and the gaps or vacant lots which have been in existence will be filled up. Thus parties who were here last winter, and who are coming again this fall, will hardly recognize the city as the same that they left less than a year ago. With all the activity in building there is a demand for rooms which cannot be supplied, and unless the completion of the buildings in course of erection is hastened, the rush is likely to find the city unprepared. On every side the brick buildings are in such a stage of erection that it will not be possible to have them ready for occupancy before November or December, and at that time the rush will be here. One cause for the delay is said to be the scarcity of brick. One building has been delayed considerably by the scarcity of pressed brick, and no doubt others are in the same category. Outside of this class of buildings there are a large number of houses in course of erection further out, but at the present time there are at least ten people looking for houses where one is to be found. There are families waiting to come to Los Angeles, but they cannot come because they cannot rent houses. In San Francisco, and in other cities, there are enterprising men who erect houses especially for rent, and in those cities there is not as much demand as here. It seems strange that something of the kind has not been done here. A close search in Los Angeles has failed to reveal the existence of a single house composed of flats, and in what other city of a like population is this the case? It is true that until recently there has been no necessity for apartment houses or flats, but at the present time fully two hundred would be rented before completed, especially if erected near to the heart of the city.—*Herald*.

MR. C. MERCHANT, of Merchant & Co., Philadelphia, U. S. agents and manufacturers of the celebrated "GILBERTSON'S OLD METHOD," and "CAMARET" brands of tin-dipped roofing plates, has just returned from England, where he accomplished two important things in connection with the business of roofing plates. As is generally known, this firm was the first to bring out guaranteed roofing plates, which had before been unknown in this country, their guaranty covering all the different points which enter into the value of roofing plate, thickness, coating, weight, squareness, etc. In order to prevent the use of inferior materials where requisition had been made for their brands, they were obliged to adopt the plan of stamping the sheets with the brand and thickness. Others followed by stamping the brand, but not the thickness, thus making it possible to use thinner and cheaper plates instead of the ones specified. This action on the part of unreliable firms has led Merchant & Co. to take another important step, that of stamping each box with its weight. There are two sizes and two thicknesses of every brand of roofing plate, and the importance of using every precaution to insure the use of just what is specified is therefore evident. Another important step in this connection is an arrangement which Merchant & Co. have made with the makers of the two brands which they represent, that the "seconds" or imperfect sheets (which come out with the majority of brands) shall not be sent to the United States nor sold to anyone in England. There will be, therefore, only one kind of goods sold, and the quality of goods bearing these brands is then positively insured.

ELEVATION, PLAN, DETAILS, AND SPECIFICATIONS OF AN "ALAMEDA" COUNTRY HOME.

CALIFORNIA can justly boast of a larger number of pretty places and picturesque localities in which to erect residences of moderate cost, than can be found in any other State in the Union. The beautiful town of Alameda, covering, as it does, a large extent of ground, embracing several square miles, may be regarded as a paradise for those who wish a quiet retreat, away from the din and confusion of the city, and yet be in close connection with the great mart. Nearly every portion of the town is covered with a natural growth of oak trees. Nor does this growth stop at this point; for a long distance to the north the ground is covered by the beautiful trees from which the neighboring city of Oakland derives its name.

Extremes meet in architecture as well as other matters. Some esthetic persons have sought to copy the humble abode of the laborer in the external view of a dwelling, while the internal arrangements and fittings rival those of Aladdin's palace. Others seek to have the outside present to the eye a conglomeration of whimsical ideas, while they have not deigned to cover the floors with a carpet, nor have a door between any of the rooms or halls, excepting those connecting with the outer world.

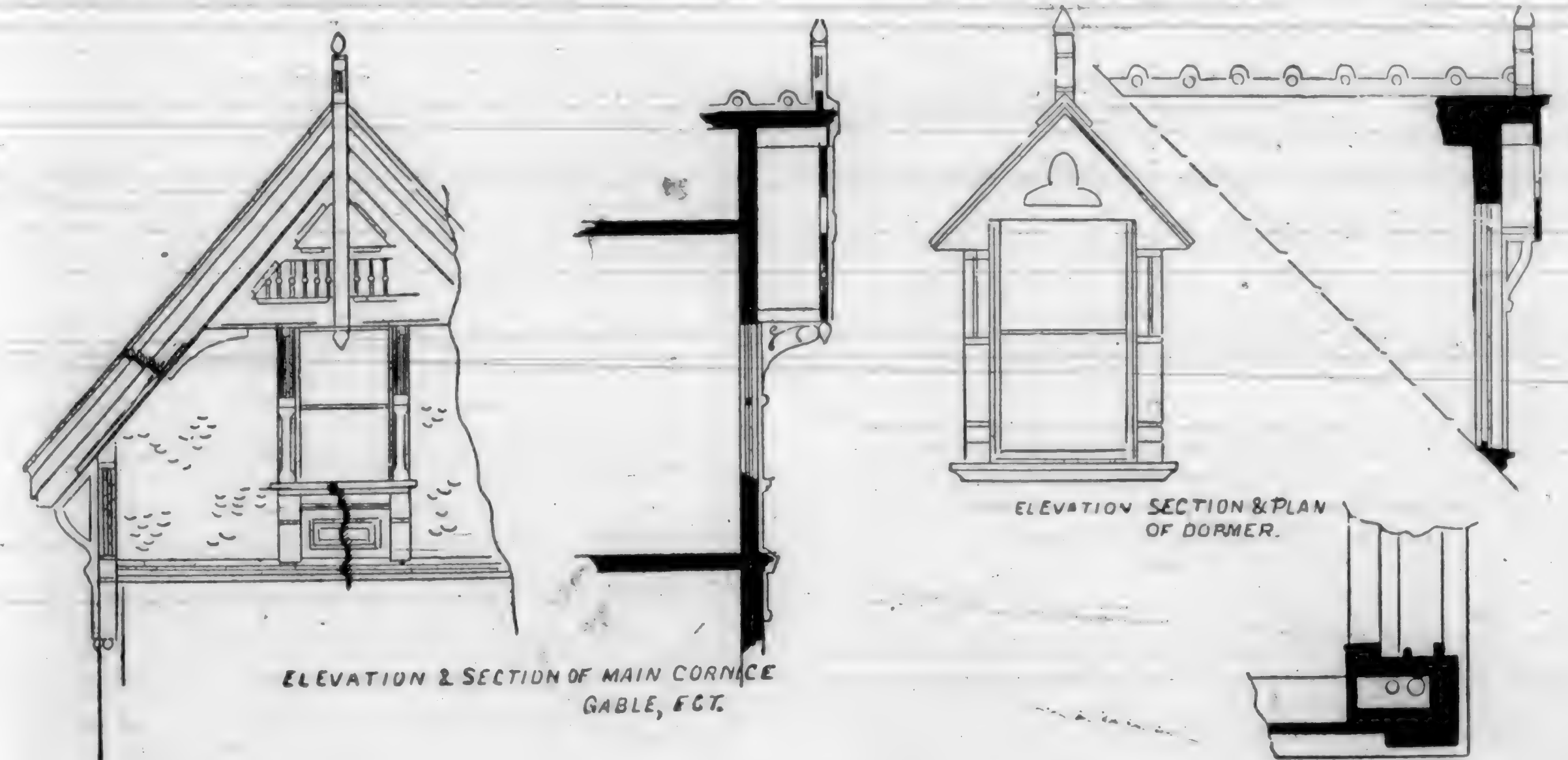
Much benefit has been derived from these whimsical erections, and it is only by much study and close application to the fancies of their clients, that architects have been enabled to prepare the beautiful Bijou plans, a good representation of which is given in this issue. In justice to the architectural profession, we must say that no portion of their practice has been so usefully bestowed as that which has been bestowed upon the production of plans for such homes, a full plan of which accompanies this article.

The elevation, as shown, is a model of neatness and economy. At once attractive in appearance and substantial in all its surroundings, it does away with all those horrible idiosyncrasies and bugbears of the Elizabethan and Queen Anne styles. There are no small windows to cause the one who cleans them to utter a whole vocabulary of cuss words at the architect who made so many corners to dig out. There is no part of California but what needs all the sunshine that was intended to enter a room, and the large windows shown allow the heat and light to make glad the hearts of the dwellers therein. Even with the thermometer at 100 degrees and over in the shade at noon-time, still when evening comes, the cool winds that invariably bless the sleep of those who are tired from their daily toil, has easy ingress from these same large windows. And in winter, from the absence of snow in all of our beautiful valleys, the same windows are a source of joy and comfort for the occupants to observe the driving rains, or admit the blessed sunshine as it pierces through the wintry clouds.

