

**CONTRACTS OPEN.**

**ELORA, ONT.**—Mr. Frank Dalby will erect a skating rink.

**JESSORVILLE, ONT.**—The Methodists have decided to build a new church.

**PETERBORO, ONT.**—The Government is to be petitioned to erect a fish hatchery on the Ontario river.

**WALKERTON, ONT.**—The town will have plans and specifications immediately prepared for the construction of waterworks.

**BROCKVILLE, ONT.**—A charter has been obtained by local capitalists for the construction of an electric street railway.

**ST. CATHARINES, ONT.**—The Government has been petitioned to erect a new bridge over the Welland canal at this place.

**LETHBRIDGE, N. W. T.**—The Lethbridge Waterworks and Electric Light Company gives notice of application for incorporation.

**PERTH, ONT.**—The town will assist the Government to the extent of \$4,000 to erect a new bridge and extend the canal at this place.

**ST. JOHN, N.B.**—James Pender & Co., nail manufacturers, are about to erect large buildings.—Geo. Waring has leased a site on which to erect an iron foundry.

**CARLETON, PLACE, ONT.**—The plans for the new post office to be erected here are on view. It is understood to be the intention to call at once for tenders for the work.

**KINGSTON, ONT.**—The vestry of St. George's Cathedral has resolved to expend the sum of \$15,000 in improvements.—Work will be commenced at once on the re-building of the hotel at Thousand Island park.

**HANOVER, ONT.**—The Board of Trade is urging the construction of a railway from Markdale via Durham, Allan Park, Hanover and Walkerton, to Inverhuron, Kincardine or other points on the western boundary of Bruce.

**WEST TORONTO JUNCTION.**—The Council at a recent meeting resolved that the best interests of the municipality and the public at large would be served by the building of an electric street railway or railways to connect with the Toronto system.

**WINNIPEG, MAN.**—Legislation will be sought to incorporate the Winnipeg and Duluth Railway Company, with power to construct a railway from Winnipeg in a south-easterly direction to a point on the international boundary in the province of Manitoba, near the Lake of the Woods.

**QUEBEC, P. Q.**—The judges named by the City Council to award the prizes offered by the corporation for the three best plans of a site for the new city hall have completed their work. Their award has been handed to the Mayor, who will communicate it to the Council.—Mr. Alfred Palmer, chief engineer of the surveying party of the Labrador Railway, has arrived here from Labrador. His conversation indicates that his report will be favorable to the projected railway.

**MONTREAL, QUE.**—A number of houses are to be erected on lots recently purchased at Montreal Junction, and arrangements are being pushed forward to secure the construction of a system of waterworks.—The Parks Commission will recommend the Council to grant the request for a site in Mount Royal Park for a new observatory, on condition that the plans be submitted for the approval of the Commission.—The Mount Royal Park Incline Railway will be ordered by the council to proceed with the erection of a permanent building in accordance with plans filed at the City Clerk's office.—St. Cunegonde will replace its incandescent street lights by arc lights.—It is said to be the intention of the Montreal Incline railway to extend the line to St. Lawrence street.—Property owners of Cote St. Paul are agitating for new waterworks.—A stone pavement will be put down in the Wellington street subway next year.

**TORONTO, ONT.**—The following building permits have been granted: A. W. Godson, det. 2-storey and attic bk. dwelling, Crawford street, south of bridge, cost \$6,500; Mrs. Crieckshank, 3-storey bk. store, 271 Queen st. east, cost \$3,500; Allan Furniture Co., additions to warehouse, 5 King st. east, cost \$3,000; Hughes Estate, alterations to stores, 115 Queen st. west, cost \$2,000; J. Bedford, det. 2-storey and attic bk. and stone dwelling, n.w. cor. Sherbourne and Sackville sts., cost \$12,000.—The Industrial Exhibition Association have instructed their architect to make a thorough examination of all the buildings and report cost of improvements, enlargements and repairs to the next meeting of the board.—The Government is being urged to grant the use of ten acres of land to enable the city to carry out the extension of the cattle market.—The City Engineer recommends that upon receipt of a sufficiently signed petition Leslie street be opened up and graded from Hunter street to the crest of the ravine, south of Danforth avenue; that Queen street be widened, commencing on the north side at a point about 100 feet west of Roncesvalles avenue, and continuing west-ly to a point 375 feet west of Sunnyside avenue; also at the south-west angle forming the intersection of King and Queen streets by the acquisition of a small triangular strip extending on each street about 100 feet; that a new street be opened and graded running parallel to and lying north of the Grand Trunk railway from the point 375 feet from Sunnyside avenue, and continuing thence westerly to the easterly limit of High Park, at an estimated cost of \$30,000; that a six-foot stone flag sidewalk be constructed on the north side of Grenville street, from Yonge street to Surrey Place.—In view of the necessity of laying shortly a permanent pavement on Yonge Street, the City Engineer recommends the immediate construction of a 12-inch water main, at an estimated cost of \$17,000.—Mr. W. G. Storm, architect, has prepared plans for a sanatorium to be erected in Deer Park.—Mr. Fellows proposes to erect next spring on Sussex avenue a couple of houses and a stable.

