One-horse plow: Same as the former one, but lighter. Cost $35, built by the city.

One-horse iron scraper "Jumper," built by the city for $35.

One-horse wooden scraper, used also as a plow: for sidewalks. Built by the city for $18. The bottom of this plow is protected by a flat iron bar, one edge of which is toothed. When necessary, the toothed edge is used on the sidewalk to make a rugose surface.

The machineries are divided as follows:

	East.	North.	West.	Total.
Truck levellers	4	2	4	10
Walkaways	11	12	15	38
Snow scarifiers, streets ...	4	2	5	11
Snow scarifiers, sidewalks.	20	29	35	84
Plows, double	6	18	10	34
Plows, single	96	84	109	289
Jumpers	35	..	..	35
Wooden scrapers	124	208	99	431

At the beginning of the storm, all hands are called. The Tramways sweepers are sent out on the route; the city plows are sent out to remove the snow from the roadways and from the sidewalks. The heavier the snow storm, the shorter the routes are made, so that each plow can be back at the starting point before the snow accumulates. Snow shovellers are sent out to keep the street corners clear of snow. Whenever a section foreman feels that his section will be snowbound, he calls the division by telephone for more help.

In case of emergency, section or division lines are wiped out, and everybody works with one ambition—beat all the others in results.

Working hours are the usual hours in a ten-hour day; but, if necessary, the work lasts as long as the snow.

We are now at another phase of the work. The snow has been brushed away from the tramway tracks, from the sidewalks and from part of the roadways. However strong the snow storm and however cold the wind may have been, the tramways have never ceased carrying the laboring class to their work, the office people to their offices, the ladies to the stores; the sidewalks were always kept in such a good state that even "my lady" could not find fault with the city employees; the roadway was clear enough to let the tradespeople deliver their goods.

The work of the sweepers and of the levellers is done, the Tramways crew may now rest and the cars are sent back to the yards.

A new phase now appears. This force is composed of 3,000 men and horses. They attack the snow banks from all sides and cart it away.

The city is, as you are probably aware, built on an island seven miles wide.

The snow used to be dumped in the river from the wharves, or on vacant lots. The larger the city got, the further the northwest boundary was, and the greater the hauling distance became.

The residents facing the dumping grounds objected, with reason, to the snow being left there. There was, therefore, only one place left—the river. But, in places, the distance was so great that the cost was prohibitive.

In 1913, the chief engineer of the city, the late Mr. Janin, thought that the cheapest way to send the snow to the river was by the sewers. Special manholes were built and the snow was dumped in the sewers.

The sewers were not designed for this purpose, and nobody knew what would be the result of throwing such a large quantity of snow and ice in the sewers. The Department of Sewers, responsible for the maintenance and the cleaning of sewers, took the matter in hand and studied the results.

The sewers used were collectors of a diameter varying from 3 ft. to 7 ft. 6 ins. Some were 10 ft. below the roadway, some 42 ft. The length of the collectors varies from 1 to 4 miles; they are mostly built of brick and cement. The "snow manholes," as they are called in Montreal, were made of steel, with a 3-ft. 5-in. by 7 ft. cover.

To prevent large pieces of ice from falling through, a grating having openings of 4 ins. is employed.

After three years of operation, the results were satisfactory. The sewers were, of course, found dirtier, and in some places the invert was crushed by solid ice falling 40 ft.

We have, therefore, designed a new snow manhole covered with galvanized iron ⅛ in. thick, and the sewer was also lined with galvanized iron ⅛ in. thick for a length of 12 ft. We think that this new manhole will answer this purpose, and withstand the shock of the falling ice.

The distance between the manholes varies very much, but the longest haul is approximately 2,000 ft.

Cost of Work.—The cleaning of sidewalks, including the spreading of sand, scraping, etc., costs 7½ cents per running foot.

The cost of removing snow from streets is $2,500 per mile.

WINNIPEG AQUEDUCT REPORT DELAYED.

At least five or six weeks more will elapse before the board of engineers who are conducting the inquiry concerning the Winnipeg-Shoal Lake Aqueduct will be able to report finally.

At the usual fortnightly meeting of the board of the Greater Winnipeg Water District, on July 14th, a letter was read from the engineers to the effect that certain important experiments and tests had yet to be carried out and the results of these were necessary to enable the commission to answer the questions submitted.

The result of these tests will, the letter stated, enable the commission to determine whether or not a more economical system of strengthening the inverts may be adopted. Also some of the flooded portions have yet to be examined when the water recedes.

Reeve McColl, of Assiniboia, asked the chairman, Mayor Waugh, whether the new work now being done is along the lines recommended by Mr. Cantell. The chairman replied that the new work is being done upon the recommendation of seven good engineers, and that that should be enough.

Letters were read from several municipalities endorsing the board's action in devoting $5,000 to the colonization of the water district. The only exception was Assiniboia, whose council objected to the outlay.

The following is a list of Canadian patents recently issued through the agency of Messrs. Ridout and Maybee, 59 Yonge Street, Toronto, from whom further particulars may be obtained:—Samuel Glover and John West, gas producers; Charles O. Bastian, electric incandescent bodies for glow-lamps; Edward B. Killen, pneumatic shock-absorbing devices; Alfred Bailey, packings for stuffing boxes; Joseph L. Dixon, electric furnace; Bricknell Bros., rotary internal combustion engine; Frank Iliff, heating and ventilating apparatus; Chas. W. Tozer, construction of retorts for the distillation of carbonaceous materials; T. B. Grierson, safety slings for lifting packing cases, bales, barrels, etc.