Great care should be exercised in painting the exterior. The colors selected should be a happy blending of light and dark shades. They should be graded from rich, heavy grades at the bottom, to the lighter tones of the gable peaks, preserving, through the intermediate section, a consistent harmony. The roof may be of dark slate color. The trimmings may be colored with a combination of blue, black, and Indian red. The body of the house may be varied to suit the above. It must be distinctly

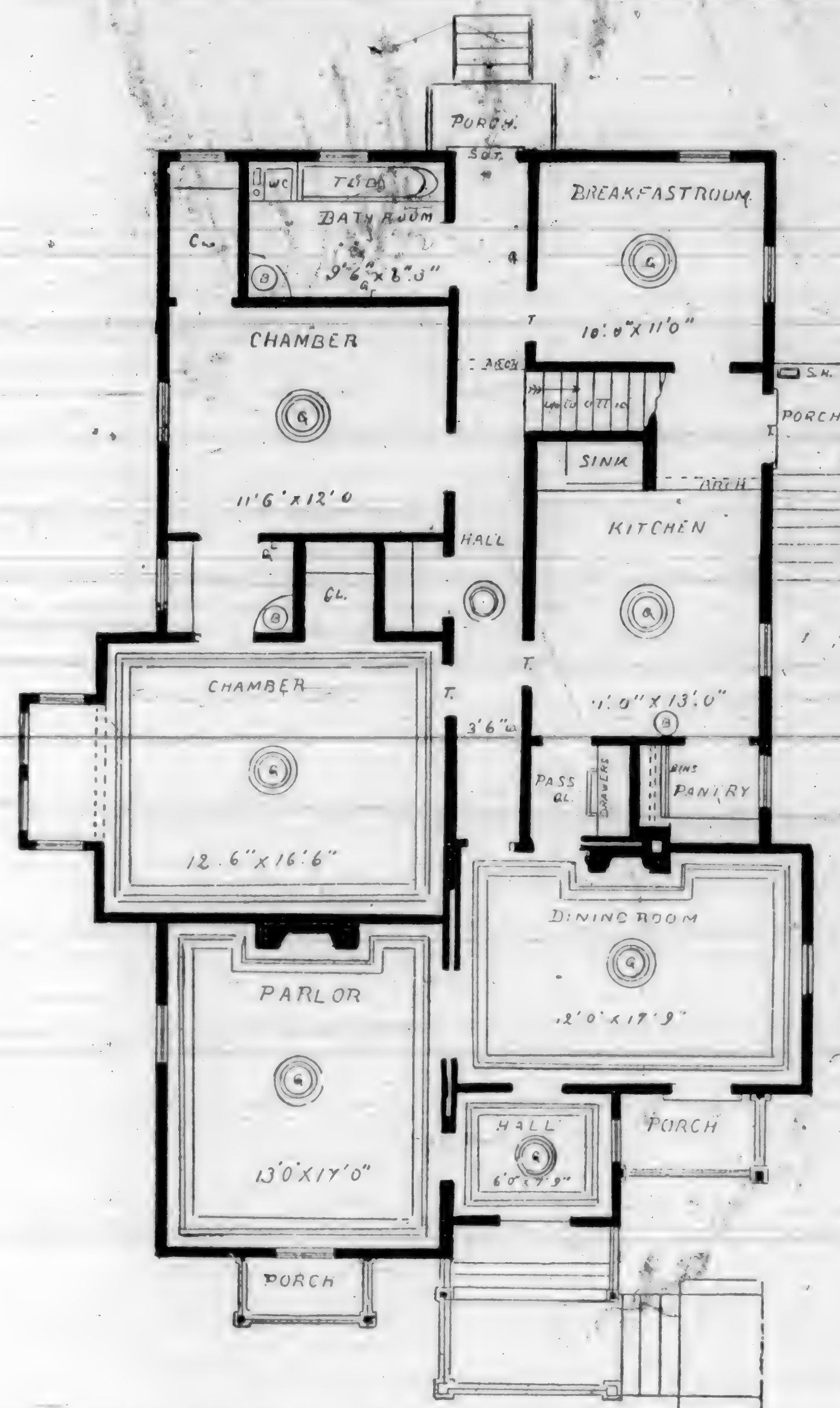


PERSPECTIVE VIEW OF \$2,500 ALAMEDA COUNTRY HOME.



ELEVATION & SECTION OF MAIN CORNICE GABLE, ETC.

ELEVATION SECTION & PLAN OF DORMER.



PLAN OF \$2,500 ALAMEDA COUNTRY HOME.

borne in mind that all buildings of the same class cannot be treated alike. Trees have a wonderful effect on colors used, and the main study of the painter and owner should be that the salient points of form and detail be enhanced by the proper selection of the various colors. By all means, if you are building a home for yourself, take the good wife into your confidence, and let her judgment be given on the various colors to be used.

The arrangement of the rooms, as shown by the plan, is very desirable for anyone with a small family. A feature is made of the entrance-way. From the hall, one can pass either to the parlor or dining-room, the latter being the general sitting-room. The parlor is large, 13x17 feet in size. It has a fire-place as shown; a cornice is also designated. Sliding doors connect this room with the dining-room, the size of the latter being 12x17½ feet. A cornice and fire-place are also shown. In case of company or family gathering, the two rooms will be practically one. The porch shown in front will be very handy for the gentlemen who smoke, or, on warm days, the ladies can use the same for sewing purposes, sheltered, as the plans show, by the roof overhead.

You pass from this room into a hall, from which you can enter all the rest of the rooms. The main chamber is 12 feet 6 inches by 16 feet 6 inches, besides a large bay-window, having four windows for light and air. There is also a cornice in this room, and a place for a stove to connect with parlor chimney.

There is a very large closet, and also wash-room, which is well-lighted and ventilated. Passing along the hall, we next come to a large linen closet. This will be found very serviceable for the storage of the linen in daily use.

Then comes a large chamber, 11 feet 6 inches by 12 feet. No cornice is shown. Should a fire be needed in this room, a patent flue could be placed therein, starting from near the ceiling. A large closet is also connected with this room. At the end of the hall is the bath-room, 6 feet 3 inches by 9 feet 6 inches. A wash-bowl and water-closet are shown. The window, being directly over the tub, assures perfect ventilation.

On opposite side of hall from bath-room is a room designated as breakfast-room, in size 10x11 feet, with two windows. This can be used as a bedroom, should the dining-room suffice for the needs of the occupants of the house. This room is very convenient, as it can be reached by three different ways. The next room is the kitchen, in size 10x13 feet, with plenty of light and ample means of ventilation. The place for the stove-pipe is indicated by the dotted lines leading to the dining-room chimney. Should it be found more desirable to have the stove in a different position from that indicated, a patent flue can be put in, starting near the ceiling. A large pass-closet, amply fitted with drawers and shelves, connects with the dining-room. There is also a large pantry fitted up with bins, etc.

A stairway is shown, near breakfast-room, leading to the attic. No plan is given of the latter, as the space can be divided according to the individual tastes of the parties building. The rear hall is 3 feet 6 inches wide.

The whole plan is very compact, and will bear careful study. The detail drawings as shown will give an adequate idea of the various finishes. Each one is distinctly marked.

We append a general set of specifications to aid those who may see fit to adopt the design. Should anyone want a complete set, we can forward them a printed copy.

SPECIFICATIONS.

EXCAVATIONS.—All rock, dirt, etc., to be cleared away from site of the building; trenches for walls and piers to be extended down to firm and solid ground; the bank to be dug well away from the walls, and the same to be left open until the walls are well set and dry.

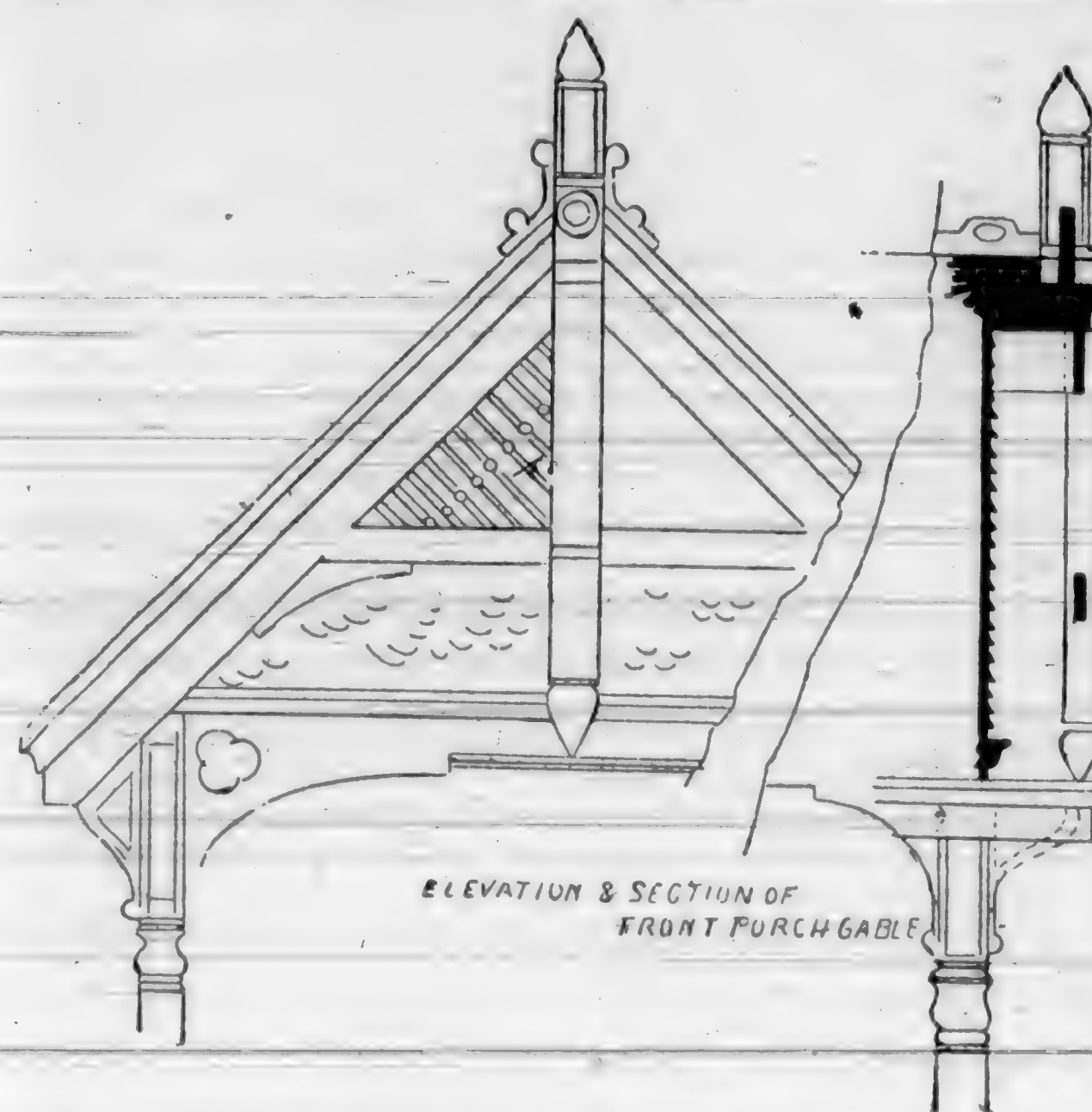
DRAINS.—To be of iron-stone pipe, with cemented joints. The fall to be not less than one-fourth inch to one foot; no drains to be less than sixteen inches from surface of ground.

