

**CONTRACTS OPEN.**

ST. THOMAS, ONT.—The Presbyterians will erect a new church on Alma street shortly.

SARNIA, ONT.—A movement for the erection of a House of Refuge for this county is progressing.

MORDEN, MAN.—The Hudson's Bay Co. contemplate erecting a substantial brick store building in the spring.

VICTORIA, B. C.—A by-law is before the Council for the expenditure of \$5,000 towards the construction of a drill shed.

EXTREME, ONT.—Mr. J. W. Broderick has purchased Mr. Jas. Rickard's large residence and intends to re-model the same.

SHERBROOKE, QUE.—The Paton Co. will probably spend about \$50,000 in the erection of additional buildings and purchase of new machinery.

ST. JOHN'S, N. B.—Messrs. Kichen & Son of New York have undertaken to complete 14 miles of Tobique Valley Railway in this province in the spring.

NEW WESTMINSTER, B. C.—A company is being formed for the reclamation of a tract of submerged prairie land about 30 miles from Vancouver.

PORT ARTHUR, ONT.—It is proposed to raise \$75,000 for the purpose of constructing an electric street railway between this place and Fort William.

KINGSTON, ONT.—The City Council is in correspondence with Mr. Geo. Unser of Toronto regarding the erection of a carpet factory estimated to cost \$30,000.

MONTREAL, QUE.—The St. Jean Baptiste Society have at their disposal the sum of \$140,000 for the erection of a monument. Tenders for the work will be asked for early in the spring.

PORT DOVER, ONT.—Mr. Thos. Hyland of this place has had drawings prepared from which to erect a large hotel on the lake shore, the estimated cost of which is \$70,000. Construction will commence shortly.

OWEN SOUND, ONT.—The G.T.R. Co. have offered to construct the road to connect this town with the Stratford and Lake Huron branch on condition that the town grants a bonus of \$70,000. Tenders are asked for the erection of a Separate School next summer on St. Mary's Hill.

HALIFAX, N. S.—At a meeting of the Board of Works, held November 17, it was decided to engage an expert engineer to examine the water supply, with a view of making such improvements as may be necessary to improve and increase the supply. E. H. Keating, City Engineer, can furnish details.

VANCOUVER, B. C.—The City Engineer has been instructed to get quotations for 660 feet of 8 inch vitrified sewer pipe and 8 x 4 Y's.—Subscriptions are being solicited and liberally given towards the construction of a Temperance Hall.—The Board of Trade will recommend the Council to erect an Agricultural Hall.

WINNIPEG, MAN.—The design of Mr. Hooper of this city for a monument to the late Hon. Mr. John Norquay has been accepted. The monument will cost \$2,000. A memorial tablet is also to be placed in the church at St. Andrews.—The sum of half a million has been subscribed for a beet sugar factory, and the Government is being asked to sanction the erection of a distillery in connection with the enterprise.

TORONTO, ONT.—Application has been made to Parliament to incorporate the Toronto Railway Viaduct and Tunnel Co. with power to construct an elevated railway viaduct of tunnel along the Esplanade from some point near Mimico easterly to the townships of York or Scarboro.—The following building permits have been granted: S. McIntosh, one pair 2-storey and attic bk. dwellings, Wood near Church st., cost \$5,300; James Taylor, one pair 2-storey bk. dwellings, Wyatt avenue, cost \$2,400.

**CONTRACTS AWARDED.**

KINGSTON, ONT.—Mr. Geo. Wilson, of Gananoque, has been given the contract for the enlargement of St. George's Cathedral.

WALKERTON, ONT.—The contract for the construction of the water-works system has been given to Mr. Miles Hunting, Hamilton. The contract price is \$18,000.

MONTREAL, QUE.—The proprietors of Sohmer Park have contracted with the Dominion Bridge Co. for a new pavilion with steel supports, 120 feet by 175 feet, and 60 feet high.

OTTAWA, ONT.—Messrs. D. O'Brien & Sons of Montreal, and Poupore Bros. of Ottawa, who are respectively the lowest tenderers for erecting 1 and 3 of the Rapide Plat Canal enlargement works, have entered into partnership, and will carry out both contracts with the one staff.

**PRESERVATION OF METALLIC SURFACES.**

One of the greatest difficulties in the way of protecting iron surfaces by means of paint is the difficulty of producing a firm adhesion between the paint and the metal. When applied to surfaces that have been polished, the difficulty is not so great; though, even in this case, anything that will cause a more perfect adhesion is to be welcomed. It is when paint is applied to the rough surfaces of iron castings, and especially to those that have been scaled by the action of vitriol, that the difficulty of producing a perfect and permanent adhesion is found. In order to secure the best results, iron that has been vitrioled ought to be well washed and carefully dried before the paint is applied. If the articles are small and will bear the application of a strong heat, they should be heated until oil applied to them smokes. They may then be brushed over with a thin coating of boiled linseed oil; and when this has become thoroughly dry, they may be painted. When the articles are too large, or when, from other reasons, it is impossible or inconvenient to heat them, the oil may be warmed before it is applied. A thin coat of hot oil will penetrate every pore, displace all adhering dampness, and stick to the metal so closely that no exposure to air or moisture will ever cause it to separate. To such an oiled surface paint adheres well; and when this process is adopted, we never find the paint falling off in large flakes, owing to moisture having crept into some crack and gradually produced a thin layer of rust between the paint and the metal. These remarks of course apply to metal that is exposed to the open air, and subjected to the action of frost, moisture and air. It is easy enough to protect metals that are kept within doors, in a dry place, and consequently need no protection; but iron exposed to the elements is a different affair. And here we may perhaps be allowed to remark that these directions in regard to hot oil apply to wood quite as well as they do to metal. A coat of oil applied hot, and allowed to become thoroughly dry, is a powerful preservative, and makes an excellent groundwork for a subsequent coat of paint.—*American Artisan.*

**STONE WALLING.**

Of whatever quality the stone may be of which a wall is to be built, it should consist of stone and as little of mortar as possible. If it be inferior in durability and power of resisting the action of the atmosphere, &c., 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 into the wall the better. Indeed, in rough walling, if the stones be pressed together until the more 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 brickwork, lest the shrinking of the mortar in drying leave the stones to such unequal bearings 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, in at least a damp state. Bond is of no 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 side, 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 stonemasons 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 the building of a dry wall, or a wall without mortar, affords. Walls are frequently built with mortar that without it would have fallen down under their own weight in a height of 6 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 a proper bond of stone. Masons are very apt to set thin broad stones on their narrow edges to show a good face, by which the wall is injured in two ways. It tends to the formation of a mere case on the surface of a wall, and it for the most part exposes the bed of the stone to the atmosphere, as a stone is more likely to be broad in the direction of its bed than across it.