

# The Canadian Builder

:: and Carpenter ::

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Vol. 2

OCT 26 1912

TORONTO, OCTOBER, 1912

No. 10



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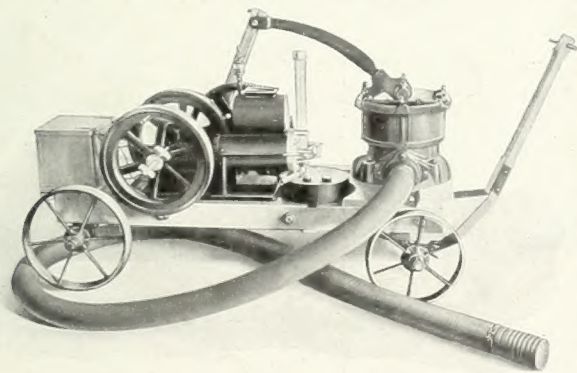
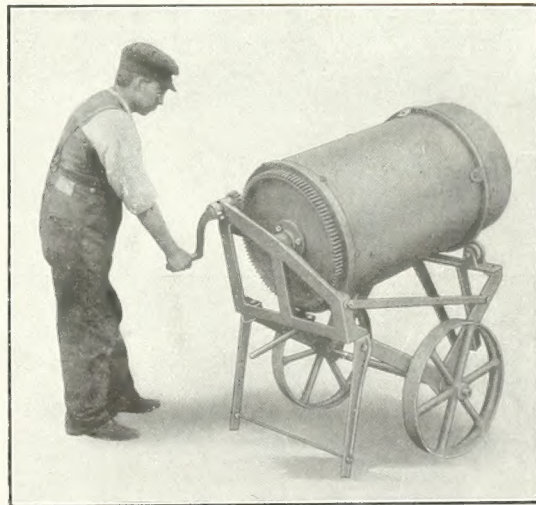
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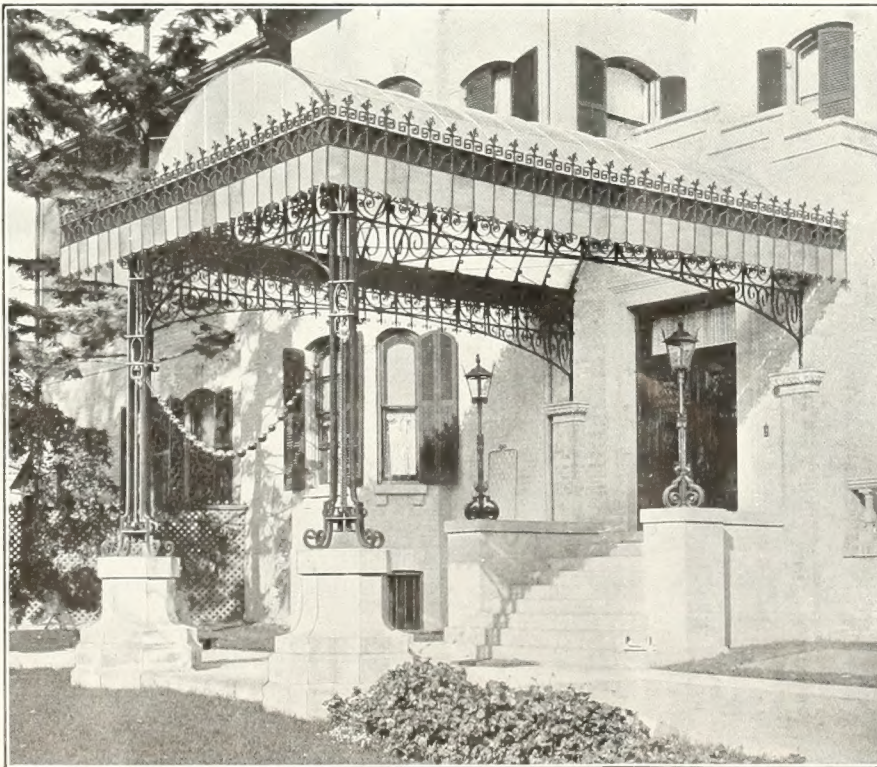
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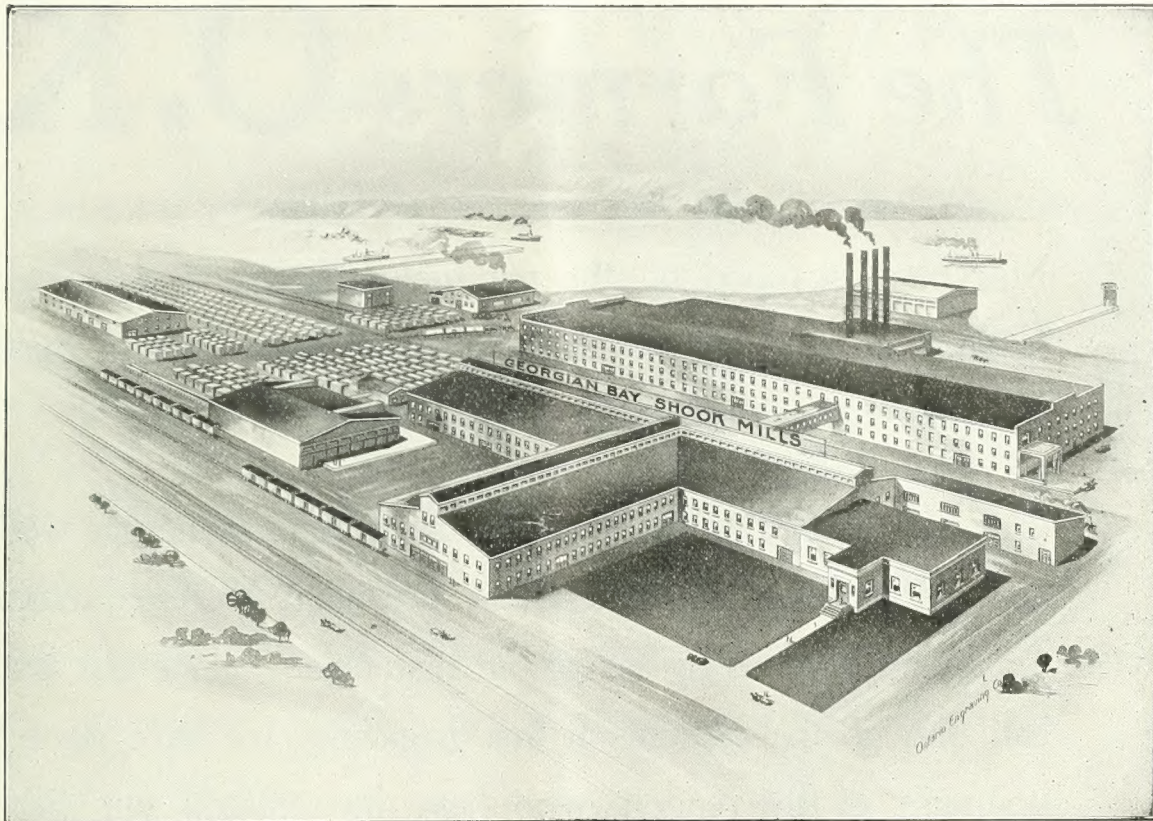


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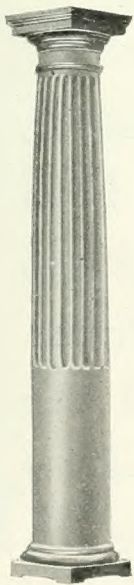
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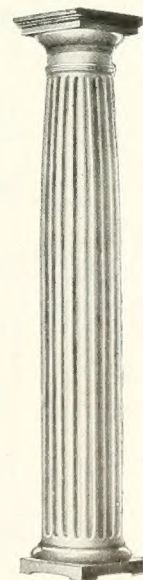
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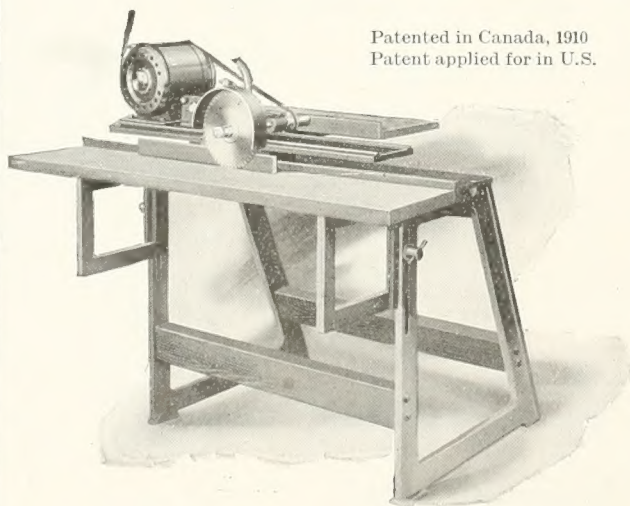
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One of the most conspicuous features of that house will be the roof. Its shape, the manner in which it is laid, and its colouring may be the means of forming the first impressions on the mind of a prospective buyer.

*ASBESTOSLATE*

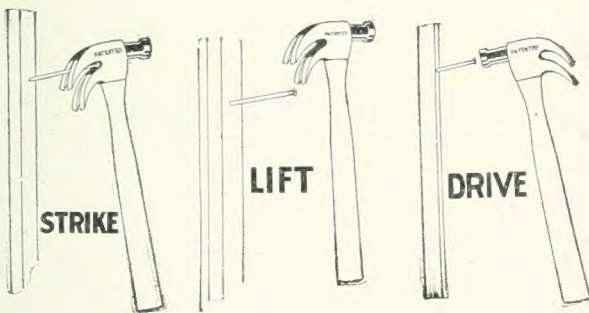
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will make those first impressions favourable ones. This roofing material imparts a distinctive but quiet individuality to the whole building. Furthermore, it offers to the seller of that building exceedingly strong arguments, for the reason that such a roof is wind-proof, water-proof and fire-proof. The owner will never be put to the expense of painting or staining it, and it is practically everlasting without the need of repairs. It is arguments of this kind that clinch many a sale.

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**The Asbestos Manufacturing  
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E. T. B. Bldg., MONTREAL. Factory at Lachine



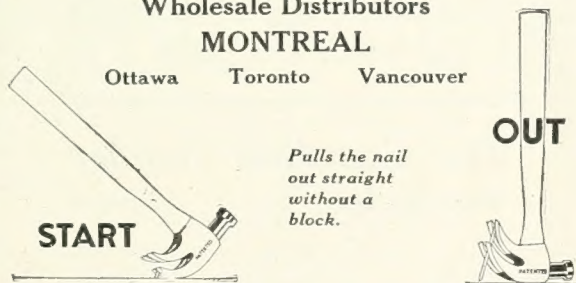
Great for high nailing. It pays for itself almost at once. Make money using it.

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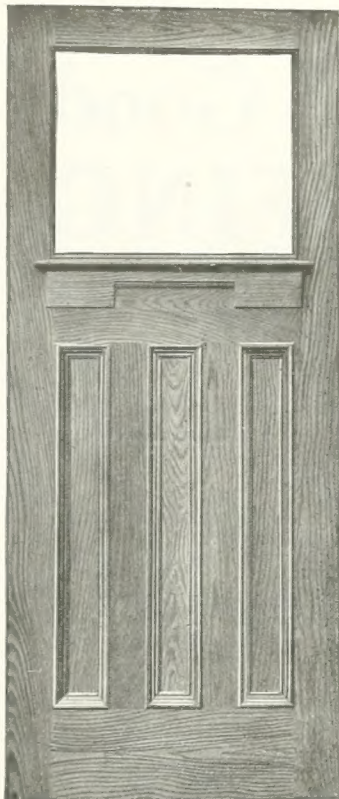
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**Fox Supply Co., Brooklyn, Wis.**

Please send me particulars about the Photograph Contest.

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Canadian Builder and Carpenter

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The advertising you will get from the appearance of your house in the paper will make it well worth your while.

**The Canadian Builder**  
McKinnon Bldg. Toronto





The first six houses of thirty to be erected on a street in Hamilton by Mr. James Bryers. The builder is to be congratulated on the pleasing effect he has obtained and the distinction he has given this new street.

## The Speculative Builder's Share in Town Planning—Some Interesting Suggestions

By C. H. Moody

THIS is the age of the speculative builder, and Canada is for him the land of exceptional opportunity. "We don't do any contract work; we build to sell," is the remark made daily to the writer by many builders. The same gentleman, when tackled on the important question of the relation of their work to town planning in the effective grouping of the residences they construct, reply at once: "We're just rushing up low-cost dwellings for immediate sale, and it won't pay us to bother with that sort of thing, because our clients are people of small means and they can't afford spacious gardens and elaborate buildings."

On looking into the question a little closer, however, it is evident that the speculative builder can lay out his low-cost dwellings so as to give more light and air to the tenants, and also to enhance the appearance of the street, thus avoiding the monotony which mars so many of our cheaper residential thoroughfares in city and town alike. In recent issues of this journal we have urged widespread effort to get out of this undesirable rut, illustrating the point by pictorial examples of right and wrong methods in grouping small houses. It is well to note incidentally that every ugly street is a reflection on the taste of both builders and occupants.

### The Object of Town Planning.

A general impression prevails that artistic and harmonious building schemes can only be obtained in connection with large enterprises, such as the new garden

cities of the old country, "proprietary" industrial towns and villages such as Port Sunlight, Eng., Essen, Germany, and Pullman, Ill., or like the newly floated housing scheme in Toronto. A recent number of Scribner's Magazine, however, contains three excellent articles on Town Planning, from one of which it can be seen that the man who builds a street of houses, or one side of a street, or even on a few adjoining lots, can do much more than he has done hitherto towards the valuable and necessary work of town planning, the chief object of which is the making of healthier, happier and more efficient citizens, by surrounding them with a better environment.

### Arrangement of Small Areas.

The article to which we refer is entitled "Model Towns in America," by Grosvenor Atterbury, who discusses at considerable length the artistic, social and economic aspects of the subject, dealing with the experiments made on a large scale by communities and commercial corporations. We are most concerned with the valuable suggestions given for the arrangement of small areas, which, as indicated above, can be used by speculative builders. In Fig. 1 we have an ordinary arrangement of small houses on seven adjoining lots. The undesirable features are obvious. "A more excellent way" is shown in Fig. 2, where the same seven lots are treated in a manner which gives a more pleasing appearance to the whole, and an ampler supply of light and air, with consequently greater comfort, to the occupants. The latter scheme also provides

for different tastes, the person who likes a near view of the sidewalk and the one who likes to live as far back from the street as possible, both being accommodated.

Figs. 3 and 4 demonstrate by contrast how not only more variety and increased comfort, but also greater economy in space, can be secured by departing from the conventional method of building a row of houses up to the same line. The economic advantage alone, saving 20 per cent. on the average width of each lot, must commend it strongly to both builders and purchasers in these days of swiftly advancing real estate values.

**The Private Park Idea.**

Among the favorable features of London and some of the other large cities of the old country are the spacious residential squares, the centres of which are filled by gardens for the exclusive use of the residents around the squares. In some the gardens contain tennis courts or other special facilities for recreation. These squares are really private residential parks, and although they form admirable "lungs" for the neighborhood, they are generally surrounded by the mansions of the rich or extensive and in many cases expensive boarding houses.

But the private park idea can be carried out for the benefit of people of moderate means, as at Forest Hills Gardens, Long Island (described by Mr. Atterbury), where a practical attempt is being made along these lines. In Fig. 5 we have the design for laying out a complete block, which comprises sixteen building lots, with space adjoining for play lawns, tennis court, croquet lawns, sand court and garden plots. In this instance the occupants of the abutting houses each pay a share of the rent for the private park, which is based on the wholesale price of the land.