BRICK WORK.—Hard, well-burned brick to be used throughout. All brick walls to be made level and straight to the proper and exact height, and to a true line from one end to the other, even to the splitting of a brick where necessary. Piers 12x12 inches. Turn trimmer arches for the support of all hearths at the time chimneys are built. All sills to be set in mortar after walls are proper height.

SIZE OF TIMBERS, ETC.—Main sills, 6x8 inches; plates, 2x4; studs, 2x4; underpinning, 4x6; joists, 2x10; ceiling joists, 2x4; rafters, 2x4; bridging, 2x3 and 2x4. Studs and joists spaced 16 inches from center; rafters, 2 feet 8 inches from center; underpinning, 2 feet 8 inches from center. All timber below main sills to be of redwood.

Roof to be sheathed with 1x6 Oregon pine, well nailed to every rafter. Gutters arranged so as to carry off water wherever directed.

SECTION OF WATER TAIL



RUSTIC.—All laps and butt joints, to be painted before being nailed in position. Butt joints to have a 3x11-inch piece of tin to keep out water.

OUTSIDE STEPS to be built upon strong stringers, inch risers of redwood, and two-inch treads of Oregon pine, with nosing and scotia. The recess to front hall will be floored six inches below main floor, with three-inch Oregon pine, put together with white lead.

FLOORS.—Oregon pine, tongued and grooved, 4 inches wide, to be used throughout the house. One tongue nail and one through nail to be driven in each piece at each nailing.

GROUNDS to be of 2-inch Oregon pine to all openings. No inside finish to be put on until the last coat of plastering is on. Face casings to be 6 inches wide and 1½ inches thick, with suitable plinths.

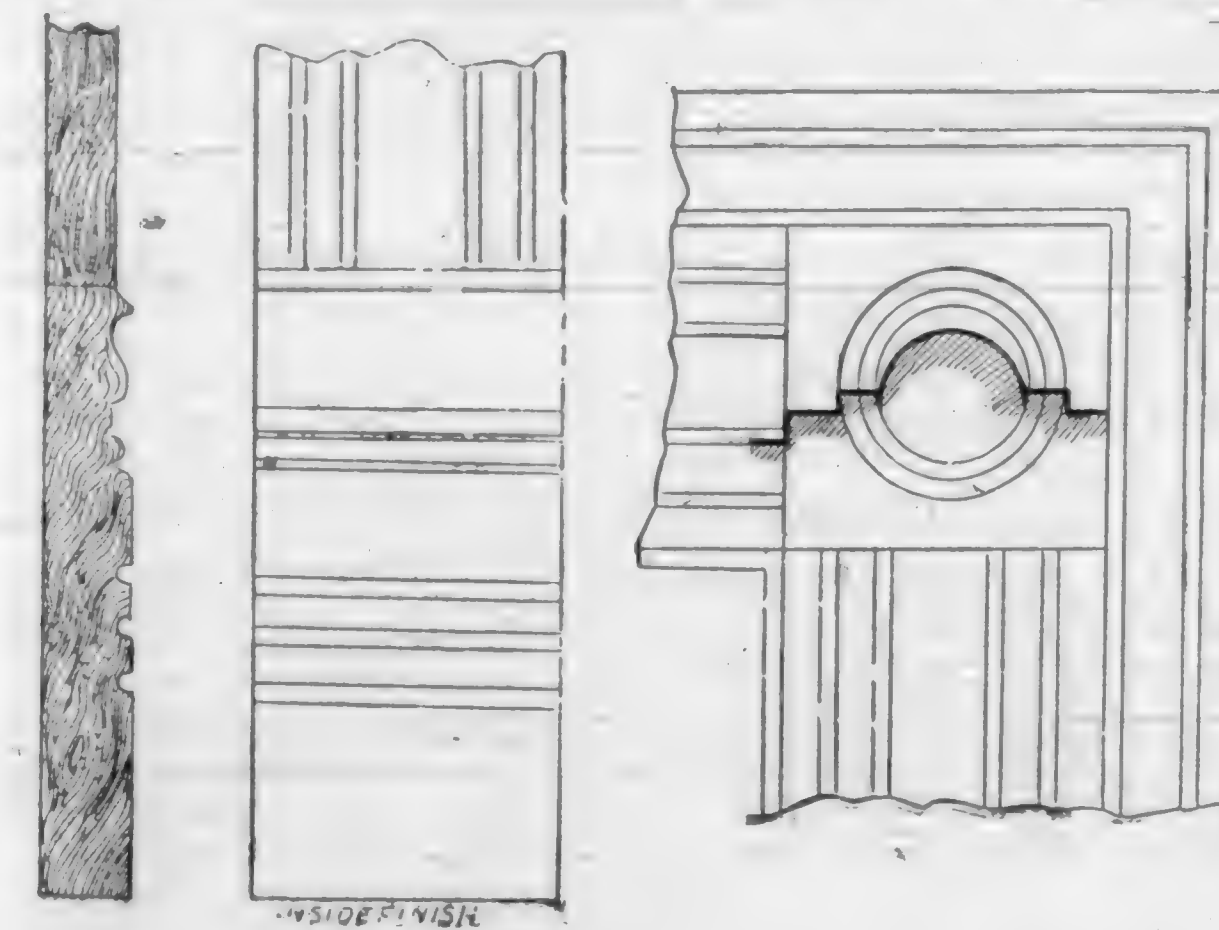
Sash beads to be fastened on with raised-head screws. All interior work to be hand smoothed and sand-papered. All carved or planted-on work to be primed before putting up. Base in all rooms to be 10 inches wide with 2-inch moulding.

WAINSCOTING.—Rear hall, kitchen, and breakfast-room to be wainscoted 3 feet high, and capped with nosing and scotia. Bath-room, 6 feet high all around.

PANTRY AND PASS CLOSET to be fitted up with shelves and hooks complete, and bins and drawers as shown.

LATHING.—Good sound lath to be used, laid on not less than ¾ of an inch apart. Joints broken over 8 laths. No lath to be put on vertically, to finish out to corners or angles; neither must there be any lath run through angles and behind studding from one room to another. All angles to be formed and nailed solid by carpenter before laths are put on.

PLASTERING.—All walls, partitions, and ceilings to be plastered one coat of well-haired mortar, made of best lime and clean, sharp sand,



free from loam and salt, using best cattle hair. To be made at least eight days before using.

BROWN COAT to be covered with a good coat of best white hard finish. All plastering to extend to the floor. Center-pieces where designated on plans.

PAINTING.—All interior woodwork to have three coats of best white lead, in such tints as may be approved by the owner. Kitchen floor to be oiled two coats.

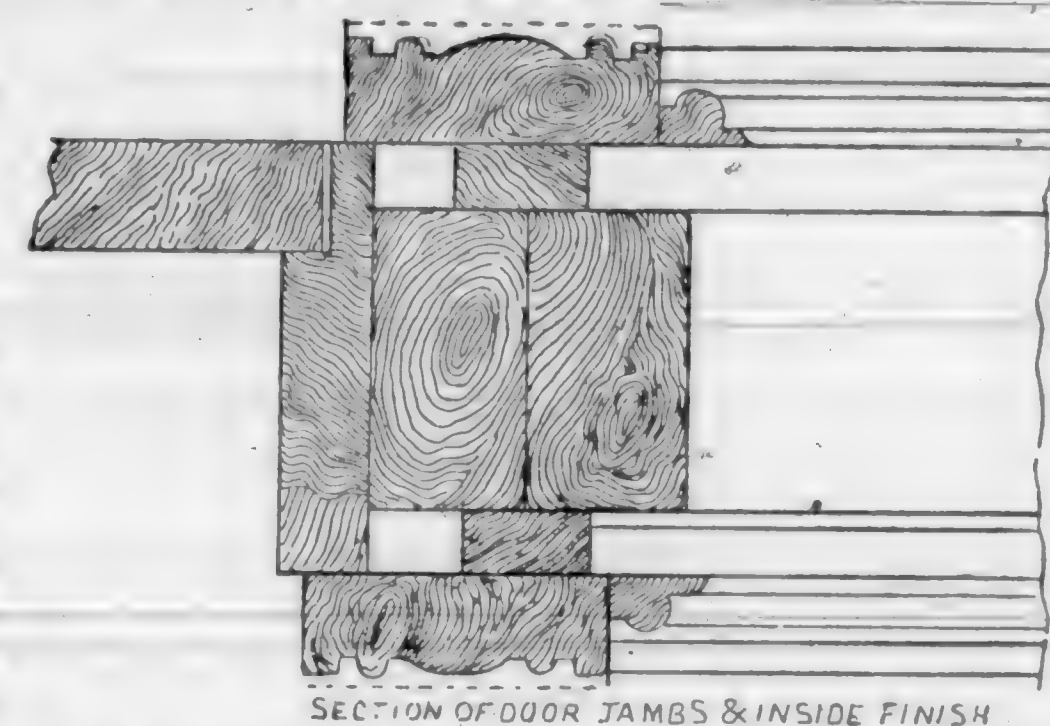
GAS PIPES to be introduced so as to give the number of lights shown on plan.

