



WINNIPEG.—The V. M. C. A. will erect a new building, to cost about \$20,000.

NORTH BAY, ONT.—The C. P. R. is about to erect a new station, to cost \$9,000.

OTTAWA, ONT.—Important additions and improvements are to be made to the Supreme Court building.

KINGSTON, ONT.—It is proposed to expend \$25,000 in further extending the city water mains.

INGERSOLL, ONT.—It is reported that Mr. James Brady has decided to erect a first-class hotel here.

WEST TORONTO JUNCTION.—The sum of \$25,000 has been voted for the extension of the water mains.

BRANTFORD, ONT.—The Council has engaged Mr. Chipman, of Brockville to report on the best system of sewage disposal.

COATICOOK, QUE.—The Coaticook Water Power Co. proposes to construct reservoirs at the head waters of the Coaticook river.

QUEBEC.—A cable despatch has been received stating that a syndicate of English bankers has been formed to build a bridge over the St. Lawrence at Quebec, and also a railroad on the north shore of Quebec to the Straits of Belle Isle.

LONDON, ONT.—The Council will probably act upon the recommendation of the Local Board of Health to extend the water mains to all the streets of the city.—London South is considering the question of constructing a system of water-works.

MONTREAL, QUE.—Steps are being taken to raise \$100,000 for the erection of a Masonic temple.—The Superintendent of the Water Department reports that the breast wheel and its three pumps, and the three pumps of No. 3 wheel at the low-level pumping works will need renewing this winter.

TORONTO, ONT.—The congregation of the Church of Christ will erect a new edifice on Cecil St., near Spadina Ave.—A building is to be erected for the use of the Young Women's Christian Guild, at an estimated cost of \$15,000. Mr. W. H. Howland can give particulars.—The following building permits have been issued from the office of the City Commissioner since the date of our last issue: Alf. James, 1 storey bk. dye house, 135 Richmond street W., cost \$1,100; Mrs. S. R. Grand, a storey bk. addition and alterations, Bay and Adelaide streets, cost \$3,000; Mr. Beckett, three att. 2 storey and attic bk. dwellings, 524 Ontario St., cost \$6,900; Corporation of Toronto, bk. tower, College St. fire hall, cost \$2,500; John Clarke, alterations Gerrard and Ontario Sts., cost \$1,000; Dr. A. A. Abbott, 3 storey bk. addition, 25 Melinda St., cost \$2,000; Allan C. Thompson, alterations and additions, 13 Jordan St., cost \$6,000; H. Staines, bk. blacksmith shop and alterations, Sheppard St., cost \$1,500; Trustees

Congregational Church, bk. church, Hazleton Ave. and Scollard St., cost \$30,000; W. C. Price, a storey bk. store and a storey bk. stables, W. side Claremont St., cost \$7,000; Land Security Co., two a storey bk. stores, Queen, nr. Simcoe St., cost \$5,500; School of Practical Science, 4 storey bk. addition, cost \$3,500.

PROPER SIZE OF PIPE FOR GREENHOUSE HEATING.

J. D. CARMODY of Evansville, Ind., has published a treatise on heating of Green Houses by the hot water system, illustrated with engravings, in which are full directions how to locate the pipes, put them together, make the joints, mend leaks, and all necessary instructions. From this treatise we quote some useful instructions on the proper size of pipe for green house heating, in which the advantages and disadvantages of large and small pipe are considered.

Large pipe, say 4-inch, commonly used in connection with water heating, contains a large quantity of water, (about one gallon to the foot,) and for a line of 1,000 feet or more, it will require a long time to heat, but it possesses the corresponding advantage of retaining heat much longer after the fire dies out. Two inch pipe has one-half the heating surface of 4-inch pipe, but it holds only $\frac{1}{4}$ the amount of water contained in the same length of 4-inch pipe; consequently the same fire in the same sized boiler will heat the water in $\frac{1}{4}$ the time, or will impart 4 times the heat in the same time where 2-inch pipe is used instead of 4-inch.

It will not be necessary to have double the amount of 2-inch pipe when used instead of 4-inch, because the water being decreased in quantity, will be much hotter. To substitute 2-inch pipe for 4-inch, add one-half to the length required of 4-inch.

EXAMPLE:—If you require 1,000 feet 4-inch pipe to heat a house you will need 1,500 feet of 2-inch for the same purpose. The use of 2-inch pipe results in economy of fuel, but as small pipe cools off quicker closer attention must be paid to the fire.

One advantage in favor of wrought 2-inch pipe is, it can be put in at less expense, and is stronger than the cast iron 4-inch pipe.

Where the pressure system is used, wrought iron pipe only will be safe; and the size may be from 1-inch to 2 inches, according to locality.

The drawback in the use of wrought pipe by florists, who generally put in their own pipe, is the cutting and threading; this requires expensive tools that only pipe fitters have, while cast pipe can be put in by common labor, if printed directions are followed.

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