

tongue, and the flat, or plate cut, on the blade for all regular or square roofs. Irregular roof or roofs having acute or obtuse angles, some different treatment will

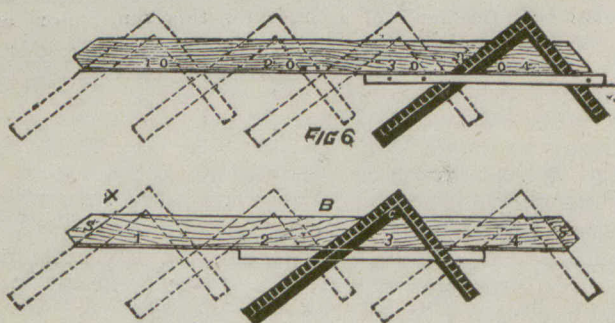


FIG. 4.
LAYING OUT BRACES.

be required, and which would demand too much space to explain how, but I may refer to this interesting subject later on.

X :—In answer to J. N., I may say there are three or four ways of laying out the distances for saw cuts to be placed on stuff to be "kerfed" for bending around a given circle. J. N. does not say exactly what he requires, but I presume it is intended to mean "kerfing" to bend around a window head. This being the case, the illustration shown at Fig. 7 will explain the matter. In a case of this kind, it is better to have the cuts or "kerfs" on the outside, in order to have the concave side a plain smooth surface. Suppose the stuff to be 1 1/4 in. thick—take a rod the same thickness, make one cut to the gauge line that forms the veneer, lay your rod on the plan as shown, and keep the cut opposite A the centre; fasten the end below A with a couple of nails. Now pull the end B of the rod until the cut is closed; the rod will move from B to O, and the distance shown between B and O, in the proper distance to lay off the kerfs. The same saw that made the cut in the rod must be used in making all the kerfs. Take the greatest care in cutting down to the gauge line; to insure accuracy fasten two pieces of stuff on the saw by putting a screw in each end, the object be-

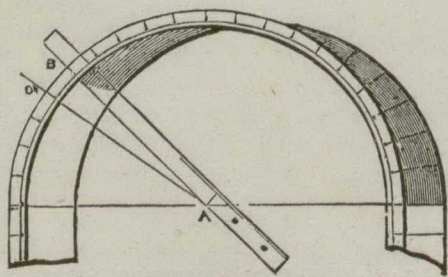


FIG. 7—KERFING.

ing to form a stop to prevent the saw from cutting too deep. Before bending, wet the smooth side of the stuff with hot water; have a cylinder ready to the required circle, bend the board over this, and fill the cut with a thin strip of stuff, glueing them in place at the same time. Brace the piece by trailing rods across the bottom, and let stand until dry. The same system of laying out kerfs will answer for any kind of circular work where the kerfs are made on the inside, as well as if made on the outside.

V. W. writes : "There is a bad echo in our church, and we wish to remedy it if possible. The audience room is 38x50 feet inside with a flat ceiling 21 feet high. The pulpit is at one end of the room and is slightly raised. Can this echo be overcome by stringing wires near the ceiling? Can wire fine enough to be practically invisible, be used?"

Jas. N. : Please inform me how to estimate the cost of buildings by the cubic foot.

P. R. S. : I would very much like to know if the Red-Wood of the Pacific coast is a good wood for inside finishing?

R. S. T. : I cannot get the bronzing on some radiators I have finished, to keep from peeling off. What is the best liquid to mix the bronze with?

W. P. : Given the rise of span of a segment arch which is the easiest way to find out the skew-back—the diameter of the whole circle of which the segment is to part, also the exact measurement from skew-back to skew-back?

CONTRACTING METHODS.

Our readers will be interested in learning the method adopted by a Boston contractor to place a stable foundation beneath a number of houses that had been built upon what was years ago a swamp with a stratum of quicksand below the boggy peat, so that the houses were in reality floating upon a very unsuitable foundation. In order to overcome the difficulty a broad trench 12 feet deep was dug outside the foundations of the entire block, and in this trench 7 or 8 inch holes were bored for the reception of pipes, which were then filled with concrete, making, in fact, a series of concrete piles. On top of these was placed 6 feet of concrete and this in turn was surmounted by several feet of solid masonry. The result of the operation was to place the entire block of houses in what might be termed a huge box, fully capable of withstanding any outward pressure and preventing any further settlement of the foundations of the buildings. We understand the work was done by Lawrence P. Soule & Sons of Cambridge, Mass.

PREPARATION FOR RESISTING DAMP WALLS.

Many articles have been tried to prevent the damp from striking through the walls, but all are more or less of no practical value to the painter, says a writer in an English exchange. One of the many objections to them is the exorbitant prices charged by the dealers, while at the same time the material from which they are produced perishes after a few months' exposure to the weather, which generally results in the damp resister and overcoats falling off in large masses.

An effective preparation may be prepared as follows : Procure 14 pounds common rosin and melt over a fire, or melter, stir in two parts each boiled linseed oil and hard oak varnish, and then allow it to cool down somewhat and take well away from the fire and add slowly 3-4 gallon coal tar naphtha, constantly stirring until all the ingredients are thoroughly mixed.

This preparation should be kept in air tight vessels, otherwise the naphtha, being volatile, passes off, leaving a thick, unworkable mass.

The above preparation is transparent, but may be prepared in any shade or color by adding any good boiled pigment, thinned down with naphtha and thoroughly mixed into the preparation.

The best method of applying the preparation is to rub the first coat well into the work by means of a heavy varnish brush. This should be allowed to thoroughly dry, which usually takes about three hours, it may then be given another coat, which dries hard with an excellent gloss. The work may then be proceeded with in the usual way. This recipe produces about 2 1/2 gallons, and will cover about 120 square yards, one coat.

The McLellan Paint Company, of Toronto, has been incorporated to manufacture and deal in paints, varnishes and painters' supplies generally, and to take over the business heretofore carried on by the McLellan French Paint Company.

In the city of St. John, N.B., there is a by-law existing at present requiring that plumbing work shall be done by competent men. It is now proposed to go a step in advance and make it compulsory for plumbers to take out licenses.

The capital of the Peninsula Portland Cement Co., with general offices at Toronto and works at Durham, Ont., is \$1,000,000. Gilbert McKechnie, of Durham, and T. W. Stanhope and Barlow Cumberland, of Toronto, are directors of the company. In the vicinity of the works there is a superior quality of marl and suitable water powers which have been secured.