PLUMBING.—Water-pipes to be of galvanized iron ¾ inch in diameter. No ½-inch pipe to be used. A 40-gallon galvanized iron boiler, with necessary connections, to be placed in the kitchen. Sink to be of size shown by drawing, to have 2-inch iron water-pipe and a Garland trap; ¾-inch brass strainer; back of sink to be lined with zinc. Slop-hoppers to be placed as shown. Wash-basins to be located as per plan, and to have all necessary hot and cold water connections. Water from all basins to discharge into an open slop-hopper outside. Bath-tub to be lined with No. 12 zinc, to have a 1½-inch waste, with Garland trap. All necessary fixtures for bath-tub to be placed in proper position. The water-closet to be Budd's patent. Place safe trays under all sinks, bath-tub, wash-basins, water-closets, etc., with 2-inch turned-up edges, well nailed to woodwork. Three-fourths inch wastes. All waste or soil pipes to be connected with the sewer, and extend the same above basins, sinks, bath-tub, water-closets, etc., out through the roof.

GENERALLY.—Drawings and specifications are intended to correspond, and to be illustrative the one of the other. All drawings to be furnished by the architect, details to be given from time to time as the work progresses. Should the necessity arise that any change or changes be made from the original design, the owner shall have the right so to do without invalidating the contract, adding to or deducting from the contract price the agreed sum of any change made.

COST.

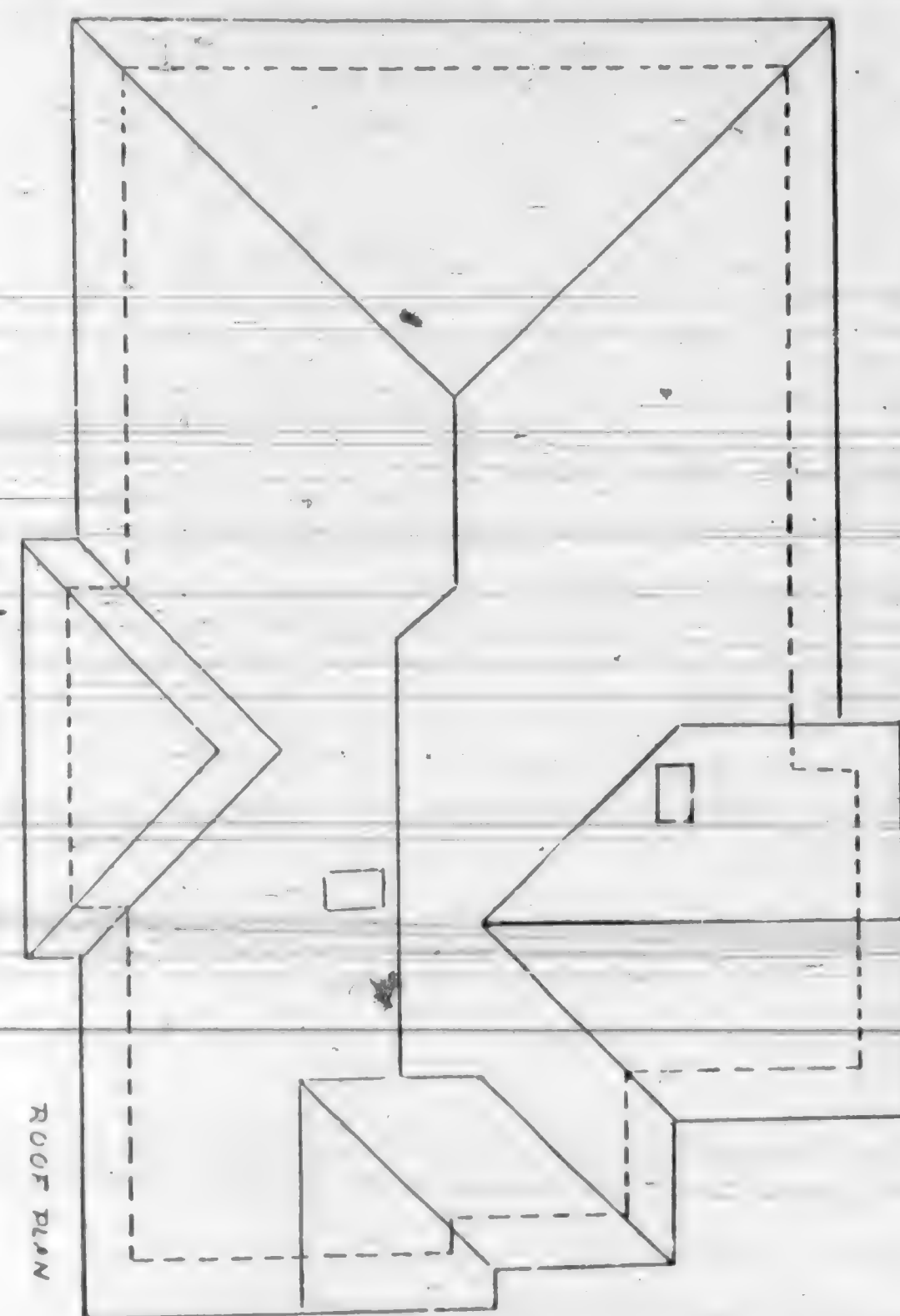
The above specifications are given as a general index



of the work. No accurate estimate can be given from them of the cost of the house. Quality and price of hardware, etc., have been omitted, leaving same to the pocket-books of intending builders. As shown, with finishes indicated by the details given, the house can be erected at a cost of about \$2,500. Of course this figure can be changed considerable. Using best of materials, etc., the price should be given at \$3,000, at which sum a truly cozy home can be obtained by those seeking a permanent dwelling-place.

Outside Painting.

ARCHITECTURE having inclined to a greater degree of decoration, mainly owing to the development of the renaissance style, which aims at picturesque, affords far more opportunities than formerly for attractive and varied color effects. No reason convincing to ourselves has yet been advanced why bright and even gay colors should not be more extensively used in the outside painting of houses, care being taken that the application shall be judicious. They would particularly serve to emphasize what we may term the ornamentally constructive portions, which need to be specially brought out. A very



ROOF PLAN OF ALAMEDA COUNTRY HOME.

little bright color, such as a band of red on olive, will often have a brilliant effect. In an instance which we have in view—a country house—the body of the house is in pea-green, and the olive and red are applied to the cornice and window frames, these colors also appearing in the stoop and piazza. We have seen a business building painted blue, whilst the cornice was of yellow, and the effect was excellent; for a building is not to be considered in the light of a design painted on a wall, or ceiling, or on canvas. It is sufficient that good contrasts are presented, instead of possessing a monotonous appearance. The architect aims at varied combinations of forms, including projections and recesses, and it is for the painter and decorator to give these their best effect in color. We are not recommending mere meretricious gaudiness, than which it is better that a whole house should be painted, exteriorly, one uniform, subdued hue. Too strong a protrusion of color is always a violation of all the rules of harmony and contrast. A house, according to its style and situation, allows of a treatment in colors that in another case it would be manifestly unwise to follow. Let a house be surrounded by umbrageous trees, and red will establish a fine contrast, looking particularly well should the structure be furnished with a tower. There are many country residences in which positive colors have been employed with excellent results; but there remain many more which admit of great improvement by more variety in the way of coloring.—*Painters' Magazine*.

Make two rooms in a house as nearly as possible of the same size and form, for the convenience of turning carpets, and also so as not to require a waste of lumber.

ARCHITECTS AND BUILDER'S POCKET-BOOK.

BY F. E. KIDDER. PRICE, \$3.50.

THE new edition of this valuable work has been issued, and we can now supply all orders. It is the most complete, and contains more valuable information for the architect and builder, than any other work of its kind printed. It is of convenient size for the pocket. The print is beautifully clear. Price, \$3.50.