There are two classes of people with limited incomes to whom a scheme of this kind makes a special appeal—those who want to experiment in gardening on a small scale, preferably close to home, and those who desire a more select playground for their children than the street or the public park.

In Fig. 6 we have an alternative scheme, which could be used in the event of the tenants around the block deciding to discontinue the extra expense of maintaining the private park. The space formerly used as the park is converted into seven or more building lots and a new street.

A scheme of this kind could be worked by any speculative builder owning a complete block, or by a small company formed for the purpose.

**Pleasing Treatment of New Street in Hamilton.**

Apropos of this interesting subject we have pleasure in giving photo cut of a new street in Hamilton, Ont., now being built up by one contractor, Mr. James Bryers. In this street the plans of the houses are all similar, although slight alterations may be made to suit purchasers who buy during the earlier period of construction, but the elevations are all different, no two exteriors being alike.

The interior finish and fixtures of these houses are exceptionally good, Mr. Bryers' object being to erect dwellings that will yield permanent pleasure and comfort to the inmates, the slight increase in cost thus occasioned being no serious drawback to the prospective purchaser who realizes that it is worth while to make a struggle to obtain quality in his home.

In looking over one or two of these dwellings the writer was particularly pleased with the size of the wash basins in the bath rooms. They were large and therefore suitable for a thorough wash, which many of the usual tiny apologies for wash basins are not. A minor point, apparently, but yet an indication of genuine catering for comfort, which should be far more general in houses "built to sell."

There is not enough money spent on building in the old country, claims Mr. Chiozza Money, M.P., the famous economist. He would have towns rebuilt every 50 years. His views are startling and unusual, but we have a private opinion that builders will agree with them.

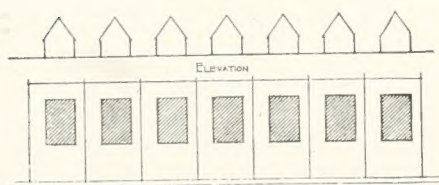


Fig. 1.—Ordinary arrangement of small houses.

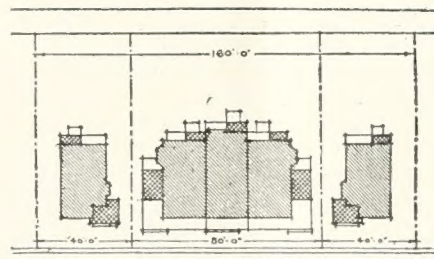


Fig. 3.—First arrangement of houses

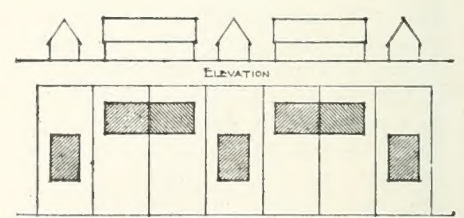


Fig. 2.—Another arrangement of small houses.

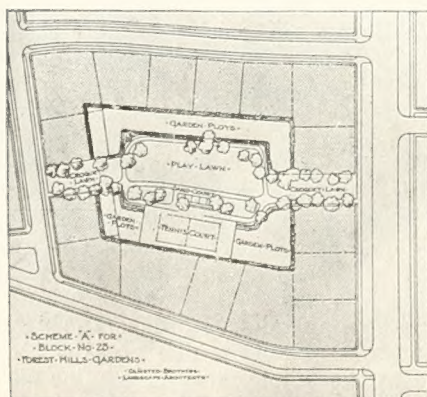


Fig. 5.—House arrangement with park.

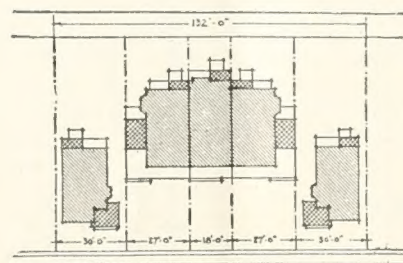


Fig. 4.—More economical arrangement.

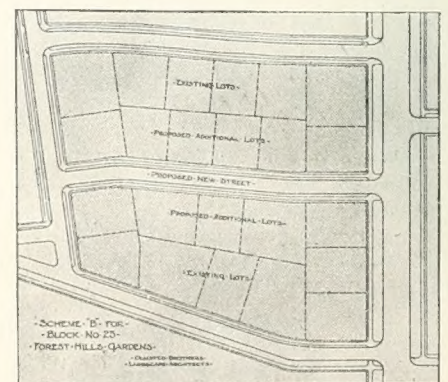
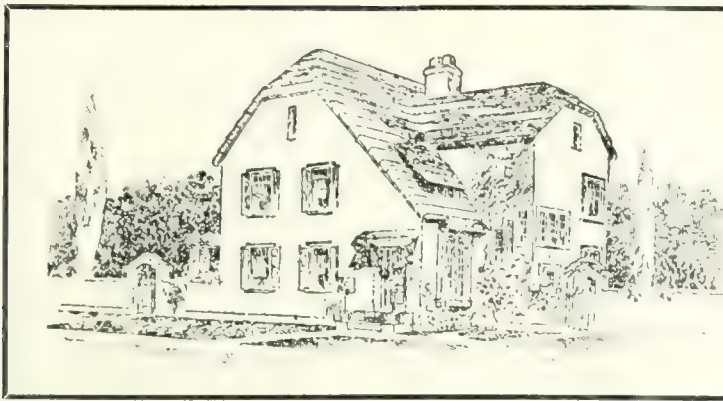


Fig. 6.—House arrangement without park.



# Prize House at Estimated Cost of \$4500

Plans by Stephen Goossen, Detroit

**T**HE elevation and plans shown herewith are for a house which is estimated to cost complete \$4,500.

They are the plans which took first prize in a recent competition of the Building Trades Employers' Association in which more than 200 architects took part.

Architects were invited to submit plans for buildings not to exceed \$4,500 in cost not including plumbing and plumbing fixtures and heating. The plans here reproduced are the work of Stephen Goossen of Detroit.

The estimates of cost for this building are:—

Excavating . . . . .	\$ 60.00
Concrete footings, cellar floor, terra cotta block walls . . . . .	1,661.00
Chimney . . . . .	90.00
Roof (frame, shingles, labor, material) . . . . .	580.00
Inside plastering . . . . .	260.00
Inside and outside finish . . . . .	980.00
Doors and windows . . . . .	210.00
Finished floors . . . . .	180.00
Painting and glazing . . . . .	198.00
Walks, grading, etc. . . . .	90.00
Tin work, flashing, etc. . . . .	51.00
Fixtures . . . . .	100.00
<b>Total . . . . .</b>	<b>\$4,460.00</b>

The general specifications provide for:

Basement walls, terra cotta blocks, size 8 x 12 x 12 in.

Entire basement is to have a concrete floor.

Building to be frame and tile construction.

Joists: first floor: 2 x 8 in.—16 in. on center.  
Joists: Second floor: 2 x 10 in.—16 in. on center.  
Joists: Third floor: 2 x 8 in.—16 in. on center.  
Rafters: 2 x 6 in.—20 in. on center.

Living room: alcove room, stair hall and vestibule, ash finish; stained, weathered.

Dining room; pine painted white.

Passage between kitchen and stair hall is to be ash finish; stained weathered.

Kitchen and pantry; pine finish, painted white.

All second story finish is pine, painted white.

The attic stairs and finish in the rooms of the attic are to be yellow pine. All to be left with natural finish.

All the rooms throughout must be plastered, including the stair wall to the basement and also attic rooms.

The tile work on porch floor is to be a dull green and color to be left natural.

The floor in the vestibule and floor and upper portion of the fireplace are to be tile of a dull blue tint.

The living room to be panelled, also the stair hall to second floor line as shown on section drawing.

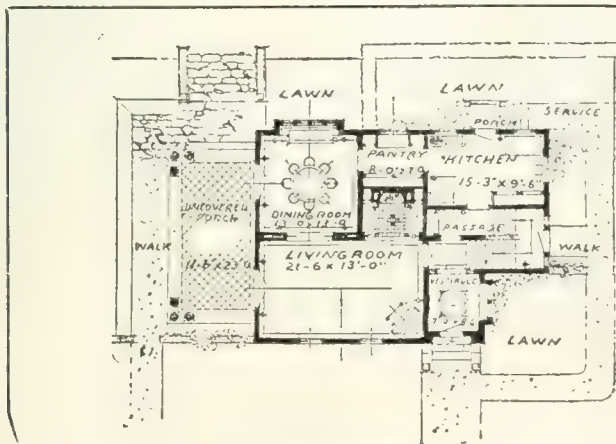
Panelled wainscoting is also required in back of seats in alcove room, to bookcase, each side of mantel.

All to extend up 7 feet from the floor, except in the stair hall, there the panelling to be made as shown.

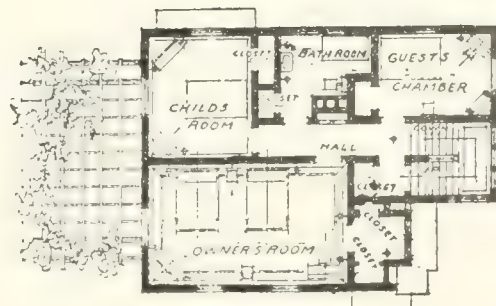
The roof is to be shingled with a thatched effect.

All the interior woodwork is to be cypress, including the window frames, porches, eac.

There is a third floor to this house not shown on the accompanying plans, containing two maids' rooms and a bath between them, and a large room for storage. This floor is reached by a continuation of the main stairs.

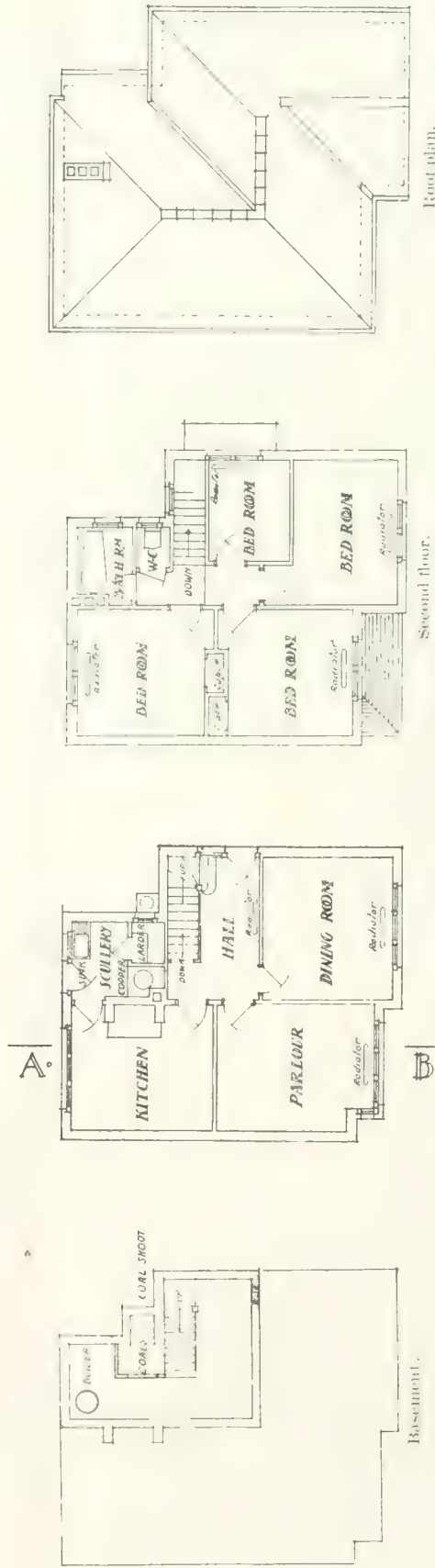
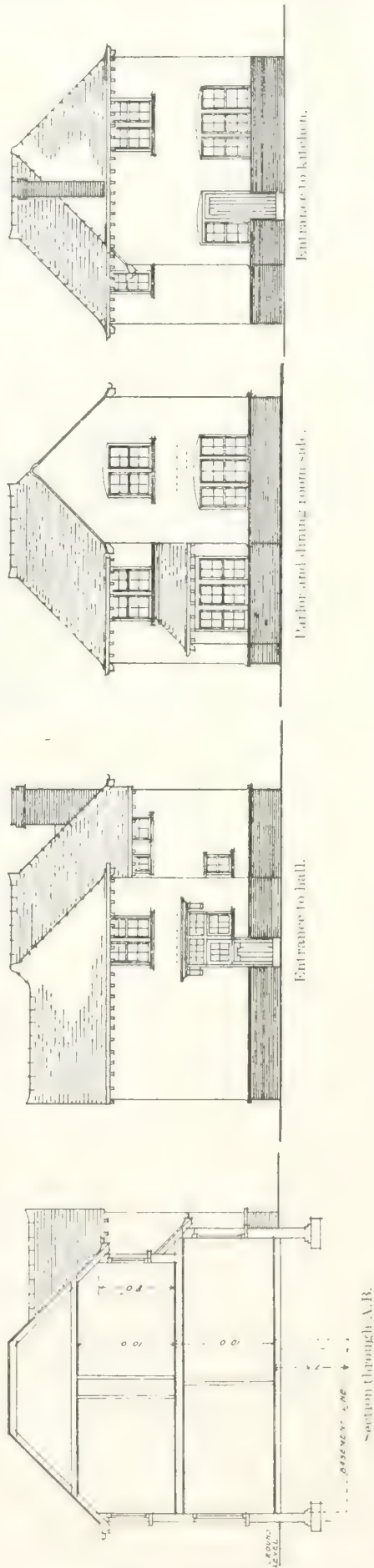


First floor plan.



