

brick, W. Lavers; painting and glazing, Geo. Kimber.—Murphy & McGuire, of this city, have the contract to construct a railway between St. Remi and Stottsville.

TORONTO, ONT.—Tenders for annual supplies were last week opened by the Board of Works. Some were referred to the City Engineer for a report. The following were accepted: Cement, 57½ cents in bags, 62 cents in barrels, Rathbun Co., Deseronto; bricks, \$5.95, east of Yonge, Walker Morley, \$6.30, west of Yonge, David Wagstaff; lumber, pine, \$13.17, hemlock, \$8.90, pine timber, 12x12x12, \$12.80, 12x12x16, \$12.80, 12x12x20, \$12.90, 12x12x24, \$16; hemlock timber, 12x12x12, \$9, 12x12x16, \$9, 12x12x20, \$9.50, 12x12x24, \$11, to J. W. P. Bryce; stop cock boxes, valve boxes, \$1.40 and \$1.45, service boxes, 65 cents small and \$1.15 large, St. Lawrence Foundry Co.; lead pipe, \$4.10 per hundred pounds, Ontario Barb Wire Co.; iron castings, \$1.70 per 100 lbs., Galloway, Taylor & Co.; general hardware, the Aikenhead Company; brass work, James Morrison Company; coal and wood, Conger Coal Company; brass and bronze castings, John Dean.—The following contracts have been awarded in connection with the proposed consumptive sanatorium at Gravenhurst: Stonework, Page & Co.; woodwork, R. Robson. The balance of the contracts will be let at a later date.

#### SUGGESTIONS FOR STONE MASONS.

A poor stone wall has been the cause of ruining many a noble and otherwise perfect edifice. "Let me give my brother mason a few pointers on laying stone," says R. N. Buell in a late issue of the Brickbuilder—"not that I shall attempt an exhaustive treatise on the subject, but simply to place before him a few simple rules, which may possibly be the means of saving him many dollars. Of whatever quality the stone may be which a wall is to be built, it should consist as much of stone and as little of mortar as possible. If it be inferior in durability of power in resisting the action of the atmosphere, etc., to the mortar, besides the certain fact that the mortar will yield until it has set hard, and so far act injuriously, no ulterior good is gained; and if the stone be the more durable material, the more of it that enters the wall the better. Indeed, in rough walling, if the stones be laid so that the most prominent angles on their faces come into actual contact, the interstices being occupied by mortar, it will be better than if a thick, yielding mass were allowed to remain between them. Absolute contact, however, should not be permitted any more than in brick work, lest the shrinkage of the mortar in drying

leave the stones to such unequal bearing as the prominent parts alone would afford. Stone being generally of a less absorbent nature than brick, it is not a matter of so much importance that it be wetted before setting. Nevertheless, adhesion on the part of the mortar is more certain and more complete if the stones be worked in, at least, in a damp state.

Bond is of not less importance in stone walling than in bricklaying. Instead of carefully making the joints recur one over the other, in alternate courses, as with bricks and gauged stones, the joints should as carefully be made to lock so as to give the strength of two or three courses or layers between a joint in one course and one that may occur vertically over it in another. In bonding through a wall or transversely it is much better that many stones should reach two-thirds across alternately from the opposite than that there should be a few through stones, or stones extending the whole thickness of the wall. Indeed, one of the many faults of stone masons is that of making a wall consist of two scales or thin sides with through stones now and then laid across to bind them together, the core being made of mortar and small rubble merely. This is a mode of structure that should be carefully guarded against. There is no better test of a workman's tact and judgment in rubble walling than is afforded by the building of a dry wall, or a wall without mortar. Walls are frequently built with mortar that without it would have fallen down under their own weight in a height of six feet, in consequence of their defective construction, thus rendering it evident that they are only

held together by the tenacity of the mortar, which is very seldom an equivalent for proper bond of stone.

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