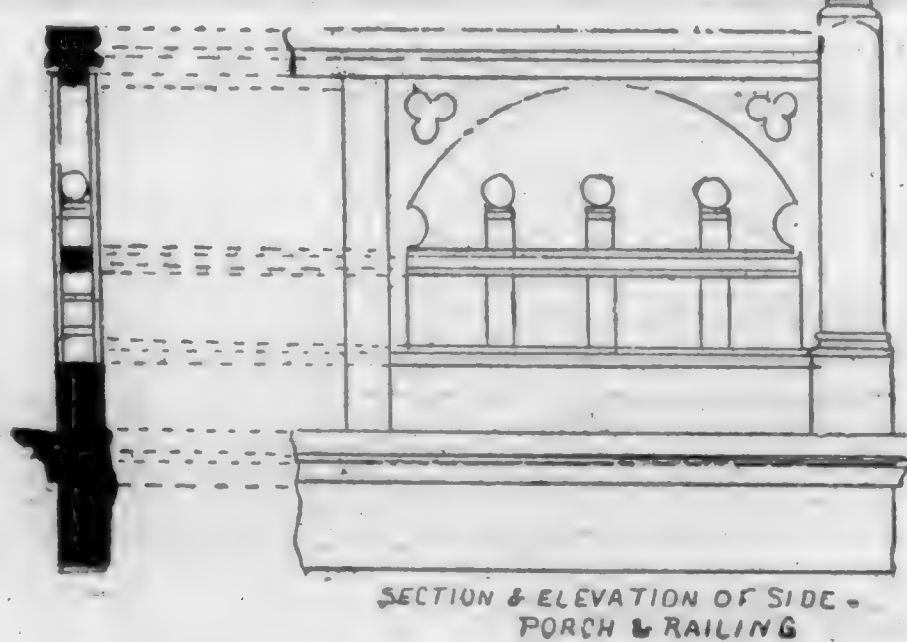
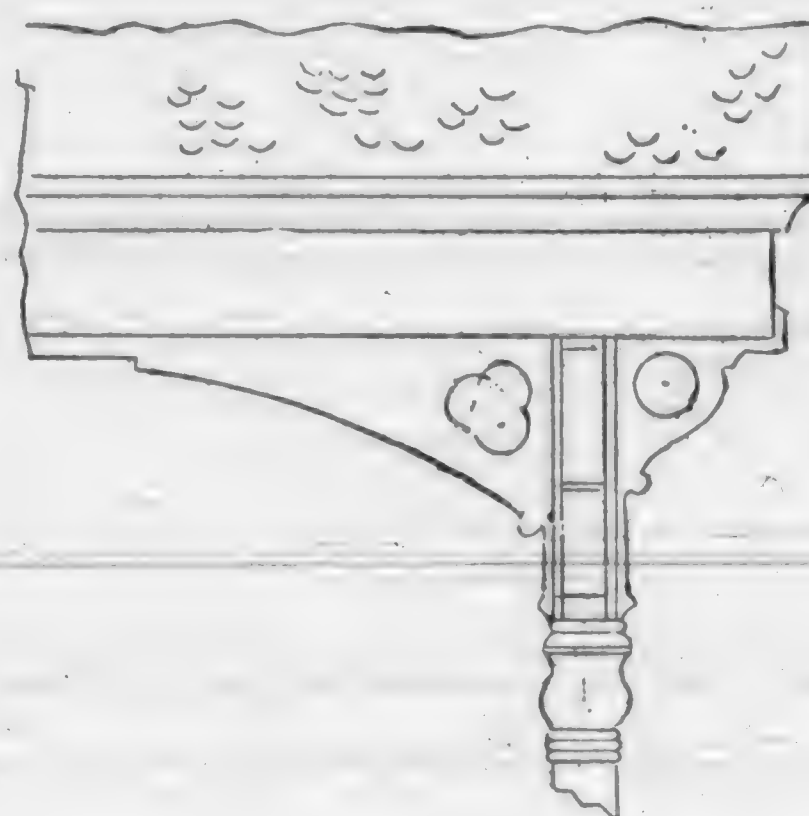
Remaining numbers of this year sent free to all new subscribers for 1888.

What Is an "Architect"?

IS the question asked by the *Record and Guide*. As they state, in the present condition of affairs, "anyone possessing the knowledge of a poor carpenter, the skill of an indifferent draughtsman, a little audacity, and a ten-dollar bill, can appoint himself an architect, and, alluring the public by cheap rates, fill our streets with buildings that are both dangerous and hideous." It is for this reason that we have advocated the licensing of architects. If it is impossible to achieve this result, real estate papers can help to some extent by urging upon their subscribers the enhanced value of buildings designed by architects of reputation in matters of design, construction, and sanitation, and that the fact of a building being constructed under the direction of a reputable architect is, in so far, a guarantee of its being well built.

In regard to the nominal compensation allowed to the "grinders out of plans by the yard," it should be considered by builders, as well as by owners, a suspicious circumstance to find anyone ready to accept a fee less than that prescribed by the American Institute of Architects. We have frequently called attention to the fact that where a so-called architect accepts a nominal sum for superintendence the full commissions are more than made up by taxes on the contractors and sub-contractors, which money eventually comes out of the owner's pocket. Our definition of an architect would be one who has studied the profession of architecture from youth, who has spent not less than five years in the office of a recognized member of the profession, both working at the boards and as superintendent of construction, and one who occupies a portion of his time throughout his life in studying the progress of his profession. A man who says he has no time to read architectural works, or to attend conventions, must be behind the times and only fit for the second rank.

Constant study is as necessary for an architect as for the members of other professions, and one would hardly be likely to intrust his health to the care of a physician who knew nothing of the discoveries constantly occurring in the medical world. With the facilities now afforded to youth, it would be perfectly fair to expect the coming generation of architects to be graduates of architectural departments of colleges, and then to hold certificates of study for a term of years in the office of an architect belonging to some generally recognized architectural association.—*Building*.



SECTION & ELEVATION OF SIDE PORCH & RAILING

DESCRIPTION OF THE NEW BROOKLYN PRESBYTERIAN CHURCH.

WE invite the attention of our readers to the engravings of the plans and elevation of our new and beautiful house of worship, now being erected on the corner of Twelfth Avenue and Fifteenth Street, East Oakland. The building occupies a lot having a frontage of 140 feet on the street and 150 feet on the avenue. The dimensions of the building are 70x143 feet. There is about six feet of yard upon the street frontage, and 25 feet upon the avenue frontage. As the lot is two feet above the walk, this space can easily be made most charmingly beautiful. Upon the western side of the church there is a vacant portion of the lot with a frontage of 45 feet on the street, and 150 feet in depth. Upon the rear portion of this space there will be erected sheds for horses and carriages, while the front portion will be appropriated to drive-ways, walks, and lawn. The auditorium fronts upon the street, from which is its main entrance. The rear portion of the building is for Sunday-

without the gallery, which will be added when required. The floor is well inclined, and the seats will be arranged in a semi-circular form. In addition to the main entrance, there are two other entrances, one upon either side of the organ loft, and leading from the main hall of the Sunday-school department. These, being upon the level of the lowest portion of the auditorium floor, will be convenient for those who wish to avoid ascending steps. They will also connect the auditorium with the other portions of the church, and afford facilities for rapid egress.

The Sunday-school portion of the church is constructed upon a unique but very simple plan, with a view to securing, as fully as possible, the massing of all the scholars into one assembly for general exercises, and their separation into rooms for class recitations. To accomplish this there are employed sliding doors and "slat partitions." This portion of the church is 48x60 feet, with a gallery 12 feet deep upon three sides. Beneath this gal-



BROOKLYN PRESBYTERIAN CHURCH, TWELFTH AVENUE AND FIFTEENTH STREET, EAST OAKLAND, CAL.
(SEE PLANS ON NEXT TWO PAGES.)

school and social meetings, with an entrance from the avenue, and also upon the opposite side of the building from the vacant lot.

The dimensions of the several parts of the building are given upon the engravings of the plans. The roof of the auditorium is supported by strong trusses, the heavy, varnished timbers of which are exposed to view from within the room. Several feet above these timbers is a plastered, dome-shaped ceiling, formed into panels about four feet square by varnished beams and cross timbers. The ceiling in the lowest place is about thirty feet from the floor, and at the highest point about fifty feet. There are four stained-glass windows near the top of the dome, and three large windows in the front and two sides of the auditorium. These three windows will be made very beautiful and consecrated to the memory of three former pastors.—Pierson, the first pastor, Dean and Patterson, both passed to their reward.

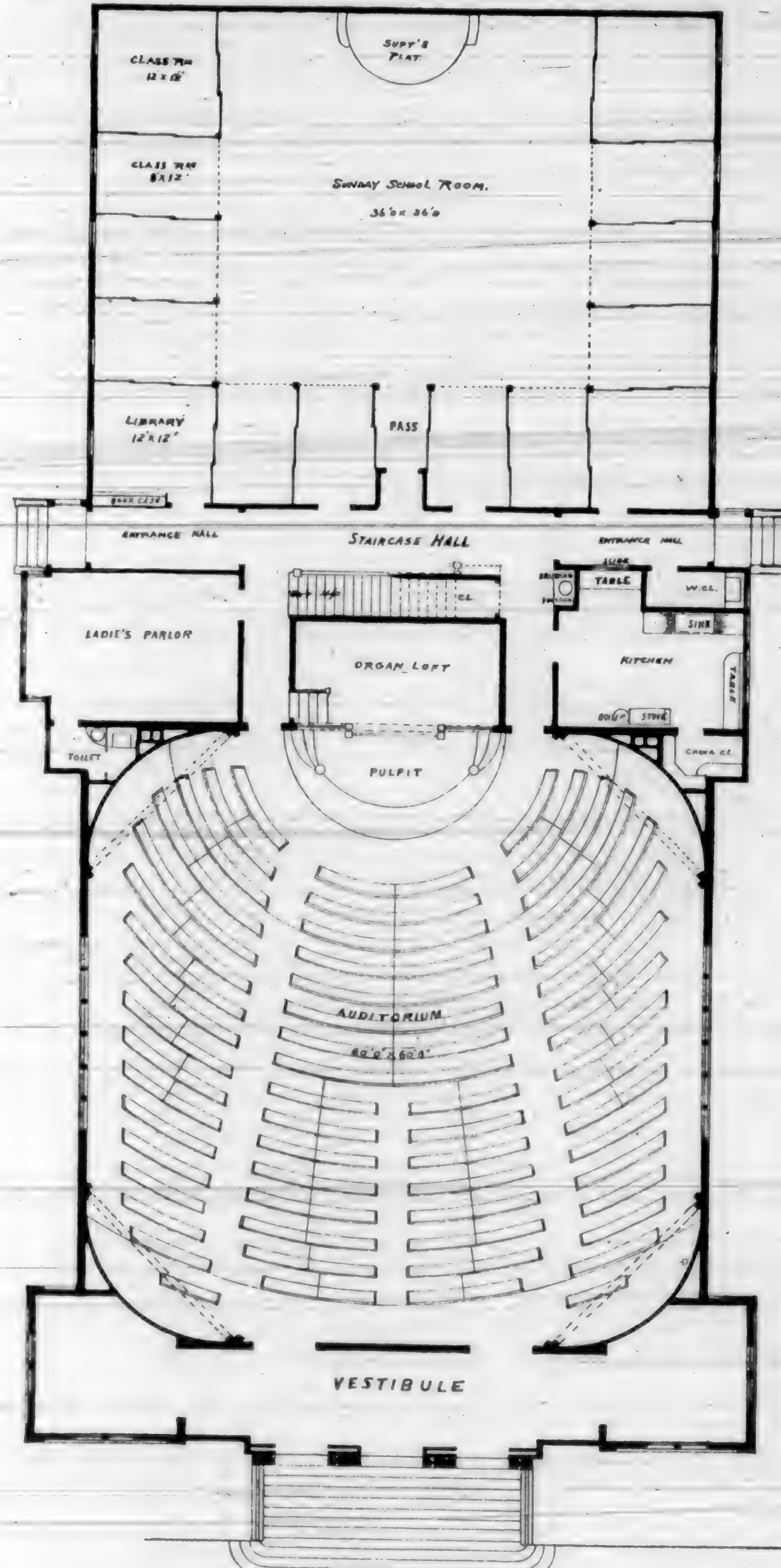
The auditorium is estimated to seat from five to six hundred,