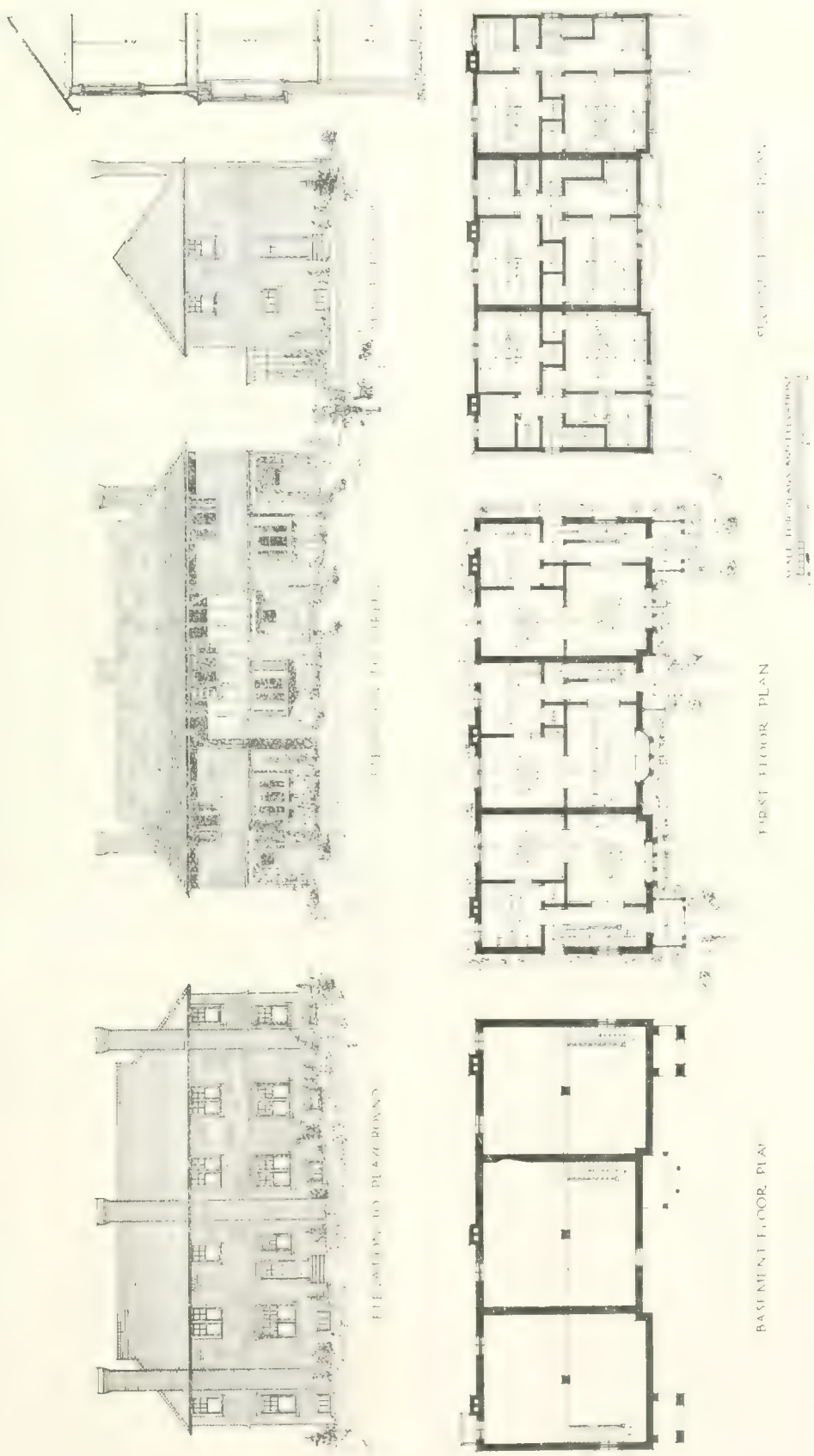
Second floor Plan

# Detached Seven Room House Awarded Prize in Toronto Housing Company's Competition



Two English architects collaborating, Sydney V. Kendall and Leonard Martin, F.R.I.B.A., of London, won the award in the competition conducted by the Toronto Housing Co. for plans of houses for the development of the land on Burn, Sparkhall and Logan Avenues. The judges were Mr. Eden Smith, Mr. J. C. B. Horwood, and Mr. Henry Sproatt. This is a seven room house. The scullery, which is an English idea, will, however, be omitted. The plans of the four and six room houses will appear in an early issue.

# Six Room Houses Given Honorable Mention in Toronto Housing Company's Competition



The plans for this house were designed by Mr. Harold Beckett, Hamilton, Ont., and received Honorable Mention in the Toronto Housing Company's competition.

## Some Thoughts on Furnace Heating

In commencing upon the question as to the necessity of accuracy and of rules to replace the general haphazard methods in vogue, especially in reference to furnace heating, a contractor points out that it must ever be borne in mind that rules and computations will never take the place of brains and experience.

The ratio of loss of heat units from a building as used in computations for steam and hot-water heating will answer just as well for warm-air heating. We might say in passing that the establishment of the average heat unit loss from buildings did not absolutely establish the amount of steam or hot-water radiation required to heat any and every building. There is still a large margin either way left for the good sense and experience of the fitter, engineer or boss plumber to get busy on in order that the plant when put to the actual test may give satisfactory and economical results.

### Latitude in Furnace Construction.

It may be conceded that in furnaces designed for warm-air heating greater leeway in construction is possible than in a steam heater for the reason that in the latter it resolves itself primarily into a question of evaporation capacity. While in air furnaces heating the air direct, quantity and velocity of air travel have a much larger range of variation with similar grate surface and comparative exposed heating surface than is the case with water, either as water or as transformed into steam. The only rating method therefore that seems practical is the actual test of each furnace as to the number of heat units it will deliver with a given amount of air supplied at a given velocity. From this data it probably would not be difficult to ascertain the figures at varying square inches of air supply and varying velocities. Whether the use of outside air reverses the cooling effect of air leakage or accelerates, it is to my mind an open question, phenomena in support of both contentions having been brought to notice.

In the selection of a furnace I have always confined myself to the two or three makes with which I have become familiar through practice. I have, however, found that in most cases a 36-in. casing furnace (for example) gives better final results than, say, a 42-in. casing furnace of a cheaper output. Unfamiliar makes I have always put up to the owner or architects. "You can have whatever furnace you want! With a No. 16 Tip Top I guarantee results; with the No. 24 Slip Shod, I don't, because I don't know anything about it."

### Some Causes of Failure.

In more than three-quarters of the cases on which I have been called where complaint has been made a handkerchief laid over the register pulled in instead of bulging out with the flow of warm air, showing conclusively that the furnace was hungry for air and naturally robbed the coldest rooms—the eastings red hot, the cellar overheated and the rooms cold. Result: The owner condemns the furnace as no good. The first mechanic that comes in says that the house cannot be heated by warm air and plugs for a steam job. And why? Because the steam boiler manufacturers in order to get a market for their goods have been instructing the fitter, the plumber and the hardware man how to install the plant, have been giving them the fundamentals for computing pipe sizes and the requirements of piping. Consequently, the mechanic is on surer ground as to possible results in the case of steam. In

the case of warm-air heating, how different! The manufacturer simply puts a furnace on the market, in some cases he will claim that it will heat a certain number of cubic feet, in other cases not. No attention whatever is paid either in instructions or otherwise concerning piping or method of setting. He, the manufacturer, has never before interested himself in the results, and the results have never interested themselves in the manufacturer or his goods further than to condemn them. The furnace, however, is only one part of the job. The installation makes or mars the reputation of the furnace.

### Sizes of Pipe.

In determining pipe sizes I divide the cubic contents in feet by 30 and the quotient in square inches has been the smallest area of pipe (when not impossible on account of constructional difficulties) for the room. However, I never use smaller warm-air pipe than 8 in. Registers I make 40 per cent. larger in area than that of the warm-air pipe leading to it. This allows the fretwork construction.

I always use a pit under the furnace when possible. If a pit cannot be used the cold-air duct is provided with a deflecting shield to throw the cold air toward the opposite side of the furnace. The cold-air supply must be at least 75 per cent. of the area of the combined warm-air pipes. Due regard is always given to rooms with two or three sides exposed and to long runs by increasing the size of the pipe. Where runs are unusually long the trunk main system is employed. Inside air supply I have only used for its circulating properties, where long halls form a pocket or where air pressure from outside interfered with the flow of warm air from the furnace into the room. The latter condition is often found in flimsily built houses and can usually be ascertained by air currents moving along the floor toward the register.—Building Age.

## Novel Building Scheme in Montreal

The Maple Leaf Realities, Limited, 513 Merchants' Bank Building, Montreal, was recently formed to buy and sell real estate and to erect houses thereon for sale on the instalment plan or rental: capital \$100,000 in \$100 shares.

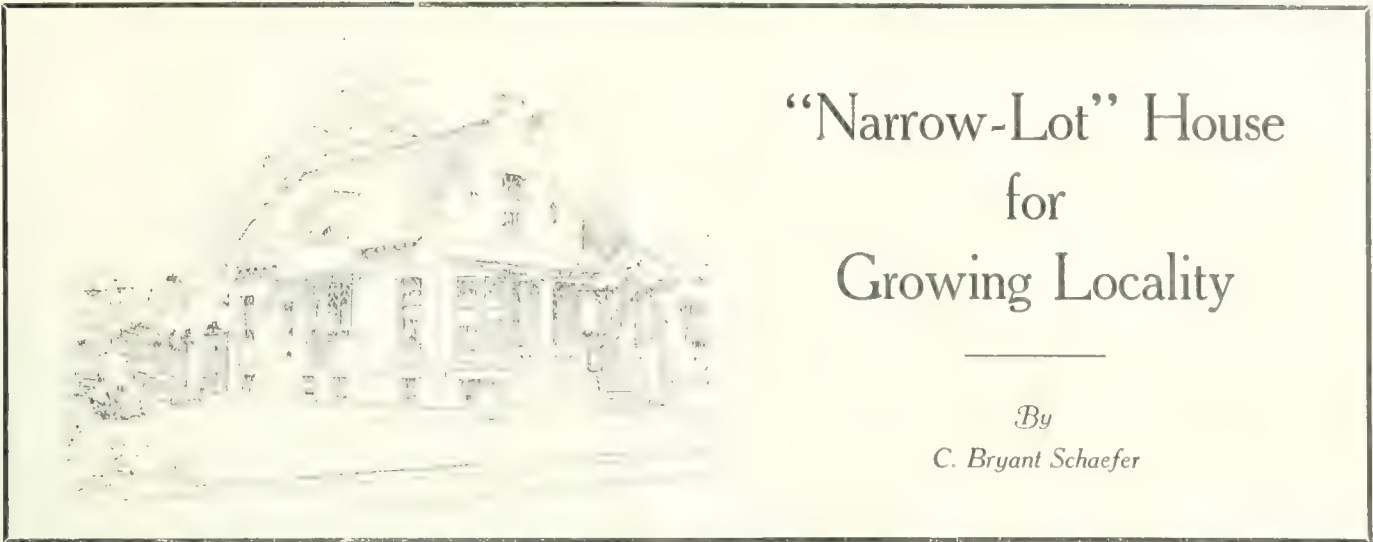
The insurance scheme is a novel feature of the company's operations. The first instalment on the purchase price of a house will cover the premium on an insurance policy on the life of the purchaser if he is an insurable risk, the insurance running at the company's cost while the house is being paid for.

The demand for houses in Montreal is so great and the rents are so high that the Maple Leaf Realities, Limited, are bound to do a large business.

## How I Keep Busy in Winter

We wish to secure a number of short, concise stories of how Canadian builders keep busy in the winter time. For each letter accepted for publication we will pay the sum of One Dollar—the price of your subscription to The Canadian Builder. Let us hear from you to-day. Address letters to the Editor of

The Canadian Builder, 408 McKinnon Bldg., Toronto



# “Narrow-Lot” House for Growing Locality

By  
C. Bryant Schaefer

**I**N building a cottage near a thriving city it is well to have the future demands of the locality in view. A good fifty foot is bound to increase in value until a larger building or more buildings are required in order to keep up with the progress of the neighborhood. As ground space becomes limited it is necessary to have two cottages on fifty feet.

The accompanying design is practical on one narrow lot with another lot on either side for a yard. Two cottages on fifty feet would leave a space of 5 feet 8 inches between. The important windows are front and rear while the dining room windows on the side slant front and back.

### Double Entrance to Stair.

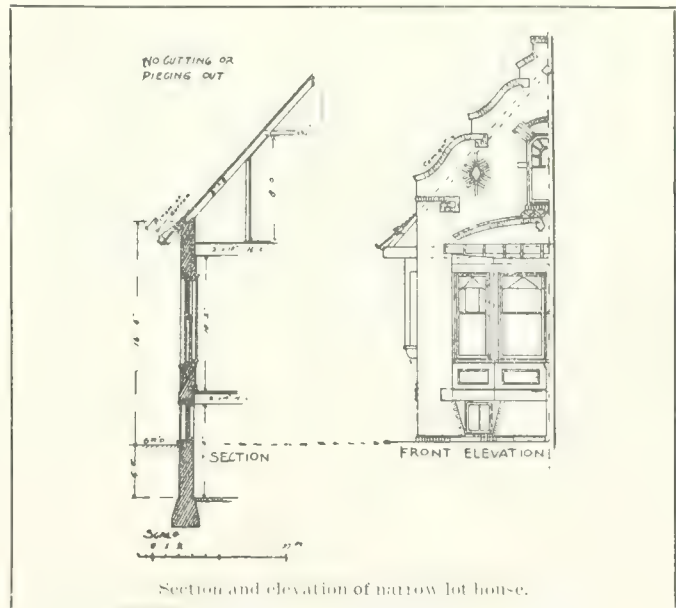
The stairs in this plan are so arranged that they can be entered directly from the front door or from the rear of the house through the dining room. This is of greater convenience than two flights of stairs. This one flight does for both with less care and cleaning.

Underneath the stairs is a side entrance that admits to the basement as well as to the main floor. It is also convenient to the second story stairway. This arrangement protects the front room from general use so it can be kept in nice shape.

The kitchen, pantry and first floor bedroom are well arranged. The former has a back door which it is nice to leave open in warm weather. Ice may be slipped into the pantry under the pantry window. The front porch may be inclosed with storm glass and screens.

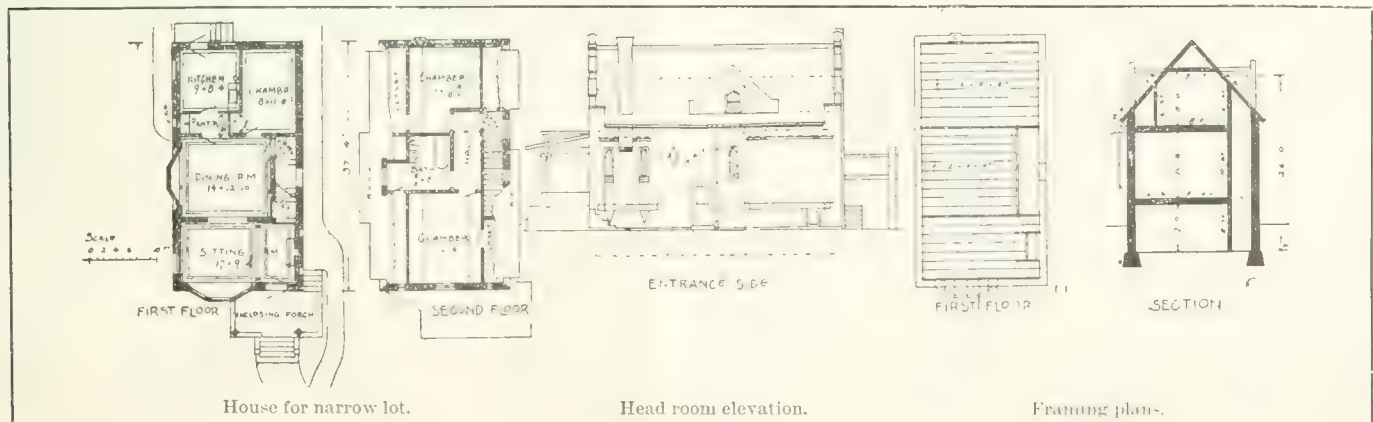
It will be noticed that our design will take in rough lumber at standard sizes. There is hardly any cutting and fitting called for. There are no pieced out pro-

jections and angles. Such are sure to sag or settle unevenly. There is no waste head room. There is nowhere any need for spiking corner wise through the timber ends.



Section and elevation of narrow lot house.

Surrounded by shrubbery this design would not only prove of the greatest attractiveness in the country, but its elegant rustic beauty would be pleasing in a cityfied environment.



House for narrow lot.

Head room elevation.

Framing plans.

## Houses for Workingmen in New Zealand

U. S. Vice Consul Henry D. Baker, in his reports, tells of the workings of the new law in New Zealand concerning the construction of houses for workingmen. Houses will be very attractively designed and sold on easy payments. Parliament will be asked to vote \$500,000 to carry on construction work.