**CONTRACTS AWARDED.**

**OTTAWA, ONT.**—Messrs. Jones & Andrews, of this city and Quebec, have been given the contract for building a wharf at St. Anne des Monts Gaspar Co.

**SHERBROOKE, QUE.**—The contract for lighting with electricity the R. C. Seminary and College, Cathedral and Bishop's palace has been given to Mr. A. J. Corriveau, of Montreal.

**'SODA IN PORTLAND CEMENT.**

Mr. Bernhofer, an Austrian engineer, says Engineering, has recently tried the effect of adding crystallized soda to Portland cement mortar and exposing the same to the action of frost. The mortar consisted of 1 litre of cement, 1 litre of lime, with 3 litres of river sand, mixed with a solution of 1 kilogramme of crystallized soda in 2 litres of water. The experiment commenced at 7.30 p.m. on Dec. 9, 1889, and lasted till 10 a.m. on Dec. 10, a period of 14½ hours. During the night the temperature fell to 31½ deg. below zero, and at the finish of the experiment was still 15¼ deg. below zero (Cent.) at which time the specimens were placed in a hot oven where they remained for three hours. At the expiration of this time it was found the extreme cold had had no disadvantageous effect on the setting of the specimens, and the experimenter accordingly concludes that the addition of soda enables Portland cement to withstand the action of frost.

**'KEEPING WALLS DRY.**

In a recent issue of the London Architect, W. L. Dearborn explains Sylvester's process for keeping walls dry. It consists in using two washes or solutions for covering the surface of the walls—one composed of castile soap and water, both substances to be perfectly dissolved in water before being used. The walls should be perfectly clean and dry, and the temperature of the hot air not above 50° Fah. when the compositions are applied. The first, or soap wash, should be laid on when boiling hot, with a flat brush, taking care to form a froth on the brickwork. This wash should remain twenty-four hours so as to become dry and hard before the second, or alum wash, is applied, which should be done in the same manner as the first. The temperature of this wash when applied may be 60° or 70° Fah., and this also should remain twenty-four hours before a second coat of the soap wash is put on. These coats are to be applied alternately until the walls are made impervious to water. The alum and soap thus combined form an insoluble compound, filling the pores of the masonry and entirely preventing the water from entering the walls.

**SLAG CEMENTS.**

In a recent article on slag cements, a French authority, as quoted in a recent issue of Engineering, states that these cements are made by finely grinding blast-furnace slag, and mixing it with a suitable proportion of fat lime. The grinding has to be very fine, because as the cement is made by a simple mixture, it is necessary that the surface on which the two constituents, the lime and the slag, react on each other should be as large as possible, if proper chemical combination is to ensue. As manufactured in France, the cement leaves only 20 per cent. on a sieve containing upwards of 25,000 meshes per square inch. The density of slag cements is much less than that of Portland, weighing bulk for bulk, but from .8 to .88 times as much. In general, this cement also sets somewhat more slowly than Portland, but when hardened, has, in many cases, a greater strength, particularly at early dates after setting. In some experiments still unfinished, the following results were attained with a slag cement from the Department of Isere:

Age.....	1 week.	2 month.	3 months.
Breaking load, lbs. per sq. inch.....	473.5	568.8	678.3

These figures are higher than any attained in the tests made on Portland cements for the new Croton aqueduct. Experiments were also made with slag cement-mortar, mixed with and allowed to harden in sea water, and gave the following results; the mortar consisted of six parts by weight of cement to ten of sand:

Age	Breaking Weight.	Pounds per Square Inch.
8 days	319.0	275.2
28 days	375.4	327.0
		248.4
		341.2

The main objection to slag cement seems to be that if it is allowed to harden in dry air its strength is very materially reduced and it is then liable to crack. In the town of Villefranche-sur-Saone it has been largely used for paving foot paths.