every there are triple sliding doors, coming out from the outer walls to the pillars supporting the gallery. These doors, when drawn back to the wall, are entirely out of the way, and do not interfere with the oneness of the room or school, and when drawn out to the pillars, they form, under the gallery, four rooms 12 feet square, and ten alcoves 8 feet wide and 12 feet deep. These alcoves are then shut off from the main room and converted into class-rooms by means of "slat partitions," drawn down from the ceiling, which is under the gallery, and between the pillars supporting the gallery.

These "slat partitions" are made of white ash slats eight feet in length, three-fourths of an inch thick, and one and one-fourth inches wide. These slats are formed to slightly overlap each other, and are fastened closely together by means of a thin but strong brass ribbon, and all glued firmly to heavy canvas. They thus form a strong curtain, which can be folded or rolled at pleasure. The ends of these slats run in grooves in the pillars

and they are drawn up into the ceiling by weights, which are suspended in the outer walls. When thus drawn up, these partitions lie horizontally between the gallery floor and the ceiling below.

Thus, upon three sides of this main room, and beneath the gallery, there are formed fourteen nice class-rooms, which as speedily all dissolve into one general room. The front of the



PLAN OF FIRST FLOOR.

gallery is closed by "slat partitions" the same as the rooms below. When these partitions are all drawn down, the central room is 36 feet square, with octagonal, dome shaped, plastered and paneled ceiling, 35 feet high. It is lighted from four windows in the dome, and one large window in the rear wall, over the Superintendent's platform. This will also be a charming room for prayer and other social meetings, so cozily shut away from the outer world, and capable of being enlarged at pleasure. The gallery floor is sufficiently inclined to afford a good view of the lower

rooms, and can be separated into rooms for classes, if desired, by means of cloth curtains. When the "slat partitions" are all up, and the sliding doors are all drawn back to the wall, there is nothing to obstruct the view in any part of the room or gallery, save the small pillars five inches in diameter. There are then five doors from the entrance hall into the main room, and two from the hall above into the gallery. The sliding doors are shown upon the plan; the "slat partitions" are indicated by dotted lines between the pillars.

It will be seen that the primary department is so far removed from the other portions of the school that the exercises of one will not disturb the other, and yet the little ones, by taking seats in the gallery, can participate in the general exercises of the school if desired.

Including the pastor's study and the ladies' parlor, there are twenty class-rooms for the Sunday-school, besides the gallery. In several of these rooms there are electric bells, connected by wire with the Superintendent's desk, by means of which the order of exercises is readily communicated to all the school.

The kitchen is located near the main room, with sink, and tables, and china closets, and a "pass window" which opens into the main hall. This will be found very convenient for socials and other kindred gatherings of the church.

By observing the plan it will be seen how fully all the room has been utilized, and how numerous and wisely distributed are toilet and other rooms and closets. The entire cost of the building will not exceed \$25,000, at which price it will be one of the best buildings for the cost in all our lovely city.

Ingerson & Gore are the contractors. Geo. A. Bordwell is the architect. A goodly portion of the credit for the interior arrangement, however, must be given to the pastor, Rev. E. S. Chapman.

Low Ceilings.

THERE was a time—and it was not many years ago—when it seemed that a ceiling could not possibly be too high. Ordinary rooms in an ordinary house—rooms with a width of thirteen or fourteen feet—were made with their height equal to their width, and people rejoiced to think how airy their habitations were. But the openings into these lofty rooms were not always of height proportionate to the apartment, and three or four feet of warm vitiated air at the top of a room is of no benefit to its inmates. A few years ago it became the fashion to study the roadside hostleries, old farm-houses, and country dwellings built here and in England in the century preceding the declaration of independence. These models had low ceilings, often so low that a tall man might bump his head against a beam, doors so low that the same unfortunate individual was compelled to stoop on entering, and windows, for these were the days of dear glass, so low that their width exceeded their height. These windows were filled with small panes, which in older examples were set in lead and formed part of a casement—and in other cases were puttied into wooden sash-bars that kept out half the light. It became the fashion to copy these inconveniences, which builders of the time would have gladly dispensed with had they known how, and thus it comes to pass that a modern "cottage," as it is now the fashion to call what a few years since would have been styled a "villa" or a "mansion," must have disproportionately low ceilings, and either leaded lights in awkward casements, or tiny square panes in tavern-looking sashes.

Shade of common sense—is humanity crazy, that it thus jumps from one extreme to the other? Must we live in rooms eight feet or eight-and-a-half feet in height, with windows the top of which is scarcely level with our heads, just because our worthy great-great-grandfathers did so? Because an unventilated lofty parlor is a waste of money and space, must I reside in a parlor so low that it cannot be ventilated quickly enough to be healthy? It gives a sort of cemetery sensation to enter a modern room, 20

feet by 14 feet by eight feet high, and oh, it's such a stuffy death!

It is strange that almost everyone, when making a comparison, forgets the first condition of a comparison, viz., other things being equal. It is undeniable that a ceiling may be too high. There is such a thing as proportion, and too great a height is money and space wasted in the production of disproportion. The heights of rooms in an ordinary house must oscillate between numbers the largest of which is not twice the smallest, and must, moreover, as a rule be the same throughout a story, whether the room be large or small. The problem is to get the best average height, the height which best combines the requirements of proportion, fresh air, and economy. It is evident that this height ought, so far as proportion goes, to be greater in a house having large rooms than in one in which the length and breadth of the rooms is smaller, but considerations of economy check the increase of height in the former case, while the necessity of head room and cubic air space limit it in the opposite direction.

The only way to arrive at a sensible compromise between mere fashion and economy on the one hand, and the claims of proportion, light, air, and liberty on the other, is to ask the question, For a room of a given length and width, what is the best height?

For example, what is the best height for a rectangular room 20 feet by 14 feet? The writer places it at 11 feet. If the room were a square of 14 feet, 10 feet would be sufficient height.

It would be interesting to hear opinions upon these matters, provided always that admiration of a low ceiling because it is the fashion were not allowed as an opinion.

The matter greatly concerns the health and comfort of everyone. Landlords and speculating builders are taking greedily advantage of the fashion which enables them to charge for houses containing about three-fourths of the cubic contents once thought a necessity, prices in excess of those formerly charged for the larger cube. The clinching argument in favor of low ceilings is usually economy in heating. Still greater economy in heating could be gained by living in an air-tight box of six feet cube. We approach this condition of things too nearly as it is, with our furnace flues pouring in hot, dry air, and our windows filled with rubber strips.—W. N. Lockington, in *Builder and Decorator*.

Shingles in Modern Architecture.

THOSE who have watched the tendency, or, we may say, the evolution, of style in wooden suburban and country houses, must have noticed the gradual disappearance of the monotonous and uninteresting clapboard, with its uncompromising horizontal lines.