### Description of Five Types Planned.

The new houses, whether of wood, concrete or brick, are intended to be substantial, comfortable, and inexpensive, but not without ornamentation of a quiet character. The following is a description of five types of houses as planned by the Government architect:

1. A dwelling of four rooms with conveniences, a scullery 7 by 12 feet being counted among the latter. There are two front rooms about 12 feet square, a living room 16 feet 4 inches by 15 feet 4 inches, which contains the range, fitted with hot-water apparatus, a bedroom 12 feet by 9 feet 6 inches, and a reasonably large bath room. The front door leads to a hall 4 feet wide and at the back is a lobby containing a coal bunker under shelter. The washhouse, with copper, has two fixed tubs. Price, \$1,380 to \$1,825.

2. Five rooms, planned similarly to the first type, but with an additional bedroom at the back 8 by 9 feet, and slightly more generous proportions. The front elevation is made attractive with a gabled porch and ornamental glass door. There is a corner fireplace in the front room. Price, \$1,450 to \$1,900.

3. Four rooms; this is distinctive in having a verandah along the whole front, and it will probably be popular because it is of the familiar "square" type of architecture beloved in the colonies. Three bedrooms (one with a fireplace and suitable for sitting room) are 12 feet square, while the dining room is 12 feet by 11 feet 4 inches. Price, \$1,350 to \$1,700.

4. Six rooms; this is the most elaborate of the set, but there is no waste room or overornamentation. Most of the money will go to provide actual accommodation. The front elevation shows the bay window of a sitting room 12 by 12 feet, having a corner fireplace and a verandah 4 feet 6 inches by 16 feet. The hall, 5 feet wide, leads past an arch and then narrows to 3 feet, ending in a glazed door at the kitchen. The living room is 12 feet 6 inches by 15 feet and has a broad window V-shaped standing out from the side wall about 2 feet. The three bedrooms are 12 feet 6 inches square, 12 by 11 feet, and 12 feet 6 inches by 11 feet, respectively. The kitchen is 10 feet by 9 feet 6 inches and around it are grouped the washhouse, scullery, and coal bunker. Price, \$1,825 to \$2,200.

5. Three rooms with provision for extension of two rooms if required, at a cost of 75 pounds. A recessed corner of the house 3 by 7 feet serves as a modest porch for the front door, and there is a tiny hall 4 by 6 feet. The rooms comprise bedrooms 10 by 12 feet and 7 feet 2 inches by 9 feet 6 inches, and a living room 14 feet 4 inches by 11 feet. Hot water and a bath are provided. Price, \$850 to \$1,075.

### Advances to Workers and Settlers.

In addition to this plan of constructing houses for workers, the Government has had in operation since 1894 a plan of advancing to settlers, either agricultural or suburban, money on first mortgage of lands and improvements, and since 1906 the same plan has been extended to include a system of advances to workers desiring to provide themselves with homes, and offering first mortgages on their homes as security. In 1909, in the state-guaranteed advances act,

there were some important extensions and improvements, and the advances to settlers and workers were all put in charge of a special department of the Government called the state-guaranteed advances office. This office has power to raise money for advances to settlers and workers up to the amount of 1,500,000 pounds (\$7,299,750), during any one financial year.

Any person, rich or poor, may secure a Government loan for the building of a home, under the plan of advances to settlers, but such loans can not be for less than 25 pounds (\$121.66) or for more than 3,000 pounds (\$14,600). Applications for loans not exceeding 500 pounds (\$2,433) have priority over applications for larger sums. Mortgages are repayable by half-yearly payments of principal and interest combined. They may also be repaid in whole or part at any time. Interest is charged at the rate of 5 per cent., reducible to 4½ per cent. provided payment is made not later than 14 days after due date, and no arrears in respect of installments or other payments under the mortgage remain outstanding. Loans are granted on freeholds up to three-fifths of the value of the security, but in the case of first-class agricultural freeholds they are granted up to two-thirds of the value. On leaseholds loans are granted up to three-fifths of the value of the lessee's interest in the lease. The loans mature between periods of 20 to 36½ years.

Workers of either sex engaged in manual or clerical work not in receipt of an income of more than 200 pounds (\$973) per annum, and not the owner of any land other than that offered as security, may obtain advances up to 450 pounds (\$2,190) and not exceeding three-quarters of the total value of the security in case of freehold land, or three-quarters of the value of the lessee's interest in the case of leasehold land, and in no case are advances granted which exceed the values of the dwelling houses, nor to applicants who do not take up their permanent residence under security. As in the case of advances to settlers, interest is at the rate of 5 per cent., and reducible to 4½ per cent. if payment is not over 14 days overdue, and the loans run from 20 to 36½ years. The valuation is 7 shillings 6 pence (\$1.82).

## Cost of Fireproof Construction

In discussing the question of "Fireproof Construction" before an audience at Orange, N.J., Philip H. Bevier, C.E., gave the following interesting figures as to the comparative cost, and arguments as to public and private desirability:

At the present price of building material, fireproof construction can be erected at a cost not to exceed 10 or 15 per cent. more than non-fireproof, and when we consider that a fireproof building deteriorates about one-ninth of 1 per cent. per year as compared to 4 per cent. for ordinary buildings; that they rent better and that money can be borrowed on them on better terms; that they are vermin-proof, cooler in summer and warmer in winter, it would certainly seem a part of wisdom and self-interest to adopt a better method in every case when the building is to be of a permanent character.

Real estate in Montreal keeps very active. After a temporary lull several large deals were closed, chief among which was the sale by auction of the High School property on Peel and Metcalfe Streets at \$15 per foot, making the purchase price \$1,369,755.





Owner, Judge Smith, Trust Bldg., Ottawa, Canada.; architect, the Bungalow Craft Co., Los Angeles, Calif.; contractors and block layers, Boyd Bros., Osgoode, Ont. Erected at Beaufort House. Frontage 38 ft.; depth 38 ft.; 1,800 8x8x16 in. faced blocks of rock and panel designs used. Building has concrete foundation, 9 rooms, hot water heat. Cost of block work, \$750.00; cost of building complete, \$1,400.

## A Number of Prize Concrete Block Buildings

*Prizes were awarded the builders of these houses by the Ideal Concrete Machinery Co. in a contest carried on by them.*



Owner, G. W. Daniels, St. Stephens, New Brunswick; architect, Mrs. G. W. Daniels; contractor and block layer, Emerson B. Hanson, St. Stephens, N.B. Frontage 39 ft.; depth 41 ft.; 2,000 8x8x16 in. faced blocks of rock design used. Building has 9 rooms and hall, stone and brick foundation, hot air heat, and is free from dampness. Completed Aug. 1910. Cost of block work, \$700; cost of building complete, \$1,400.



Owner, Rev. Austin Potter, Dundas, Ont.; architect, Martyn H. Hewitt, Dundas, Ont.; contractor, J. W. Dickson, Dundas, Ont.; frontage, 30 ft.; depth, 40 ft.; 1,800 8x8x16 in. faced blocks of rock and Bush Hammered design used. House has concrete foundation, 8 rooms, hot air heat and is free from dampness. Cost of blocks, \$315; cost of building complete, \$2,600.



Owner, Thos. I. Dates, Owen Sound, Ont.; architect, E. C. VanLeyan, Detroit, Mich.; contractor, Edward Martyn, London, Ontario; block layer, T. Banks. Erected at Owen Sound, Ontario. Frontage, 37 ft. 6 in.; depth, 37 ft. 6 in.; 6,250 8x8x16 in. and 8x10x16 in. faced blocks of vertically tooled and plain designs used. Building has Ideal block foundation, has hot air heat, 10 rooms and is perfectly dry; temperature of 70 deg. maintained throughout the cold winter on 8 1/2 tons of coal. Cost of block work, \$1,350.00; cost of building complete, \$5,650.00.



Owner, Molson's Bank, Montreal, Can.; architect, A. J. Dunlap, Lindsay Bldg., Montreal, Can.; contractors, Byers & Anglin, 18 St. Alexis St., Montreal, Can.; block layer, Edward Cox. Erected at Revelstoke, B.C.; frontage 25 ft.; depth 45 ft.; 1,624 faced blocks of horizontally tooled design used; blocks are not waterproof, concrete foundation, hot water heat; cost of block work, \$1,080; cost of building complete, \$20,850.

### Cement-Covered Hollow Tile Garage

Illustrated herewith is an example of private garage in the construction of which the walls are of hollow tile covered with cement plaster, while the roof is of red tile with hips and ridge to correspond. The manner of securing the roof framing to the concrete walls is clearly indicated in the detail which is shown directly at the right of the front elevation.

The interior of the building is open to the roof, the construction beams being left exposed and the spaces between being plastered. The walls are given a rough hard plaster finish, while the floor is of concrete with a 9-inch base.

The building has two sliding entrance doors, the approach being of concrete and slightly inclined. The capacity of the building is sufficient for two cars at least, with room for more by slightly crowding. At the rear of the garage is a work bench extending fully half way across the end and lighted by a broad window, while at the right and left are closets or cupboards, one being intended for stores and the other for coats and automobile apparel. Ample light is afforded the main floor by the triple windows on either side, these being as high in the walls as experience has found best adapted for the purpose required.

The garage here illustrated is that of Mr. S. J. Francis at Newton Center, Mass., and was erected in accordance with drawings prepared by A. C. Richardson, architect, No. 9 Cornhill, Boston, Mass.

Be just as free about answering questions as you are to ask them, for the best way to learn is through a fair exchange of ideas. You have no right to the ideas of others if you are stingy with your own.

### Good Places in Houses for Closets

*By Mary H. Northend in Keith's Magazine*

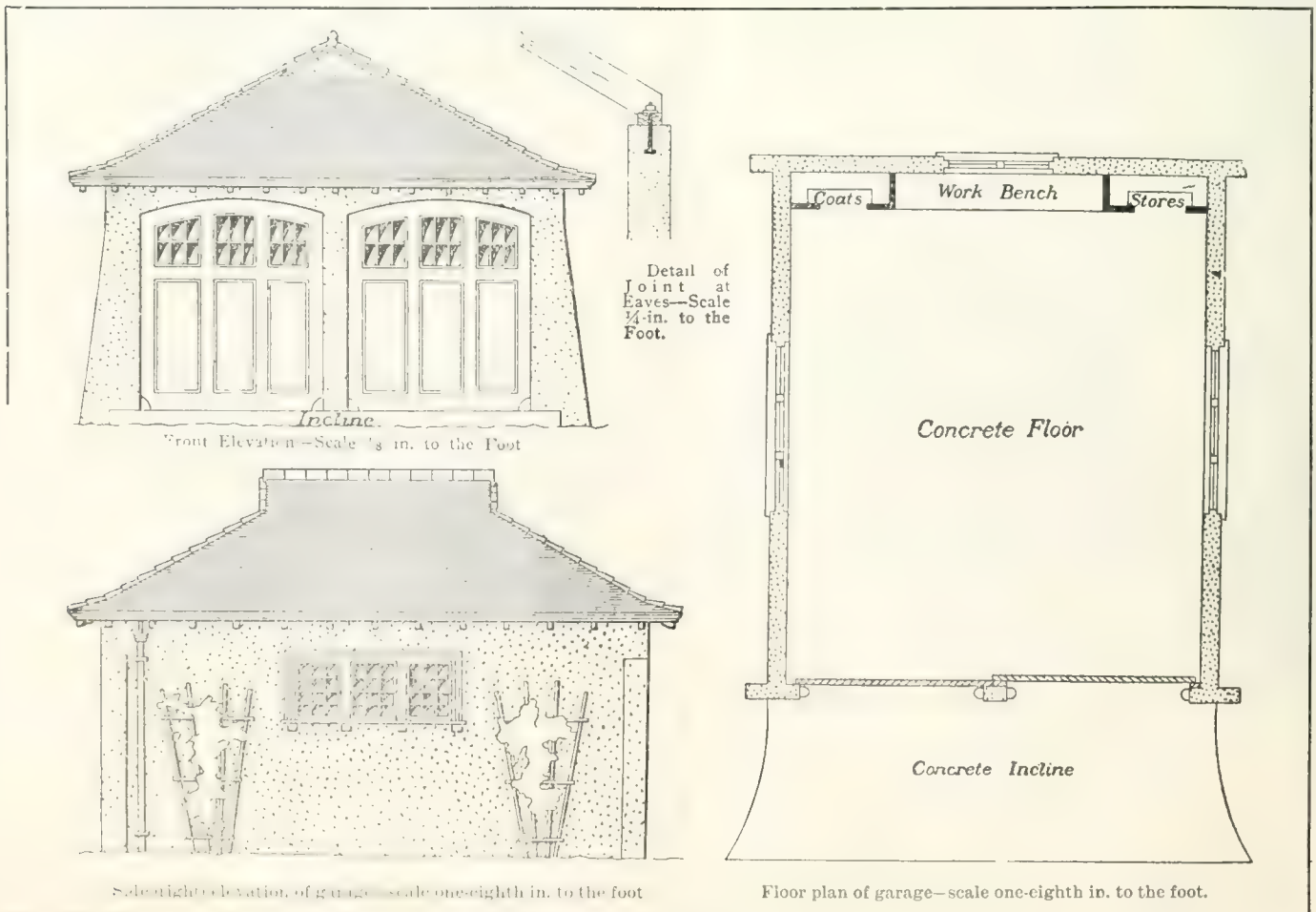
To one who knows the conveniences and comfort of many closets it seems strange that so little provision for them is made in modern house designs. Even more inexplicable perhaps is the way in which the inhabitants of these modern closetless, cupboardless houses manage to maintain even a semblance of tidiness.

There was some excuse for the lack of closets in many of the old-fashioned mansions of Colonial days. Built perfectly square and divided into four primly rectangular rooms and a long straight hall on each floor, there was little room left for cupboards of any description unless the space between the walls was utilized for this purpose. Modern builders cannot be so easily vindicated, however, since their departures from the uncompromising style of their predecessors have been accompanied by the introduction of jogs and alcoves eminently suited for closets, but too frequently allowed to remain merely wasted space.

Although cupboards are much more easily arranged when a house is being built than after it has been completed, it is possible fortunately to add many convenient little closets even in an old house. Odd corners and jogs may be admirably adapted to meet the needs of the housekeeper, and in many cases beauty, as well as practical utility, will be the result of judicious transformations along that line. The expense of making such alterations is seldom large and their value from the standpoint of convenience alone is as a rule far greater than their actual cost.

#### China Cupboards.

Perhaps no type of built-in closets is more commonly found to-day than the china cupboard. Recommend-



ed by its ornamental character, as well as by its usefulness, this has come to be looked upon as a most desirable dining room feature and its popularity is constantly increasing. Even in old-fashioned houses built in china closets are often to be found, although they usually differ quite noticeably in style from cupboards of more modern design.

Most of the old-time china cupboards were built across a corner of the room, thus taking up but little space and at the same time affording excellent place in which to display one's fine china and glass. The buffet pattern seems to have been a great favorite in those days and with good reason. Grace and convenience were well combined in this style of closet and its simple decoration and finish was always in harmony with its surroundings.

The modern reproduction of the old-fashioned buffet is a good example of what a china closet should be. The upper shelves, usually four in number, are protected from the dust by means of glass doors. These may be either plain or ornamental, according to the owner's personal tastes, but the most attractive cupboards have tiny leaded panes. The lower part of the buffet is enclosed by wooden doors supplied with brass knobs, lock and sometimes ornamental hinges. Such a china closet is most effective when finished in white corresponding to the woodwork of the room and used in conjunction with mahogany furniture of an old Colonial style.

