THE

Canadian Contract Record

A Weekly Journal of Advance Information and Public Works.

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THE CANADIAN CONTRACT RECORD,

A Weekly Journal of Advance Information and Public Works.

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The purposes of this journal are to supply Contractors, Manufacturers and Dealers throughout Canada, with advance information regarding contracts open to tender, and to furnish Architects, Municipal and other Corporations with a direct medium of communication with Contractors

Information from any part of the Dominion regarding contracts open to tender will be gratefully received.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Ontario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

USEFUL HINTS.

Hard finish is cheaper than paint for woodwork, looks better and lasts longer.

The weight of a crowd of men closely packed is about 84 pounds per superficial foot.

VARNISH FOR UNPAINTED WORK.—Quarter of a pint of wood naphtha, quarter of a pint spirits of wine, four ounces benzoin, four ounces oranges shellac; dissolve all together.

The cost of houses may be approximated by rating small ones at twelve to twenty cents per cubic foot for ordinary plans, and fifteen to twenty-five cents where there is an extraordinary amount of plumbing, etc., and the site unfavorable. Thus a house 30 x 30 x 25 containing 22,500 cubic feet, would range from $2,700 if of frame in a favorable locality and not too elaborate to $5,525 if of stone and in an expensive place and "liberally" constructed.

THE FLOW OF STEAM.—The velocity at which steam flows in pipes and through apertures is governed by the same law as the flow of liquids, if the gravity is considered. It is more convenient, however, to compute the flow from temperature, as follows: $V = 60 \sqrt{T + 460}$, or the velocity per second equals 60 times the square root of the degree of temperature with 460 added. The flow is nearly uniform at different pressures, and the following table will answer for nearly all cases without further calculation:

Pressure in lbs. per in.,	25	30	45	60	75	100	150
Velocity in ft. per sec'd,	863	867	877	885	891	898	908

Mortises where in the side of a beam, should be cut as near as possible in the centre of the depth, where the neutral axis is, thus weakening the beam to the least extent. But tenons, to have the greatest strength, should be at or near the under side of the joint. To reconcile these two, give the tenon a depth of ⅙ and a length of ⅓ the depth of the cross beam, and make the level side of the cross beam into a shoulder, let into the main beam one-half the length of the tenon.

IMITATION EBONY.—Wash any compact wood with a boiling decoction of logwood three or four times, allowing it to dry between each application. Then wash it with a solution of acetate of iron, which is made by dissolving iron fillings in vinegar. This stain is very black, and penetrates to a considerable depth into the wood, so that ordinary scratching or chipping does not show the original color.

INTERESTING ENGINEERING FEAT. The method of constructing the foundations of the great drawbridge over the Thames at New London is of exceptional interest. Timber curbs were constructed, which were sunk eighty feet into the bed of the river, the bottom of which was soft mud for this depth. The mud inside the curb was excavated, and the piles driven into the solid ground then obtained. The heads of these piles were then bound together with concrete, on which the masonry of the pier was finally erected.

STAINED FLOORS.—The hue to be given in staining a floor greatly depends on the condition of the boards. If they are smooth or fine grained, a satinwood or pitch stain is appropriate, but if a floor is old and somewhat rough, it may be well to stain it with dark oak or mahogany. After the stain is applied with the brush, it is to be wiped dry with a soft cloth. For the ultra-fashionable floor of a pale shade of oak sized and varnished, raw sienna powder is mixed with water. Although at first of a painfully glaring yellow, sizing tones down the strong color surprisingly and the polish brings out the true oak shade to perfection. A coating of shellac varnish to parquet floors has the fault of becoming brittle as soon as the spirit used in dissolving it has evaporated. The objection to linseed oil is its darkening effect on the wood, besides rendering in time different kinds of wood much of the same color. White wax so prepared as to be free from stickiness makes one of the best finishes. Once the floor has been properly filled and finished, it keep fresh and bright, and when a little dull only needs to be rubbed over with a weighted brush or cloth.

FIRE PROOFING WOOD-WORK. The Western Manufacturers' Mutual Insurance Company have issued the following suggestions relative to the construction of fire-proofing wood-work. A door of the right construction to resist fire, should be made of pine, and should be of two or more thicknesses of matched boards nailed across each other, either at right angles or at 45°. If the doorway be more than 7 by 4 feet, it would be better to use three thicknesses of the same stuff; in other words, the door should be of a thickness proportioned to its area. Such a door should always be made to shut into a rabbit, or flush with the wall when practicable; or, if it is a sliding door, then it should be made to shut into or behind a jamb, which would press it up against the wall. Both sides of the door and its jambs, if of wood, should then be sheathed with tin, the plates being locked at joints and securely nailed under the locking with nails at least one inch long. No air-spaces should be left in a door, by paneling or otherwise, as the door will resist best that has the most solid material in it. In most places it is much better to fit the door upon inclined metal sliders than upon hinges. This kind of door may be fitted with automatic appliances, so that it will close of itself when subjected to the heat of a fire, but these appliances do not interfere with the ordinary methods of opening and shutting the door - they only constitute a safeguard against negligence. The construction of shutters varies from that of doors only in the use of thinner wood.