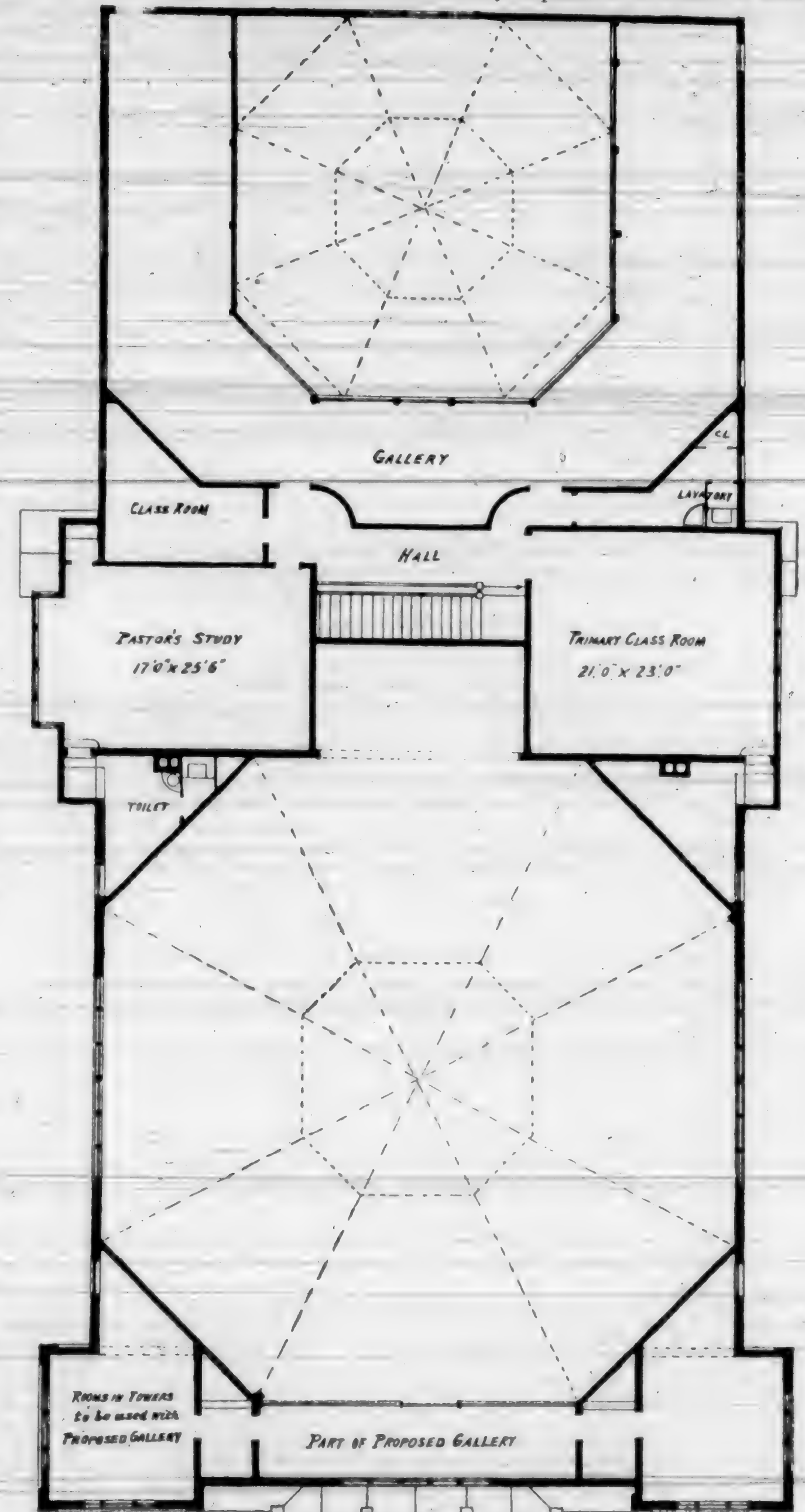
The cry is, "The clapboard must go," and it is going. But what is replacing it? The answer is instantaneous—the shingle. With the many ingenious methods of laying shingles, the greatest variety of effect can be obtained without cutting them at all. But now comes the important question of coloring. At first paint was used, but the dull monotony of masses of color covering the grain of the wood has now almost universally given way before the modern creosote stains. Many attempts have been made to imitate the effect of stains without using creosote, but they have been sad failures, as other oils do not penetrate the wood and bring out the grain in relief. A test was recently made at the request of well-known architects of Boston, by a prominent chemist, of all the materials sold under the name of "stains." The result was that he pronounced "Cabot's Creosote Stains" among the best of them all.

These creosote stains have already been so long in use that the preserving properties of the creosote have begun to show their value on houses in all parts of the United States.

Planning of Rooms.

WHATEVER the length of a room may be, it will not be disagreeably proportioned if its height and breadth are the same: and if the length may be limited, once and a half the breadth is the most pleasing. Galleries, of course, will

be much longer than that proportion, and the corridors will necessarily be narrower than they are high. Entrance halls should be cubical, regularly polygonal, or circular. Access should be given to a room by the end; it should be lighted on one side, and the fire-place may be at the other end, or on the other side; if the former, there should be two doors, or one and the appearance of another, that the fire-place may be immediately opposite a door. Many things, however, from localities and otherwise, constantly occur to make it absolutely impossible to attend to such



PLAN OF SECOND FLOOR.

suggestions as these. In halls and saloons not commanding a pleasing view, the windows may be advantageously placed above the usual level, for agreeable effect, for light, and for ventilation. In rooms lighted from above, as the Pantheon in Rome is, a columnar ordinance may be judiciously adapted, but otherwise columns and their accessories can seldom be well disposed internally.—W. Hosking, in *Carpentry and Building*.

Remaining numbers of this year given free to all new subscribers for 1888.

Questions and Answers.

ENLARGING DRAWINGS.—John R. McC. writes: What is the quickest and most practical way to enlarge architectural and other drawings?

Answer.—For accuracy and speed photography is to be recommended; but as this necessitates special apparatus and some amount of skill, you would probably find that the instrument known as the "pentagraph" would suit your purpose. These may be purchased at any store where artist's instruments are sold for from 25 cents to \$20, and after a little practice are easily used, and prove very accurate. In the absence of this instrument, the enlargement may be executed by first drawing a number of parallel lines over the drawing at equal distances apart, and then other parallel lines at right angles. These are taken as the basis of measurements. Upon the plain sheet of paper lines at right angles to one another like those on the drawing are formed. Measuring with the two different scales of the original drawing and copy, an enlargement may soon be produced. Full details of the process will be found given in any of the manuals of drawing. The proportional compasses will be found to be a material assistance in the operation.

BURNT CLAY FOR CONCRETE.—S. T. W. writes: In a recent number of your journal I see burnt clay is recommended as a good substitute, both for ballast to be used in forming concrete, and for sand to be used in making ordinary mortar. Will you please give me some further particulars as to the manner in which it should be prepared?

Ans.—The clay chosen for this purpose should be a stiff one. A suitable quantity having been dug, it is mixed with coal dust or small coal, and piled in a heap, previous to which a suitable fire is formed at the bottom consisting of wood, shavings, or straw, with small pieces of wood on top, then larger pieces, and finally some large coal. The fire is lighted through a touch-hole left for the purpose, and the bulk of the clay is added after it becomes well alight. In using burnt clay for ballast, it needs only breaking up; but used in lieu of sand, it will need grinding. Great care must be taken that the whole of the clay used is thoroughly well burnt.

Artificial Stone—Valuable Patent Right for Sale.

(SEE ALSO OUTSIDE BACK COVER.)

WE would call attention to the description below of a new compound for artificial stone, samples of which may be seen at this office.

COMPOSITION FOR ARTIFICIAL STONE, ETC.

John Lorenz, of Muskegon, Michigan, has invented a new and useful composition forming an artificial stone, to be used in the construction of walls, paving, and all other purposes in which an artificial stone is applicable.

The nature of his invention consists in a proper combination of ashes and cinders, or clinkers, with ordinary cement to form a perfect and durable artificial stone, for the purpose above specified. A material has been used for these purposes, composed of clear ashes and cement, and also of clear cinders and cement, as well as these materials combined with lime or adhesive substances; but so far as our knowledge extends, no one but the inventor has yet used the compound formed of ashes, and cinders with cement.

Experience has shown that artificial stone made of ashes and cement is susceptible to the action of the elements to such a degree as to cause it to soften, scale, crack, and easily wear out; and, further, artificial stone made from cinders and cement has been found to be too gritty for many of the purposes hereinbefore set forth, is liable to become rough by use, and requires a very large amount of cement in its formation, and consequently is more expensive than stone constructed by a combination of ashes with cinders and cement. By experiment I have demonstrated that this combination produces a stone which will not be injuriously affected by heat, water, or frost, and is, therefore, free from cracking, crumbling, scaling, or softening, and can be dressed and polished to such an extent as may be required.

The right to manufacture above on the Pacific Coast is offered for sale. Please notice adv. on outside back cover. Full particulars can be had at this office.

Material for One Hundred Yards of Three-Coat Plastering.

EIGHT bushels of good lime, one bushel of hair, one load of sand, one barrel of plaster of paris. Two of the eight bushels of the lime are required for the second coat; 1,440 lbs., 10 pounds of nails, will do 100 yards of lathing.

HILL'S
Patent Inside Sliding Window Blinds,

Are Adapted to any Style of Window,
And Suitable for all Buildings, Dwellings, Stores, Office
Buildings, and for Houses Built to Rent, Hotels,
Boarding or Lodging Houses are
Unexcelled.

They are entirely inside of the window casing, and while requiring no furring out or boxing, make it an impossibility to tear curtains, interfere with plants or window ornaments, or become broken by contact with chairs or other movable articles.

The light can be admitted and sunlight excluded from any part of the window; can be instantly removed and taken to any part of the house to clean and as easily replaced.

They can be opened or closed with the window raised, and without removing articles from the window-sill, and cannot blow open or rattle. The blind is very light (one-half inch in thickness) and strong, possessing more durable qualities than a hinged blind one inch in thickness.

There is no sagging, hanging, or getting out of order.

They are made in three sections in height (each section sliding past the others), and any number of divisions in width corresponding to the folds in the old-fashioned folding blinds. They require no hinges—all trimmings furnished with blinds—are made of all woods, finished or unfinished.



The Blind manufactured throughout the United States and Canada by the members of the HILL SLIDING BLIND ASSOCIATION, is the only sliding Blind ever put into practical and general use, or that has been adopted and used by the leading architects and builders, both East and West.