#### Wall Cupboards Are Common.

Wall cupboards are much more common, and appropriate for that matter, in dining rooms, where no particular period is followed in the furnishings. There are many different styles from which to select and often a distinctive type will be suggested by some unusual architectural feature of the roof itself. Then, too, the position which the closet is to occupy will frequently have an influence on its design. For instance, a jog in the wall may leave just sufficient space to insert a small cupboard, or certain lines in the shape of a window may be repeated in a set of china closets built in on either side. Superfluous decoration should be avoided, for it must be remembered that cupboards are primarily for use rather than ornamentation. Grace of outline is desirable, however, and the beauty of a simple, well designed china closet adds much to the attractiveness of any dining room.

#### Kitchen Cupboards.

Although somewhat less pleasing to the eye, kitchen cupboards are quite as necessary as the more ornamental china closets. It is in the kitchen that the busy housewife most appreciates convenience and here a set of cupboards built in the proper place may mean the saving of many steps. A most satisfactory arrangement was hit upon by one clever woman and its adoption would doubtless prove a blessing to many others.

On either side of her kitchen sink was built a broad shelf, underneath which was a drawer and a good-sized closet. A shelf was built in each closet, several inches from the top, and on these were kept kitchen soap, brass polish, stove blacking and similar articles. The space beneath the shelves was utilized for kettles and pans, while the two drawers above the closets were kept for dish towels and kitchen cutlery respectively.

Within easy reach above the sink was constructed another cupboard with double doors. In this were three long shelves, on which were arranged the smaller pieces of tinware and the cooking dishes. Everything

had its place and it was an easy matter to put things in order when dish washing was over.

Unfortunately the sink is so situated in some kitchens as to make such arrangement as has just been described impossible. In such cases a good substitute may be contrived by building a large cupboard across one corner of the room or in any other place which may prove most convenient. This should be provided with glassed-in shelves for kitchen ware, while the lower portion may contain drawers for towels, soap, etc., or be made into a small closet and used for flour or kettles.

#### Laundry Closet is Essential.

A laundry closet is also essential to the convenience of a home. If possible it should be large enough to contain the ironing board and clothes horse. In addition to this there should be sufficient room for either drawers or shelves at one side, where laundry supplies, such as soap, starch, bluing, clothespins, etc., can be kept.

Even a very small space is large enough for a broom closet and it is a convenience well worth having. The only equipment necessary for such a closet is a generous supply of hooks on which to hang the brooms, mops, dusters, brushes and dust pans which go to make up every woman's cleaning outfit.

Not even the living room of a house should be without closets, for there are always games and magazines to be stowed away when not in use. Some rather unusual cupboards are occasionally introduced, as in the case of one home, where the man of the house contrived an ornamental glassed-in cupboard above the mantel in which to display his highly prized golf cups. Not content with a single example of his ingenuity he proceeded to cut into the partition beside the open fireplace and made a neat little closet for kindling wood.

#### Clothes Closets Absolutely Necessary.

Clothes closets hardly need to be mentioned as absolutely necessary in every well ordered home. It is the exception rather than the rule, however, that even a new house contains a cedar closet for storage purposes. The few home builders who have been wise enough to provide a closet of this sort have found them far more convenient than cedar chests, since the clothing may be simply hung up and left with the knowledge that no moth will ever touch them. In building a closet of this sort red cedar should be used for ceiling, floor and walls in order to make it absolutely moth proof. This is, of course, rather expensive, but the value of such a closet is correspondingly great and in the end the investment will be sure to prove well worth while.

### A Woman Builder

The female architect made her appearance some time ago, but the female builder is a new proposition. Mrs. Ollie McIntosh, Cincinnati, has commenced operations as a carpenter and builder, assured of success. The lady in question used to be a dressmaker, but a breakdown in health caused her to turn her energies into a new channel. She tackles plumbing and cement work, in addition to carpentering. "I broke down my health building dresses," said Mrs. McIntosh, "now I intend to restore it building houses. The open air is far healthier."

It would be interesting to know the attitude of the Cincinnati builders towards this new encroachment of the modern woman on a sphere of activity hitherto reserved for mere man.

## Tiles for the Kitchen and Laundry

The following is from a booklet issued by the Associated Tile Manufacturers, Beaver Falls, Pa.:

"The only really good treatment for the walls and floors of a kitchen or laundry is tile. This may seem quite new to you, because the use of tile for these rooms is not so common in this country as it is in older countries where they have learned how to do things better.

"In Germany, every kitchen is tiled, not only the floors but also the walls, sometimes all the way to the ceiling. This is true also in France, England and Holland.

"A tiled kitchen is beautiful, but its attractiveness is not the strong argument. The real argument in favor of tile is health—the health of your family.

"Most people learned a long while ago about the importance of cleanliness in the bathroom and the kind of equipment and surface treatment that made cleanliness imperative.

"Now comes the question of the kitchen. There are greater sources of danger from the kitchen than from the bathroom. Floors and walls that absorb steam, odors of cooking, grease and other things necessary in preparing food in any kitchen, create and harbor germs which are dangerous to the health of the family.

"There is only one material with which you can cover the floor and walls of your kitchen which is absolutely impervious and which is practical to use as a surface covering, and that is tile.

### Tile is Clean and Sanitary.

"Tile has a glazed surface which is absolutely impervious to moisture of any kind, which can be easily wiped off and made, not merely apparently clean, but absolutely clean. The labor of taking care of a kitchen is reduced to a small fraction of what is required with the old kind of walls, and at the same time, the kitchen is actually cleaner, pleasanter to work in and more satisfactory in every way.

"Everything that applies to the kitchen applies to the laundry. In both there must be a great deal of steam and dampness. Dampness is a source of ill health. It is impossible to keep a wooden floor, or a floor covered with any of the substitutes for tile, clean and dry. Only a tiled floor is clean and dry.

"It is only because we are not in the habit of thinking of tiles for the kitchen and laundry that all kitchens and laundries in this country are not covered with tile.

"It is to induce you to consider tiles for your kitchen and laundry that this little book is sent you. If you will insist on tiles for these purposes, it will be one of the best investments you ever made.

"The whole idea of a house is a place to live in. An important part of the house is the kitchen where the food is prepared. If the kitchen is not clean and well kept, the whole household suffers. It is really one of the most important rooms in the house. It is not enough to provide a good range, a first-class refrigerator and modern cooking utensils. The room itself must be good.

"It is not exactly a modern idea to have a tiled kitchen, although it is modern in this country, because tiled kitchens have existed for hundreds of years in the older countries. This is one of the best features that the ancients have handed down to use. Even the kitchens of old Pompeii were tiled.

"Before you go any further with that house you are going to build, get estimates at once for tiled floors

for both kitchen and laundry—and this includes also the pantry, and tiled wainscoting as high as six feet at least.

"The cost of the work will be more than the treatment of wood and plaster—but when you remember that a wooden floor must be painted or covered with linoleum, that the walls must be first plastered and then coated with some impervious cement, that these things must be constantly renewed, that the best wooden floor wears out, and that linoleum itself is pretty expensive and wears out, you will see that in the long run tiled floors and walls will be cheaper than anything you can have. At the same time, they are always better. Properly laid tiled floors and properly set tiled walls do not wear out and do not have to be replaced.

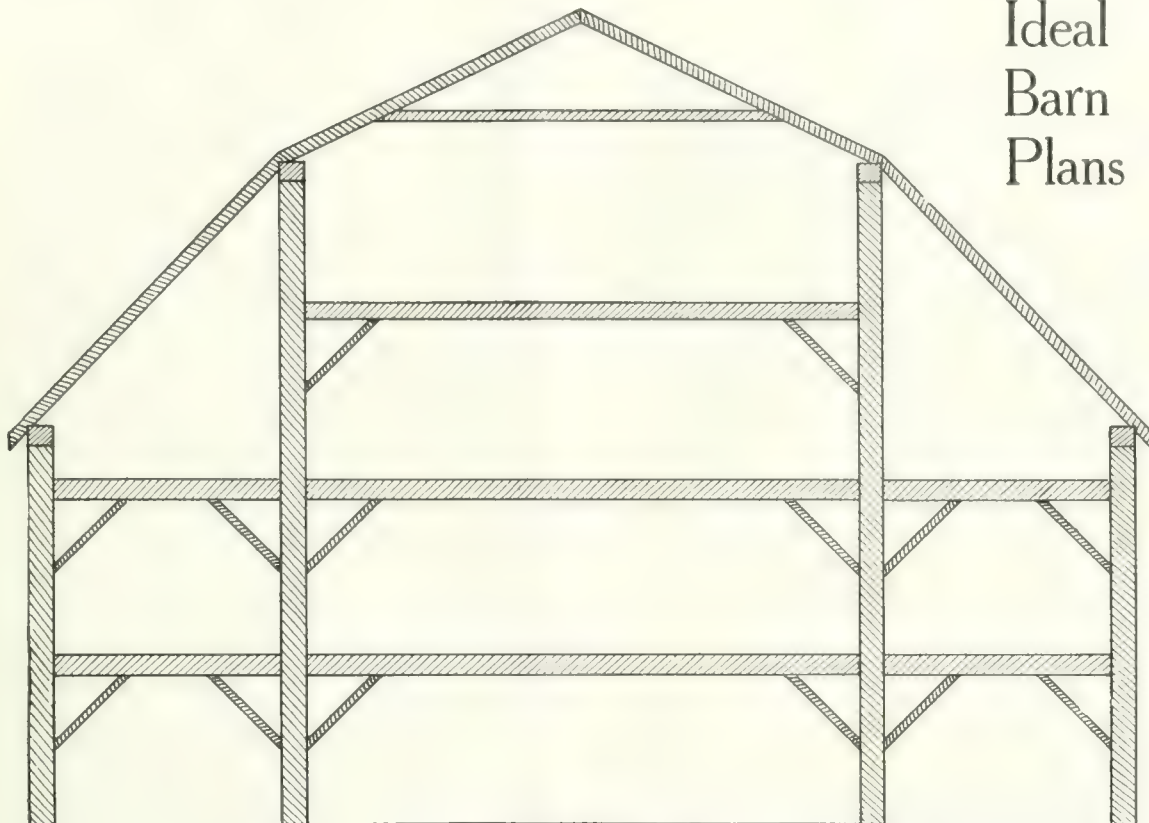
### Reasons for Using Tile.

"Here are the reasons for you to consider tiles for these purposes: Tiled floors and walls are scientifically clean. They are germ-proof. They are impervious. They can be kept clean with little difficulty. They cost less in the long run than any other treatment. They are very attractive. They are intrinsically appropriate for the surface of a room in which cooking is prepared, or in which washing is done. They offer an infinite number of color schemes and decorations to please every state. They harmonize with every kind of architectural construction. We will be glad to correspond with anyone interested in the use of tiles for these purposes, and to give the name of a local dealer who can supply tiles and who can furnish figures on the quantity required. Roughly speaking, a tiled kitchen costs from 40 cents upward per square foot for floors, and from 50 cents upward per square foot for walls."

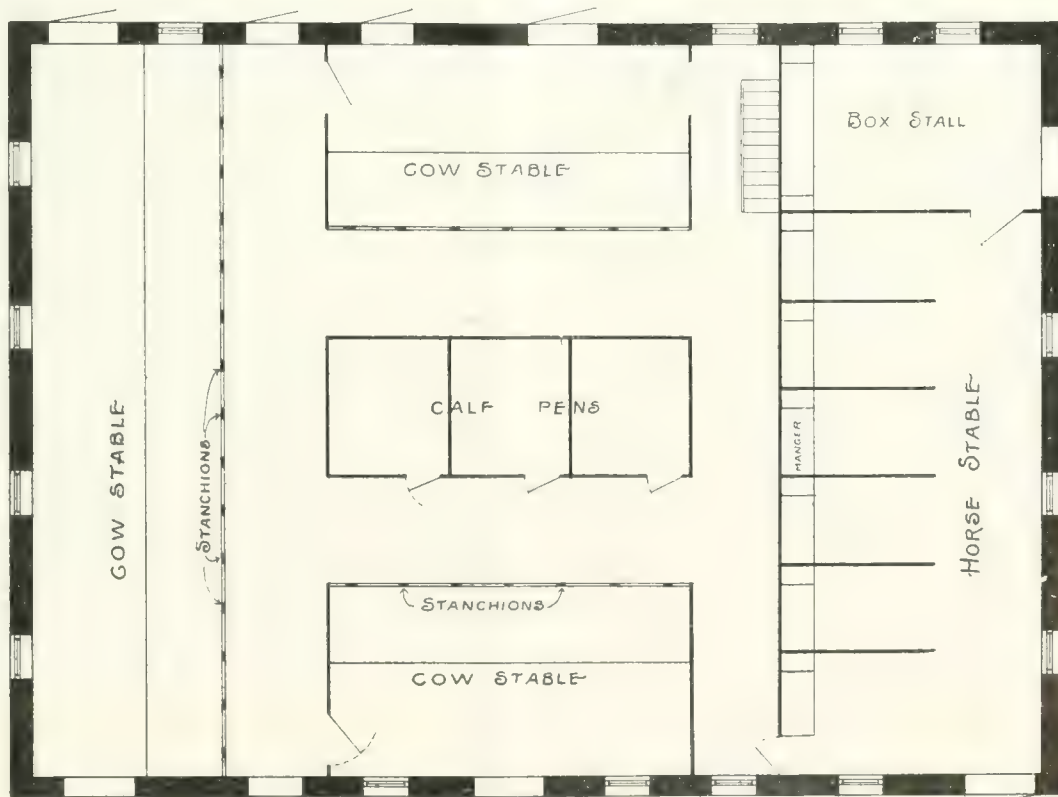
## Canadian National Association of Builders' Exchanges

City.	Secretary and Address.
Montreal	R. L. Wemy, Sec., 263 St. James Street.
Toronto	P. L. Fraser, Sec., 2 Berti Street
Quebec	A. Cote, Sec., 23 Rue St. Jean.
Ottawa	W. Hastings, Sec., 22 Metcalf Street.
London	Geo. S. Gould, Sec., Bank of Nova Scotia Building.
St. Thomas	E. O. Penwarden, Sec., Dowler Block.
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# Ideal Barn Plans

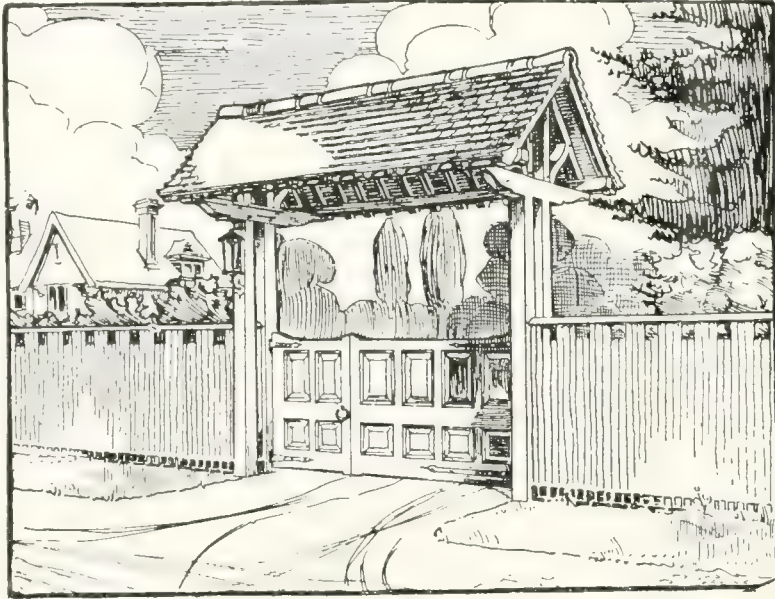


44 feet wide, 16 feet post.



60 feet long, 44 feet wide.

BY G. A. WINGROVE, WALSINGHAM CENTRE, ONT.  
Published by Courtesy of the Metal Sangle & Siding Co., Preston, Ontario.



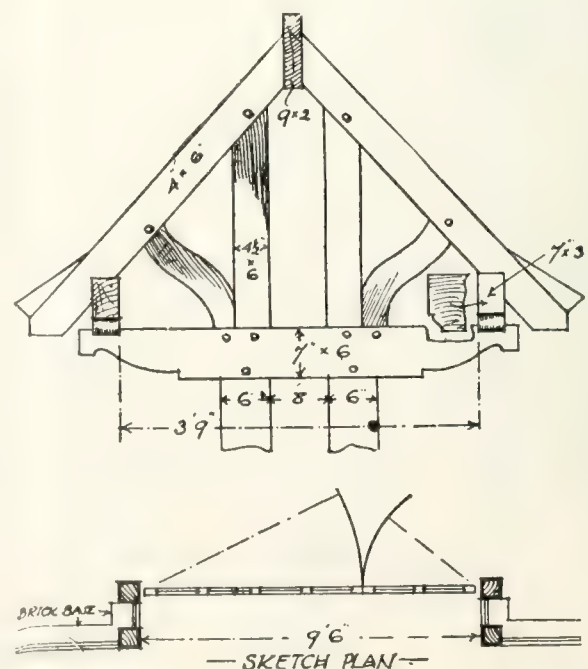
## A Carriage Gate Adapted From the Lych Gate

By  
W. Keeble

**A**N example of the adaptations of the picturesque lych gate of the English churchyard, which are beginning to have a recognised place as popular features for the entrances of country houses, is shown in the perspective drawing on this page, being reproduced from *Building World*. It could be executed in oak or pitch-pine, and roofed with old tiles or oak shingles. The main posts are 7 in. square, reduced to 6 in. at the top, and bedded in concrete to a depth of 3 ft. The elevation of one gable end will serve to show the sizes, etc., the various joints being secured with pegs left projecting  $\frac{1}{2}$  in. It will be understood that the ordinary rafters, as distinct from those in the gable framing, would be only 2 in. thick. Referring to the view, the ridge will be seen to consist of half-round tiles, alternately long and short, and tilted at the ends. The treatment of the oak-cleft fence with loop-holes at intervals will also be noticed.

The sketch plan illustrates how the gates can be recessed a little—usually a very satisfactory arrangement. The gates, instead of being equal, comprise a hand-gate for pedestrians, and one nearly double its swing, to be opened for the passage of cars,

etc., this method having been found more convenient than those more generally adopted. The gates are  $2\frac{1}{4}$  in. or more in thickness, with shaped tops, raised panels and mouldings on the solid, hung with special strap-hinges bolted through the posts. Should the situation demand it, a lamp might be fitted on one or both of the front posts, or a lamp might be pendant from the roof, taking care to leave sufficient head clearance.



# The Canadian Builder and Carpenter

A Practical Paper Devoted to all Branches of the  
Building Trades

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Vol. 2

TORONTO, OCTOBER, 1912

No. 10

## The Motor Truck and the Building Trade

The motor truck is finding increased uses, builders now finding them valuable for long hauls and quick deliveries. Where a builder is using more than one house, it is worth looking into the cost of operating motor trucks. It may be that you can secure substantial economies in the carting of materials and in the elimination of delays. In an early issue of *The Canadian Builder* we shall give some definite operating cost figures so that builders can have an idea of what others are accomplishing by means of motor trucks.

## Something About Ourselves

We have had a large number of letters from subscribers complaining that their copies of *The Canadian Builder* are received late in the month. Readers will understand that in the publication of several papers such as those issued by the Commercial Press, Limited, some of them must be printed at the end of the month to keep the presses running continuously. Unfortunately *The Canadian Builder* is one of these papers.

To give the readers of our papers better service in the future, we have recently greatly increased our equipment, including the addition of a large printing press of modern design—one of the largest flat-bed presses in Canada. In fact, to our knowledge, there are only two or three as large presses in Canada. This press is now being erected in our new offices into which we shall move at an early date. This addition of equipment has been made necessary on account of the rapid increase of the circulation of our various papers including *The Canadian Builder*.

In the spring of 1911 the total paid circulation of *The Canadian Builder* was about 1,000. In order to cover our subscription list at this date, it has been necessary to print over 4,000 copies of the October issue, and this number will be greatly increased. Such increases make large expenditures necessary to supply our readers with a first-class paper.

\* \* \*

In order to make *The Canadian Builder* of greatest service to our readers, we wish their hearty co-oper-

ation. In doing certain work you no doubt have adopted methods which you have worked out. Write us about them. Also when you have a question to ask, let us know about it and we will present your problem to other builders. In all communications give your name. This is not necessarily for publication but for editorial reference.

We wish to draw your attention to the advertisements. These have been prepared to show you where to buy labor-saving devices and builders' supplies. Each advertisement contains useful information that should not be missed by a single builder. The ideas that you may glean from the advertisements will be well worth your while. Your co-operation with advertisers and with the editors in the way of suggestions will greatly assist us in building up a strong paper of greatest value to you, our readers.

## Government Built Houses for Workmen

In this issue is given an outline of the plan being carried out by the New Zealand Government for the solving of the housing problem. A scheme of constructing houses to sell to workmen is underway, and over 3,000 inquiries were received in a short time regarding the houses.

The first plan tried out by the New Zealand Government was to rent houses, but this was not a success. The houses offered no special inducements over those rented for private persons either in construction or in cheapness, while a certain amount of prejudice appeared to have been created against them because of the designating term "workers' dwellings." They were not unlike other houses in the same localities in general aspect and in rent asked.

It is quite common in New Zealand cities for workmen, especially those having only two or three in their families, to subrent one, two, or three rooms rather than to occupy a whole house. Generally speaking, this system of sharing the use of a house with other tenants has enabled the average New Zealand workman to live within his means, as frequently would not be possible were he to rent a whole house for himself, unless it had an exceedingly cheap rent by reason of unfavorable appearance and location. The Government dwellings therefore appeared to be above the means of many of those whom they were intended to benefit.

The plan of selling dwellings to workers on an easy installment system promises to be much more popular with the working classes than the former plan of requiring them to pay rent. While more money is necessary to meet the installments than to pay rent, the workers can consider such expenditure as an investment in homes which they may eventually own. The present plan will probably appeal more than the former system to the best and thriftiest class of workmen, and it is likely that the occupiers will take more personal interest in the maintenance of houses they are buying than in those which were only rented or leased. Moreover, the houses to be built under the new scheme promise to be more attractive architecturally and better fitted to the varying needs of workmen than the houses built in accordance with the act of 1908.

This interesting topic, dealt with in this issue, will doubtless be of considerable interest to builders generally as well as to those employees and others interested in the comfortable housing of workmen.

# Brick Work, Concrete Work and Masonry

## Cost of Brick Construction

In a recent issue of "Brickbuilder" appears an interesting article by George Hunt Ingraham on "Comparative Cost of Various Types of Construction," and some of the results of the cost estimates made from convincing evidence that the day has arrived when brick, all conditions considered, is not only the best, but is also the cheapest form of material which can be used for residence construction. When deterioration, cost of maintenance, heating and insurance are considered, the comparison is entirely in favor of brick construction.

In this article, figures are presented showing the comparative cost of building three types of houses, each house having been figured in several styles of construction. The estimates are made by Boston contractors, from specifications given them by leading Boston architects, and the materials are figured at the prevailing Boston prices.

The costs given do not include heating, plumbing, electric work, interior decorations or lighting fixtures.

The cost of all three houses is computed with shingled roof, dipped and stained before laying and given one brush coat after laying.

The brick house was figured with water-struck brick, costing \$19.00 per thousand delivered. The terra cotta brick house was of 8-inch block.

House No. 1 is built of terra cotta blocks (stuccoed). House No. 2 is built with wood frame, wire lathed and stuccoed. House No. 3 is built of brick. The estimated cost of each is given below:—

TABLE I.

	Wire Lath and Stucco.	Cypress Siding (painted white).	Clapboards (painted white).	Shingles (stained).
Number one	\$ 8,100.00	\$ 7,800.00	\$ 7,800.00	\$ 7,875.00
Number two	16,970.00	16,100.00	16,500.00	16,200.00
Number three	19,685.00	19,625.00	19,625.00	19,625.00

	Cost per cu. ft.	Cost per cu. ft.	Cost per cu. ft.	Cost per cu. ft.
Number one	34,089 cubic contents	23c.	23c.	23c.
Number two	84,837 cubic contents	20c.	19c.	19c.
Number three	72,380 cubic contents	27c.	27c.	27c.

If built of brick or terra cotta block stuccoed the estimated cost is as follows:

TABLE II.

	Brick.	Terra Cotta Blocks (stuccoed).
Number one	\$ 8,820.00	\$ 8,800.00
Number two	17,125.00	17,465.00
Number three	21,780.00	20,900.00

	Cost per cu. ft.	Cost per cu. ft.
Number one	34,089 cubic contents	26c.
Number two	84,837 cubic contents	20½c.
Number three	72,380 cubic contents	30c.

The per cent. increase in cost of brick construction over wood and wire lath and stucco is as follows:

	Over Wood.	Over Wire Lath and Stucco.
Number one	12.7%	8.8%
Number two	1.7%	9.1%
Number three	1.98%	10.61%

The per cent. increase in cost of terra cotta block stuccoed construction over wood and wire lath and stucco is as follows:

	Over Wood.	Over Wire Lath and Stucco.
Number one	6.7%	5.93%
Number two	6.7%	2.92%
Number three	6.50%	6.17%

The clapboard houses are covered with best quality of spruce clapboards, laid 4½ inches to the weather, and painted three coats of lead and oil paint.

"House number one is built of terra cotta block stuccoed. House number two is built of wood frame, wire lathed and stuccoed. House number three is built of brick.

"Insurance.—The insurance rates on the different types of construction are as follows:—

TABLE III.

	Cost for 5 years.	Cost for 15 years.
<b>Number one.</b>		
Wood construction (wire lathed and stuccoed)	75c. per 100	\$182.25
Wood construction (siding, clapboards, shingles)	75c. per 100	175.00
Brick	50c. per 100	132.50
Terra cotta blocks stuccoed	50c. per 100	128.70
<b>Number two.</b>		
Wood construction (wire lathed and stuccoed)	75c. per 100	375.82
Wood construction (siding, clapboards, shingles)	75c. per 100	371.25
Brick	50c. per 100	256.87
Terra cotta blocks stuccoed	50c. per 100	261.97
<b>Number three.</b>		
Wood construction (wire lathed and stuccoed)	75c. per 100	442.91
Wood construction (siding, clapboards, shingles)	75c. per 100	441.56
Brick	50c. per 100	326.70
Terra cotta blocks stuccoed	50c. per 100	313.50

"Repairs.—In estimating the cost of repairs, it is allowed that the wood house would need painting every three years after the first three years, besides general repairs to outside woodwork. The replacing of the shingle roofs is not included.

TABLE IV.

	Average cost per year for painting and repairs.	Total cost for 15 years.
<b>Number one.</b>		
Wood construction (wire lathed and stuccoed)	\$25.00*	\$375.00*
Wood construction (siding, clapboards, shingles)	75.00	1,125.00
Brick	25.00*	375.00*
Terra cotta blocks stuccoed	25.00*	375.00*
<b>Number two.</b>		
Wood construction (wire lathed and stuccoed)	35.00*	525.00*
Wood construction (siding, clapboards, shingles)	100.00	1,500.00
Brick	35.00*	525.00*
Terra cotta blocks stuccoed	35.00*	525.00*
<b>Number three.</b>		
Wood construction (wire lathed and stuccoed)	35.00*	525.00*
Wood construction (siding, clapboards, shingles)	100.00	1,500.00*
Brick	35.00*	525.00*
Terra cotta blocks stuccoed	35.00*	525.00*

\*These figures are for painting and repairs on exterior woodwork only. No attempt has been made to give the cost for upkeep of wire lath and stucco wall. The efficiency of this type of construction is generally recognized, is dependent on the style of house, its location and exposure, quality of workmanship, quality of material used, etc. But it is no exaggeration to say that in the matter of durability alone it will not compare with a wall built of brick or one built of terra cotta blocks and stucco, on either of which types the cost of upkeep would be very little, not only for 15 years, but for a very much longer period.

"The figures here given, although not so favorable to the better type of construction as may be obtained in many other localities, furnish, nevertheless, evidence that more houses should be built with permanent construction, especially as the cost is so little in excess, and also that after fifteen years, the repairs and deterioration on a wooden house are very much greater as the house grows older, while on the more permanent construction the repairs and deterioration after fifteen years remain practically the same year by year, to say nothing of the better salable value of the more permanent types. And, finally, from an artistic point of view, they add more dignity and tone to the vicinity in which they are erected. Also, the better types of con-



struction are cooler in summer and warmer in winter, and require less fuel for heating."

COMPARATIVE COSTS AFTER TWENTY YEARS. (See Page 1.)  
TABLE V.

Wood Construction (ending August 1st, 1932).	No. One.	No. Two.	No. Three.
Original Cost	\$8,800.00	\$16,100.00	\$19,625.00
Repairs	1,125.00	1,500.00	1,500.00
Insurance	175.00	371.25	441.56
Totals	\$10,100.00	\$18,271.25	\$21,566.56
Wood Construction (ending August 1st, 1932).			
Original Cost	\$8,100.00	\$16,970.00	\$19,685.00
Repairs	375.00	525.00	525.00
Insurance	128.70	375.82	442.91
Totals	\$8,603.70	\$17,870.82	\$20,652.91
5% interest on difference in original cost over wood construction	225.00	427.50	45.00
	\$8,828.70	\$18,298.32	\$20,697.91
Brick Construction.			
Original Cost	\$8,820.00	\$17,125.00	\$21,780.00
Repairs	375.00	525.00	525.00
Insurance	132.50	256.87	326.70
Totals	\$9,327.50	\$17,906.87	\$22,631.70
5% interest on difference in original cost over wood construction	225.00	543.75	1,616.25
	\$10,092.50	\$18,450.62	\$24,247.95
Terra Cotta Blocks (tuccoed).			
Original Cost	\$8,800.00	\$17,465.00	\$21,900.00
Repairs	375.00	525.00	525.00
Insurance	128.70	261.97	313.50
Totals	\$9,303.70	\$18,251.97	\$22,738.50
5% interest on difference in original cost over wood construction	585.00	798.75	956.25
	\$10,068.70	\$19,050.72	\$22,694.75

## Specifications for Finishing Concrete Floor Surfaces

By F. P. Foster, Jr., in *The Building Age*

During recent years more than usual attention has been given to the development of special materials for the perfection, protection and decoration of modern building construction with special reference to concrete surfaces. For the benefit of master painters as well as for architects, builders and contractors, it is well to furnish detailed specifications relative to the proper use of such materials. The subject of the present article being the treatment of concrete floor surfaces, the writer will not attempt to describe any complete line of finishes for waterproofing or decorating concrete, but will be limited to the subject in hand. There are at present on the market for treating concrete floors numerous materials made by various manufacturers. It is well after experimenting to learn the value of one special material and to become absolutely familiar with the best methods of using it. One of the well-known materials for this purpose is Glidden's Concrete Floor Dressing, which is made in the following colors: Light drab, dark drab, terra cotta, tan, white, green and also in transparent. This floor dressing has a capacity for covering with the first coat from 300 to 350 sq. ft. to the gallon, U.S. measure, and 360 to 430 sq. ft. to the gallon, Imperial measure. The second or finishing coat will cover from 350 to 400 sq. ft. to the gallon, U. S. measure, and 430 to 500 sq. ft. to the gallon, Imperial measure. The cost of the material itself is approximately half a cent. per sq. ft. to each coat. The cost of labor varies from 2¼ cents to 3¼ cents per sq. ft. for the finished job, which includes two coats and for any touching up that may be necessary, or about 7/8 cent to 1 3/8 cents per sq. ft. for each coat, according to the rate per hour paid for the labor.