It is rapidly displacing the objectionable folding blind, also shades, which since they have ceased to be considered the fashion, are used principally in cheap dwellings and tenements.

The Hill Blind is the only sliding blind made of white cedar, and where the grooved slide can be used as the window stop, or placed on the pulley stile, similar to the ordinary stop—the slide is only 2 1/2 inches wide—plenty of room can be obtained by setting the casing flush with the pulley stile, in light studded buildings. NOTE.—Any other sliding blind using the slide as the stop for the sash, is an infringement of our patents of February 26, 1884, and February 24, 1886, and anyone selling, using, or making such a blind will be prosecuted by the HILL SLIDING BLIND ASSOCIATION, as they are determined to stop the sale of several cheap and worthless imitations.

The Hill Sliding Screen, working the same as the blind, is the only screen covering one-half of the window, which will remain at any desired point, and which can be instantly removed, when not required, or to clean the windows.

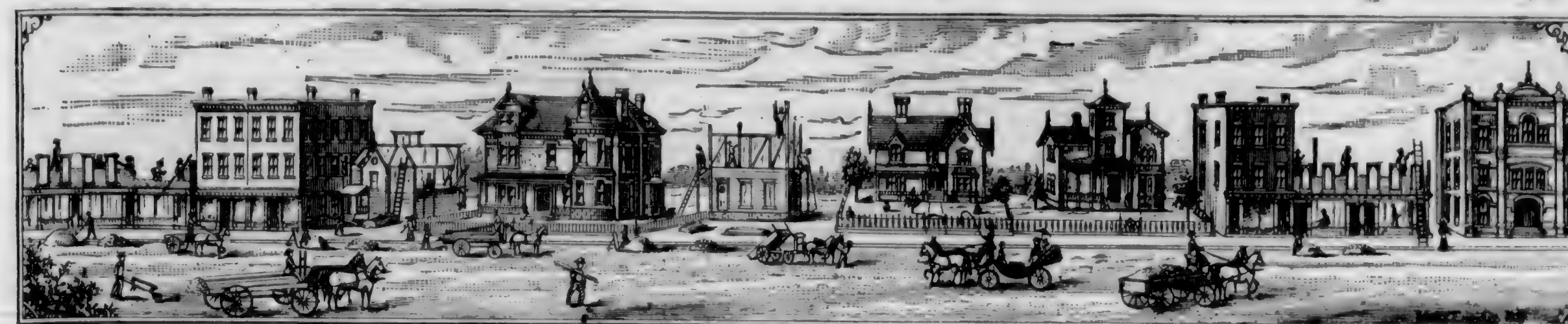
Over eight thousand sets have been specified and put in, throughout the Pacific Coast, since April 1, 1885.

We refer to the following prominent architects of San Francisco, who have used or specified the Hill Blind and Screen, also hundreds of owners throughout the Pacific Coast:

Miller & Armitage, Pissis & Moore, H. D. Mitchell, John Marquis, John M. Curtis, Moore & Schultze, J. T. Kidd, J. H. Humphreys, T. J. Welsh, Jas. E. Wolfe, Townsend & Wreken, Chas. J. Deylin, Geo. E. Voelkel, Copeland & Banks, M. Balczynski, Edw. R. Swain, Chas. V. Pierce, S. & J. C. Newson, Wm. Mooser, Chas. Geddes, Macy & Jordan, H. T. Bester, A. A. Bennett, Salfeld & Holberg, A. J. Barnett, John J. Clark, G. V. Capelletti, P. R. Schmidt, M. P. Schetzle, Clinton Day.

HINDES & MURRAY,
Main Office and Factory, 411 Mission Street, Corner of Fremont.

Sole owners of the right to SELL and MANUFACTURE for the Pacific Coast, except Counties of San Diego, Los Angeles, San Bernardino, Santa Barbara, Kern, San Luis Obispo, and Ventura in California.



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.

Colton.

W. R. Fox, M. D. Residence, frame. J. F. Wallin, contractor. Amount \$6,440. E. Newcomer, architect.

Mural Painting (new), for \$3.00.

Home Hand-Book, for \$10.00.

M. A. Murphy. Residence, frame. J. F. Wallin, contractor. Amount, \$3,360. Jones & Griffiths, architects.

Limes, Cements, and Mortars, for \$4.00.

History of Architecture, for \$15.00.

Transcontinental Hotel, additions. E. Newcomer, architect. Cost about \$5,000.

Shavings and Sawdust, for \$1.50.

American Cottage Building, for \$3.50.

Methodist Church Society, frame church. Wm. Pierce, contractor. Cost, \$2,650. E. Newcomer, superintendent.

Architecture and Building, \$3.50.

American Cottage Building, for \$3.50.

Florida, San Jacinto Co., Cal.

Kerr & Young's Hotel, frame. Amount, \$10,000. E. Newcomer, architect.

Oakland.

St. Mary's College. Architect, J. J. Clark; contractor, Remillard & Co. Cost of brick work, \$43,000.

Oregon.

At Salem, contracts have been let for the construction of the new wing to the Insane Asylum. It will cost \$9,000.

Artisan, for \$5.00.

Builders' Guide, for \$2.00.

A. H. Johnson will build a warehouse on his dock at the foot of K Street.

Practical Perspective, for \$5.00.

Woodward's Country Homes, for \$1.50.

A two-story frame dwelling is being built on the corner of Seventeenth and N Streets for John Myer.

American House Carpenter, for \$5.00.

Cutting Tools, for \$2.00.

R. P. Earhart, ex-Secretary of State, is having a handsome building built on Tenth Street, between Mill and Market, to cost \$7,000.

Woodward's Country Homes, for \$1.50.

Plaster, How to Make it, for \$1.00.

A great shingle-making industry can be built up on the Sound, where there are unsurpassed facilities for the manufacture of cedar shingles. The Oregonian, in speaking of the growing demand for cedar shingles in the East, says: "This week a local house received a telegraphic order for fifty car loads of cedar shingles. Orders from Ohio, Missouri and other Eastern points have been and are being filled almost daily. A Pittsburg man desires a great quantity, which could not be supplied at this time."

Steel Square Problems, for \$1.00.

Workshop Companion, for 35c.

J. A. Van Easton will erect a \$2,000 residence.

Builders' Companion, for \$1.50.

Artistic Homes, for \$3.50.

The new temple of the A. O. U. W. will be erected on an available site not further back than Fourth Street, and between Salmon and Oak. The building will be of brick, and cost not less than \$70,000.

Wonders of Art, for \$1.25.

History of Architecture, for \$15.00.

The four-story addition to the Portland Savings Bank building on Washington Street will be commenced at once. It will cost about \$17,000. Contract has been let for the work this week.

Builders' Companion, for \$1.50.

Builders' Work, for \$5.00.

Three frame stores are being built by Charles Logus on Fourth Street between K and L, Portland, to cost \$3,000.

Ruskin's Works (four volumes), for \$6.00.

Industrial Drawing for Carpenters, for \$2.00.

Redlands.

Stimmel & Lissenden, store and office. Brick building. Cost, \$5,800.

Artistic Homes, for \$3.50.

Modern House Painting, for \$5.00.

Y. M. C. A. Brick building: Cost, \$4,000. Brooks, contractor.

American Cottage Homes, for \$3.00.

Builders' Work, for \$5.00.

Mrs. C. Wells. Frame residence. Lancaster & Minor, contractors. Cost, \$3,600. E. Newcomer, architect.

Practical Perspective, for \$3.00.

History of Architecture, for \$15.

Sloan's Hotel building, brick. Cost, \$15,000. S. J. Logie, architect and contractor.

American House Carpenter, for \$5.00.

Cutting Tools, for \$2.00.

Washington Territory.

At Puyallup, a \$12,000 hotel is being erected.

Science of Carpentry, for \$4.00.

Universal Assistant, for \$2.50.

CONTRACT LET.—The Portland man, who put in the lowest bid for the construction of the Methodist Church in Seattle, raised his bid from \$24,000 to \$30,000, and finally backed out altogether and went home. The trustees immediately decided to build a brick basement, and construct the superstructure of wood. We are authorized by Rev. A. J. Hanson to state that the contract for the construction of the brick basement has been let to Mr. Parke for \$2,950. He will begin work to-day, and his contract requires that the work be completed in 20 days. The basement will be of brick, 13 feet in the clear and be made ready for the superstructure, which will be let as soon as the foundation is completed.

Building Superintendence, for \$3.00.

American Cottage Homes, for \$3.00.

A four-story brick block 100x115 feet, is to be erected on the corner of Ninth Street and Pacific Avenue in Tacoma, for W. H. Fife. Cost nearly \$80,000.

At Garfield a school building will be erected. Lawrence & Holbrook are the contractors.

Miscellaneous.

BIDS FOR PROPOSED NEW SCHOOL-HOUSES IN S. F.—Bids were opened for building, according to plans and specifications of the department architect, two school-houses, one on Union Street near Franklin, and the other on Page Street between Baker and Broderick. The bids were as follows:—

Bidders.	Union Street School.	Page Street School.
John Blake.....	\$23,978	
A. McElroy.....		\$23,494
T. C. Riddell.....	24,350	23,990
Moore Bros.....	25,453	25,493
S. P. Green.....	21,995	22,695
J. H. McKay.....	18,440	18,940
John J. Dunn.....	25,993	26,695
H. T. Bray & Co.....	20,796	21,396
G. W. & J. W. Hansbrough	23,400	23,800

[Contract was awarded to J. H. McKay for Union Street school-house, at figures given.]