The transparent floor dressing is of special value for the floors of factories, warehouses, mills or any other floors which are subjected to severe conditions of wear.

In this connection it is essential to note that concrete floors should never be treated or dressed until they are thoroughly dry and well seasoned and the dressing should be applied before they have been subjected to traffic or wear.

### Damp Floors.

Concrete floor dressing should not be used upon damp floors or floors which are subject to seepage. A coat of Glidden's Liquid Rubber applied over the floor surface will, however, overcome such conditions. This liquid rubber is a black elastic bitumen and is applied by means of a brush over which an inch top coat of concrete thoroughly waterproofed should be applied, using 2½ lb. of waterproofing to each bag of cement used in the concrete aggregate. When the concrete is thoroughly dry and seasoned two coats of concrete floor dressing should be applied in accordance with the above specifications. This same specification may be used upon damp basement walls which are subject to seepage, making a cement mortar veneer of ½ inch thickness and applying two coats of white liquid cement (coating) upon the surface after it is thoroughly dry in place of two coats of floor dressing. This specification will serve for damp basement floors and walls and it produces a sanitary and light radiating basement.

Concrete floors having very fine, close texture floated to a dense surface which give it at times a semi-gloss finish should be treated as follows: The surface should be gone over lightly with a carborundum rubbing brick in order to establish a bonding surface that will enable the concrete floor dressing a knit close to the floor structure and practically become a part of it. This will prevent scaling and peeling of the floor dressing. The floors should, of course, be cleaned, thoroughly dry and well seasoned before the priming coat of floor dressing is applied. It should be put on by means of a suitable brush and worked well into the pores of the concrete, spreading it well over the floor surface to develop a thin film. The second coat should be brushed out evenly over the surface in the same manner as one would apply a finishing coat of floor varnish and it should be given from four to six days for thorough hardening. Two coats develop a satisfactory result, although three coats should be used where floors are submitted to unusual wear.

### Concrete Floors of Coarse Texture.

Concrete floors of very coarse texture should be cleaned thoroughly dry and well seasoned before the priming coat of concrete floor dressing is applied. Either the transparent floor dressing or any color desired may be used and should be put on with a brush as already described. After the first coat is thoroughly dry all surface areas or spots which may show unusual absorption or penetration of floor dressing should be "touched up" in order to prepare a uniform surface for the finishing coat. The latter should be applied after the first coat is thoroughly dry, and should be allowed to harden from four to six days.

### Floors of Irregular Texture.

Concrete floors of irregular texture; that is, those made up of very fine and very coarse texture laid irregularly, which is sometimes due to carelessness, but often due to unforeseen conditions, should be given a joint application of the specifications described for concrete floors of fine and of coarse texture. Concrete floors of normal, uniform texture should be cleaned, thoroughly dry and well seasoned when the first or priming coat of concrete floor dressing is applied. In this instance as well as in others it can be put on with

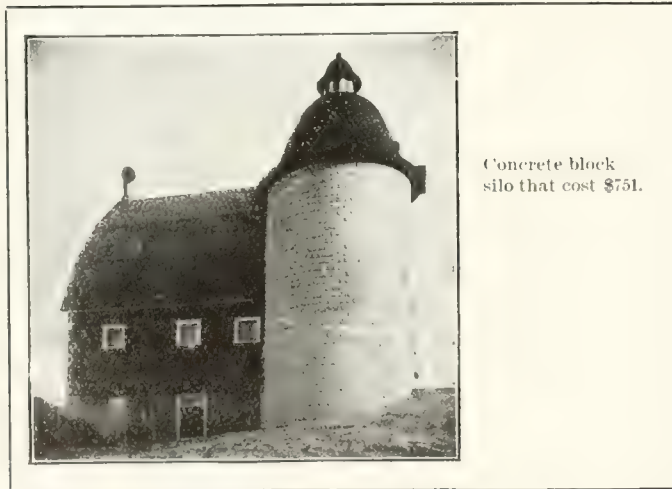
a brush and worked into the pores of the concrete, spreading the surplus well over the floor surface to develop a thin film. Floors which are laid in colors such as terra cotta, green, etc., or where inert colors are mixed throughout the cement veneer or wearing surface, should be given two coats of transparent floor dressing applied under the same conditions as for the normal or uniform texture.

### Silo of Concrete Blocks

An illustration is shown here of a concrete block silo, built for Mrs. S. D. Massey at Dentonia Park farm, near Toronto, Ont., by the East Toronto Brick Co., and published by courtesy of the Ideal Concrete Machinery Co., London.

The foundation of the structure is 4 feet high and 12 inches thick, made of 1:6 concrete. The floor consists of 3 inches of cement and gravel, mixed 1:6, and a top coat 1 inch thick of 1:2 mix. The wall contains 1,750 of 8-inch x 8-inch x 16-inch hollow concrete blocks, made on an "Ideal" machine and laid in lime mortar, the joints poured with a 1:2 mix of cement and sand. No. 8 steel wire was used for reinforcing and was placed in grooves in the block, every third course. Wing walls, containing the chute and connecting with the barn, are built of hollow concrete block to a height of 10 feet and above that boarded and shingled.

In building the roof it was desired to match other construction on the farm and this work made the job rather more expensive than would otherwise have been



Concrete block silo that cost \$751.

the case. There is some compensation for the extra care and expense in connection with the silo, for it is said to be the best looking one in that part of Canada.

Roof rafters were covered with basswood strips and then shingled. The bell top of the roof is covered with sheet lead, and the whole roof and chute job cost \$250.

The silo is 15 feet in diameter inside, 34 feet high and has a capacity of 180 tons. The silo block cost \$10 per foot of height, laid in the wall. The itemized statement of the construction is as follows:—

Foundation . . . . .	\$ 41
30 feet of silo block, laid in the wall . . . .	300
Side walls, floors and plastering . . . . .	160
Dome roof with bell top, covered with sheet lead, inclusive of top portion of chute sides and chute roof . . . . .	250
<b>Total . . . . .</b>	<b>\$751</b>

### Correspondence and Discussions

Readers are invited to send replies to questions asked by readers of The Canadian Builder and these will be paid for at regular editorial rates. Anyone desiring the names of firms manufacturing certain lines will be answered in this department.

Comments on articles published in The Canadian Builder are welcomed and all letters containing good ideas will be paid for.—Editor.

\* \* \*

#### Which of the Two Intersecting Points, is Right?

On page 27 of the September issue of The Canadian Builder, "Toronto Subscriber" inquires which is the point of intersection on balcony floor 7 feet 0 inches x 8 feet 0 inches with brick pier in corner.

In my opinion there should be no dispute as to the point, which in all cases should run from the angle of the brick pier.

I also notice in "Complete cost of \$3,500 House" on page 12, that the carpenter labor is estimated at \$150. This, in my opinion, is erratic.

M. N. WALKER,

General Supt. British Construction Co., Montreal.

Editor's Note.—Mr. Walker is correct. The printer mixed up the figures as will be seen when items are added and compared with the total given. The items should read as follows:—

Labor for carpenter . . . . .	\$634.00
Grading, earth, etc. . . . .	150.00
Rudd heater . . . . .	18.00
Furnace, etc. . . . .	105.00

\* \* \*

#### How Should This Tank be Placed?

I take the liberty of addressing you for information in plumbing. Being a reader of The Canadian Builder and have received some very important information from its pages, I am seeking the proper form from some of your experienced contributors. I am having a water system placed in my home. Bathroom is downstairs. In kitchen ceiling, 8 feet high, I was thinking of installing a water supply tank beside the bathroom with enough elevation for water to run in wash basin and extending to ceiling.

It is quite necessary to place it on ground floor to prevent freezing as it would surely do if placed in small space above on joist. An upright tank attached to a range is too high for water to flow from supply tank.

What I want to know is, could an upright tank be placed on its side and do the work satisfactory. If so it could lay under the elevated tank and be out of the way?

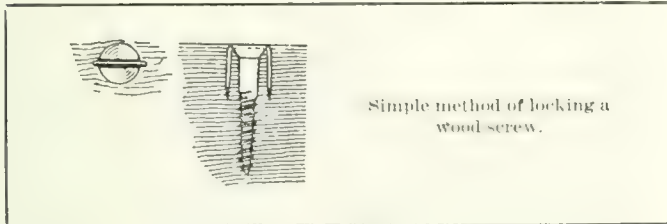
JOS. F. BALL.

The power user of to-day, who generates his own power, is really a very lucky fellow if only he could but realize it. He is virtually the managing director of a concern which supplies power to an obliging consumer (who is good enough to say beforehand what power will be required), and he is concurrently that obliging, and, let us hope, satisfied, consumer himself, who, in return for information given, is exempt from all extra charges which would have had to have been by him incurred to cover the capital and running costs of a plant of "maximum demand" size.—Power User.

# Carpentry and Woodworking

## Locking a Wood Screw

A contributor to a recent issue of Popular Mechanics gives a simple method for locking a wood screw. It is simply to drive a small staple over the head so that



the straight top will enter the slot in the screw head. In places where the wood is likely to shrink, this method is very satisfactory.

## Another Kink in the Saw Problem

By Fred Eberle

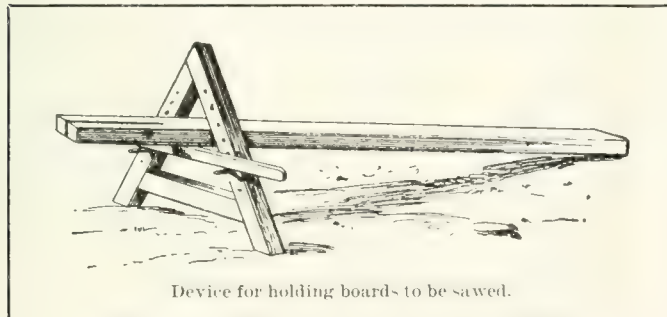
Sometimes builders get in a tight corner when working on gables, dormers, etc. The following may help them to overcome difficulties when they have no steel square or bevel:

To get miters, minus steel square or bevel, near enough for outside work, place saw on material to be cut, using saw as mirror, place saw till it is right angles with material giving square pitch cut, giving any miter, by looking at saw for results by holding saw at any angle material casts shadow on saw giving angle or cut required.

## How to Hold Heavy Work to be Sawed

By William Grotzinger

A good way to hold large heavy work that is to be sawed is shown in the sketch. The work is passed through the triangular opening in a wooden frame, nearly in the form of the letter A. When the frame and work lie at an obtuse angle, they constitute a



three-legged stool. The upper edges of the board become wedged fast in the sides of the triangle, and the lower side of the board rests upon a cross piece, which can be placed at various heights, according to the size of work that is to be held. In sawing, the man rests

his knee on the work, near the top of the frame, and the board is changed end for end, when sawn through half its length.—Scientific American.

## Planing Mill Dimensions of a Mullion Corner

By Emil Werke

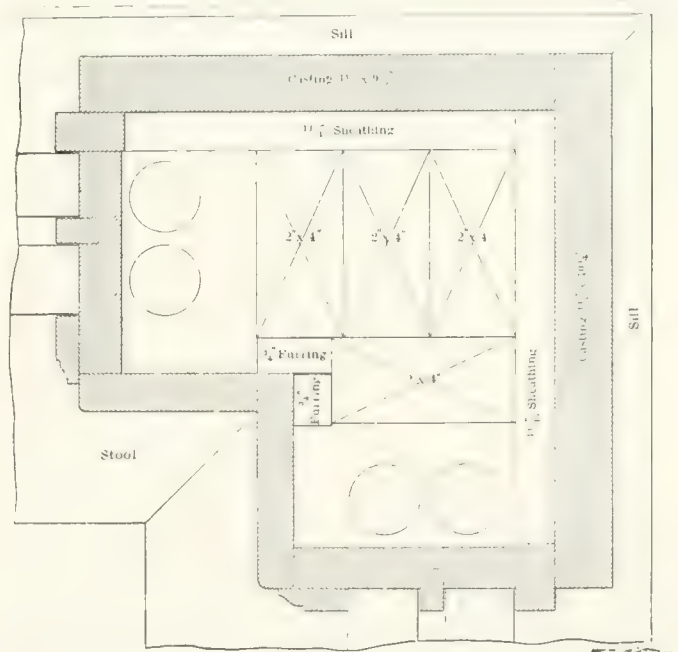
My sketch illustrates in cross-section the way to dimension the various parts of window frames coming together in the corner of the building.

We can see by the figure that the studs are 2 by 4 and the outside sheathing 13-16. The inside is lath and plaster and the 3/4-inch thickness of these is taken up by the two narrow furring strips just inside of the finished casing.

Of course the width of the pulley-stiles of the frames is determined by the thickness of the wall, the same as in any frame, but the widths of the outside casings are determined exactly by the width of the inside casings. The drawing shows the two mullion casings at the inner angle to have 3 1/2-inch faces but it can be understood that if they had 2 1/2-inch faces instead, it would take an inch off of each of the corner casings at the outside of the frame, and it will become apparent that the only way to reduce the size of the mullion corner is to narrow up the inside casings.

So far as the wall is concerned, this may be done until the two window stops join in the corner, but in that event there would be room for but two studding and no room for weights. As this kind of a corner must bear the weight of the upper part of the building, it is just as well to use the four pieces as shown unless the regular casing for the inside is narrower than 3 1/2 inches and in that case the mullion casings can be made the same width as the others.

When billing out the outside casings we must not



Planing mill dimensions of window frames for the corner of a building.

forget that one casing laps by the other unless the corner is to be filled with a  $\frac{1}{4}$  round, and that there should be a little extra width provided for the carpenter to fit the whole frame into place in the wall.

The mullion end of these sills must also be left long enough to miter at the corner when the frames are set and the same is true of both apron and cap if there are any.—Wood Craft.

### A One-Man Floor Scraper

The claim made by the "Little Giant" floor scraper is that it will scrape eight squares, or 800 square feet of flooring, in eight hours, which at the wage scale of from 30 cents to 40 cents per hour would be 30 cents to 40 cents per square. This would practically mean a saving of 90 cents to \$1.20 per square over the old method of scraping by hand and would amount to from \$60 to \$72 on 6,000 square feet.

This machine is simple in operation. The knife is bolted on the front plate and scrapes the floor when the machine is pulled towards the operator. A shaving is removed with each stroke, about two inches wide and three feet long. The knife projects beyond the front of the machine and will scrape right up to the baseboard.

All rollers of the machine are rubber tired, protecting the floors. The handle is adjustable as to height



Floor Scraper which does the work efficiently. Manufactured by the Hurley Machine Co., Toronto.

and length. The scraper may be used on oak, maple, birch, yellow pine and parquet floors.

This scraper is manufactured by the Hurley Machine Co., Toronto.

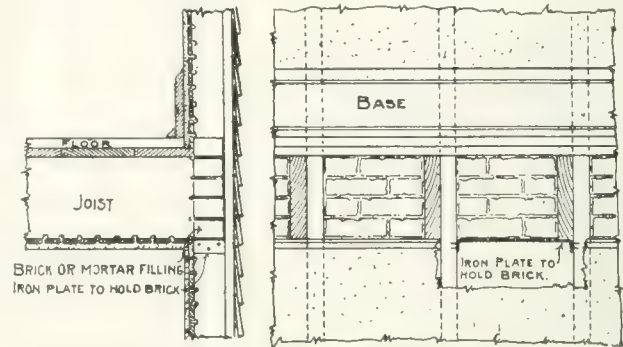
### Fire Resistance in Frame Houses

The question of fire prevention is all-important, and the builders of frame houses can do something in this direction. The following suggestion, given by C. W. Older, in the American Carpenter and Builder, is worth noting.

A frame residence cannot be made fireproof, but it can be made to resist the flames enough to prevent

loss. By keeping the fire confined to one room, or one floor, there is a great deal better opportunity to save the whole house from destruction. A few precautions in building would be of great assistance, at such a time, to avert a calamity.

Notice, for instance, the course of a fire. Often when it starts in the basement, the flames are visible under the eaves as soon as they have made much headway below. And, considering the construction of the walls, it would be impossible for the result to be otherwise. Even if the fire should start in a room



CROSS SECTION  
LONGITUDINAL SECTION.  
Brick Fire Stop Should be Put in at Each Floor

on the first floor, it does not make remarkable headway until it has burned a hole through a wall, then in a very few minutes the entire structure is ablaze. It seems to be one of the failures of a frame structure for the wall to act as a flue between the lath and the siding. There are ways by which this can be considerably relieved, but we constantly find this type of buildings erected with an air space in the wall open top and bottom. Some take the precaution to see that the bottom is closed, usually by a layer of brick, or perhaps only mortar. This is a great help, as it shuts off the greater part of the draft. If the builder would go a step further and shut off this air space at each floor, it would have the same effect on the fire as closing up a chimney, for by leaving no outlet above in the wall there would be no chance for a draft.

This can be accomplished, before the lathing is done, by spiking sheet iron between the studding, and on this pouring horizontally a good pasty mortar. This will fill the openings that may be left around the edge of the sheet iron, and by being placed on a line with the floor, has no undesirable feature whatever, besides causing the fire to burn so slowly that there is a greatly increased likelihood of being able to extinguish it altogether.

This method of precaution from fire is by no means new, and is not represented as such, but a more frequent use of it should be demanded. With the number of frame buildings being erected, it is surprising to note how few make any pretence of a safeguard of this kind. In some localities almost everyone observes a great amount of care, but in other communities the opposite extreme prevails.

As it represents but little expense, compared with benefits likely to be derived in an emergency, there is very little argument against its more general use.

The ground-floor plant is the ideal one where conditions will permit and where it is necessary to make the plant more than one story high the elevator is an important factor that should be selected and installed with due care and forethought.

# Barrett Specification Roofs



## On Four Great Granaries

To cover the four huge granaries illustrated herewith the Canadian Pacific R. R. engineers, chose Barrett Specification Roofs for good and sufficient reasons.

These practical men know that these roofs will last *20 years or more*.

They further know that they will need no painting or maintenance expense of any kind and that the net cost per year of service will be infinitely lower than could be shown by any other type of roofing.

It is for these very reasons that Barrett Specification Roofs are used on more first-class buildings in the United States and Canada than any other kind.

A big roof generally means a Barrett Specification Roof, for the reason that the cost of big roofs is carefully scrutinized and ultimate economy carefully considered. Small roof areas ought also to have Barrett Specification Roofs, because they are just as economical and satisfactory there.

Copy of The Barrett Specification with tracings ready for incorporation into building plans free on request. Address nearest office.

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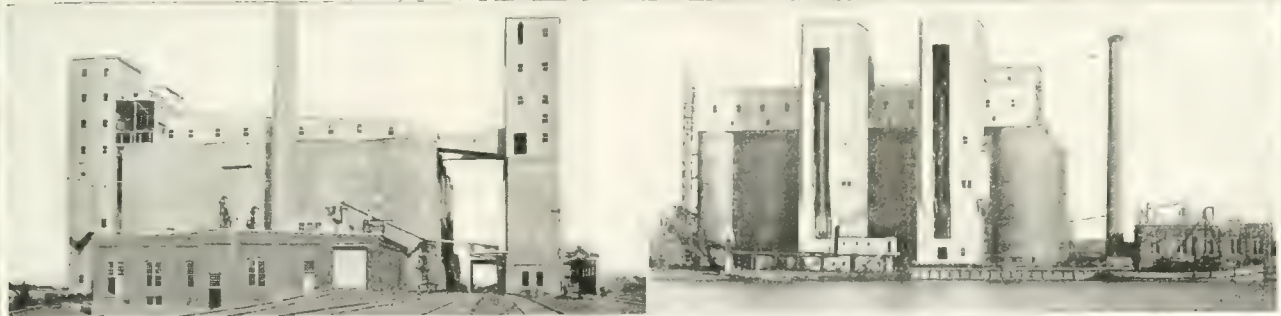
MONTREAL TORONTO WINNIPEG VANCOUVER ST. JOHN, N.B. HALIFAX, N.S.

### Special Note

We advise incorporating into plans the full wording of The Barrett Specification, in order to avoid any misunderstanding.

If any abbreviated form is desired, however, the following is suggested :

ROOFING—Shall be a Barrett Specification Roof laid as directed in printed Specification, revised August 15, 1911, using the materials specified, and subject to the inspection requirements.



# Price List of Building Materials—Revised to Date

	PRICE AT MONTREAL	PRICE AT TORONTO	PRICE AT WINNIPEG	PRICE AT VANCOUVER
<b>Hemlock Lumber</b>				
2 x 4 in. to 2 x 12 in., 8 to 14 ft.....	\$20.00	\$21.00		
2 x 4 in. to 2 x 12 in., 16 ft.....	22.00	25.00		
2 x 4 in. to 2 x 12 in., 18 ft.....		26.00		
1 in. Hemlock No. 1 .....	20.00	20.00 to 23.00		
No. 1 hemlock decking .....	23.00	23.00		
No. 2 hemlock dimension and 1 in.....		16.00 to 18.00		
<b>Pine</b>				
1 in. common pine, 8 to 12 in. wide, rough	\$27.00 to 30.00	\$27.00 to 30.00		
2 in. white pine, bill stock .....	29.00 to 33.00	29.00 to 33.00		
7/8 x 8 and 10 in. pine shelving .....	36.00 to 40.00	36.00 to 40.00		
7/8 x 12 pine shelving .....	42.00	45.00		
No. 1 white pine flooring .....	40.00	32.00		
No. 1 spruce flooring .....	30.00	26.00		
No. 1 pine decking, D2S .....	40.00	30.00		
Spruce pine decking .....		25.00		
No. 1 pine V. or beaded sheeting .....	37.00	35.00		
No. 2 pine V. or beaded sheeting .....	31.00	31.00		
<b>Pine Trim for Paint Finish</b>				
4 in. casing, per 100 ft.....	\$2.00	\$2.00		
5 in. casing, per 100 ft.....	2.00	2.25		
8 in. pine base, per 100 ft.....	3.50	3.25		
10 in. pine base, per 100 ft.....	4.25	4.25		
4 in. pine window stool, per 100 ft.....	2.75	2.75		
<b>Shingles, Lath Roofing, Etc.</b>				
XXX B. C. cedar shingles .....		\$3.70 per M	\$1.00 & 3.50 per M	\$2.10 & 2.00 per M
N. B. Extras .....		3.60		
N. B. Clears .....		2.90		
No. 1 pine lath .....	5.00	4.75 per M	5.75 per M	2.75 per M
No. 2 pine lath .....	4.50	4.25		
No. 1 spruce lath .....	4.00	4.00		
Metal lath .....			.15 to .19	
Roofing Felt (2 ply) .....			2.50 per roll	
<b>Cedar Posts—Fence</b>				
5 in. at small end .....	5c. foot	.25 each		
7 in. at small end .....	7c. foot	.35 each		
<b>Hardware</b>				
Nails, wire, common .....	\$2.35 base keg	\$2.40 cwt.	\$3.70 per keg	\$3.25 per keg
Nails, cut, common .....	2.55 " "	2.75	3.70	4.25
Sash weights, cast iron .....	1.50 per 100 lbs.	1.65		
Tarred felt paper .....	.40 roll	1.65	.90 per roll	.62½ per roll
Building paper .....	.30 roll		.75	.70
Insulating paper .....			1.25	
<b>Brick, Tile, Terra Cotta, Sewer Pipe</b>				
No. 1 dry pressed red brick .....	19.50	\$18.00 per M	\$25.00 to 50.00	\$45.00 per M
No. 1 dry pressed buff bricks .....	20.50	18.00	25.00 to 50.00	45.00
Red stock bricks .....	11.00	12.00	13.00	13.50
Grey stock bricks .....		11.00		
Wire cut bricks for foundation work ..		11.00		
Porous terra cotta bricks .....		15.00	\$15.00 per M	
No. 1 enamelled bricks, all colors, from		80.00 to 150.00	100.00	
Fire brick .....	25.00		45.00	45.00
Roofing tile .....			.15 per ft.	
Sewer pipe, 4-inch .....	10c. foot		.08½ per ft.	.15 per ft.
Sewer pipe, 6-inch .....	15c. foot		.16½ per ft.	
<b>Cement, Plaster, Stone, Etc.</b>				
Cement (bags extra) .....	1.80 bbl.	\$1.90 bag	\$2.50 per bbl.	\$3.25 per bbl.
Sand, for cement or brick work .....	1.00 ton	1.15 a yard	1.75 a yard	
Lime .....	12.00	.38 cwt.	.32 per bu.	1.35 per bbl.
Hydrated lime .....	13.00		12.00 per ton	4.25 per bbl.
Mortar color .....	5.00 bbl.		.05 per lb.	
Plaster of paris .....	2.35	3 10 bbl.	4.00 per bbl.	4.25 per bbl.
Crushed stone, 2 in. .....	1.59 ton	1.30	2.75 per yard	
Crushed stone, 1 in. .....	1.60	1.35	2.75	
Crushed stone, ¾ in. .....	1.75	1.45	2.75	
Hardwall plaster .....	\$12.50 neat		12.50 per ton	15.00 per ton
	6.00 sanded ton			
Gravel .....	1.85 ton		1.85 per yard	
Hair (plaster) .....	.03 per lb.		1.25 per bale	15.00 per ton

**NOTE TO READERS.** We would be glad to have suggestions from readers as to the extension or modification of this list.



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Ideal Concrete Machinery Co., London, Ont.  
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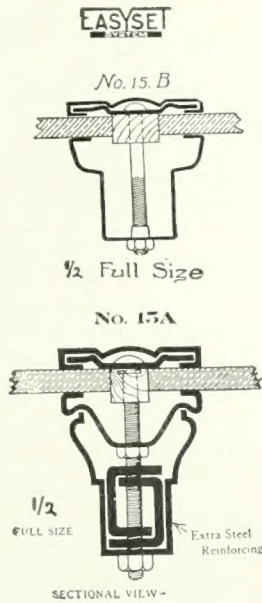


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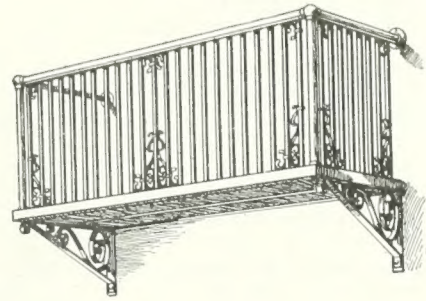
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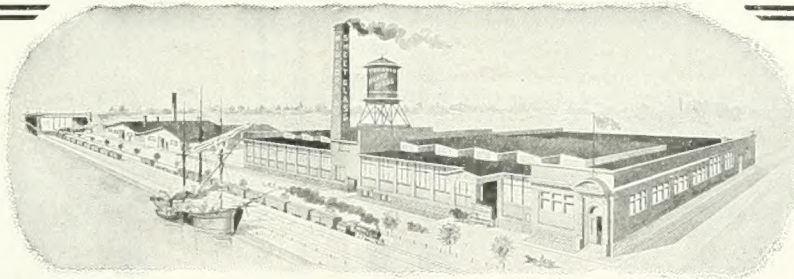
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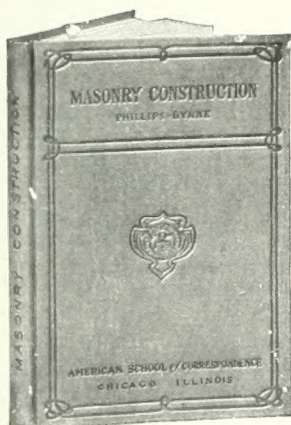
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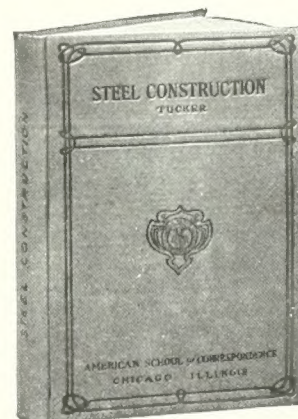
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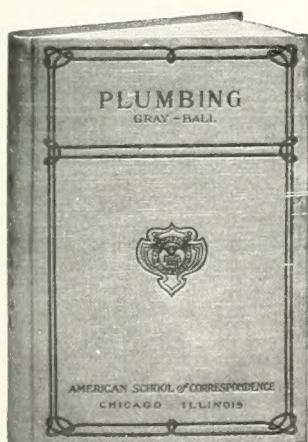
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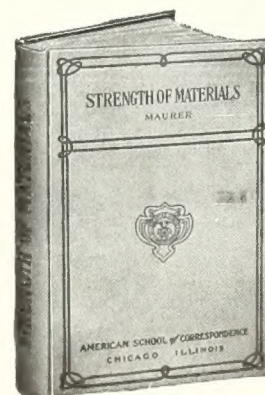
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# The Canadian Builder— A Record of Note

## *Some Information of Interest*

To those firms who are now advertising and also to such firms as are not now advertising, but who will be at some time.

¶ In the Spring of this year the total paid circulation of *The Canadian Builder* numbered less than 1,000.

The total paid circulation of this issue is close to 4,500.

This increase of 3,500 has been secured in little more than 5 months.

## What Readers Think of the Paper

*"'Tis almost superfluous to say that I am entirely pleased with The Canadian Builder, believing that it stands to comply admirably with the needs of those in any way connected with the building trade."*

GILBERT A. CLOTHIER, Toronto

This is a sample of the unsolicited letters we are getting from our readers.

## Results Advertisers are Getting

*"We must confess that we are well pleased with the results so far obtained from our advertisement in The Canadian Builder. Kindly advise what will be the charge to continue full page instead of half page as arranged."*

THE GEORGIAN BAY SHOOK MILLS, Limited  
Midland, Ont.

*"We might say for your information that we are receiving, both directly and indirectly very good results from the advertisement which we are carrying in your paper. In fact the writer has to admit that the results are surprising."*

THE HURLEY MACHINE CO., Limited, Toronto

These two are samples of the unsolicited letters we have had from advertisers expressing their appreciation of the good results they have had from the paper. More than half the advertisers have signified their satisfaction with the results obtained from the paper.

Send for complete information and rates. Rates will be advanced as soon as circulation reaches 5,000.

**The Commercial Press, Limited**  
Toronto, Canada