

## NEW METHOD OF SNOW REMOVAL

**Christie Four-Wheel-Drive Truck Equipped with Bucket-Type Conveyor Driven by Sterling Engine Makes Remarkable Record in Removing Snow and Ice**

**S**NOW removal is always an expensive item in the estimates of all city engineers in Canada; therefore, the following description of the Friedman "snow tank," which was recently tried in New York City with splendid results, will be found of interest. Each "tank," it is claimed, will load approximately 1,300 trucks (8 cu. yds. capacity) in 24 hours (allowing 2 hours daily for filling with gas, oiling, changing shifts, etc.,) and in the New York demonstration four 5-ton trucks were loaded with ice in less than three minutes.

The "tank" consists of a Christie four-wheel-drive truck with a special frame, the truck being operated in the usual

## COST OF REMOVING SNOW BY HAND

Loading, 8 men, 20 minutes, at 50c. per hour.....	\$1.33
Auto truck at \$4 per hour, waiting 20 minutes while being loaded, .....	1.33
Auto truck carting snow and returning, average 15 mins., .....	1.00
	<u>\$3.66</u>
Cost to city, 8 cu. yds., at 54c. per cu. yd., .....	\$4.32
Expansion 25%, 6 yds. on ground expand to 8 yds. in the truck, .....	1.08
Actual cost to city, .....	\$5.40
Piling, 8 cu. yds. at 9c. per cu. yd., .....	.72
Total cost to city of loading, carting, and piling 8 cu. yds., .....	<u>\$6.12</u>

manner. Over the rear wheels of the truck is mounted a 6-cylinder, 5½-in. bore, 6¾-in. stroke, 150 h.p. Sterling marine-type engine, which receives its cooling water from the radiator. The fuel tank is located on each side of the motor. Two operators are required, namely, the driver of the truck and the mechanic who stands on the rear platform and operates the motor underneath and the levers for the operation of the loading slide. The Sterling engine is started electrically from the rear platform.

The machine is 26 ft. long, 9½ ft. wide, 12½ ft. high, and weighs 22 tons. Its speed is from 2 to 10 miles per hour,

## COST OF REMOVING SNOW BY "TANK"

Loading, 3 men (\$60 per 24 hours) filling truck in one minute, .....	\$0.04
Gas and oil (5 gals. per hr.), .....	.03
Wear and tear (\$25 per 24 hrs.), .....	.02
Overhead (\$50 per 24 hrs.), .....	.04
Auto truck, waiting one minute while being loaded, ..	.07
	<u>\$0.20</u>
Cost of loading, .....	\$0.20
Auto truck carting snow and returning, average 15 mins., ..	1.00
	<u>\$1.20</u>
Cost of loading and carting, .....	\$1.20
Less compression, 50%, 16 yds. on ground compressed by force of conveyors to 8 cu. yds., .....	.60
Actual cost of loading and carting, .....	\$0.60
Piling, .....	.04
Total cost of loading, carting and piling 8 cu. yds., ....	<u>\$0.64</u>

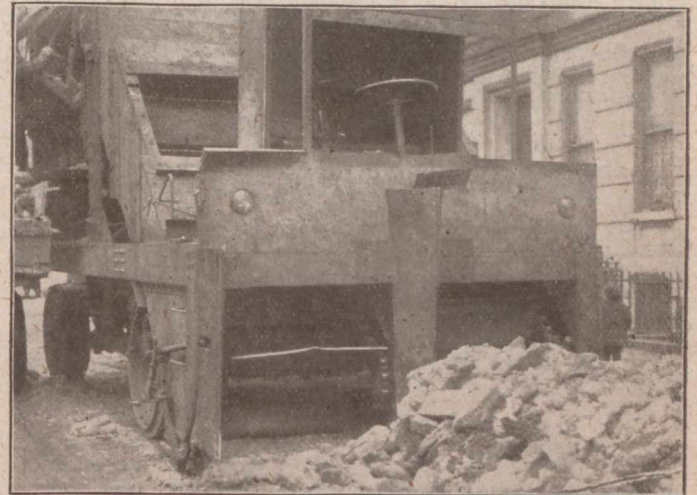
and it has four speeds ahead and one reverse. It clears a path by depositing the snow to one side in a ridge or in piles of 10 cu. yds. each. The speed of operation depends upon the depth of the snow fall and varies from 2 miles per hour when handling a 24-in. fall, to 8 miles per hour when handling a 6-in. fall. For 18 ins., the speed is 3 mi. per hour;



SNOW TANK DISCHARGING TO TRUCK

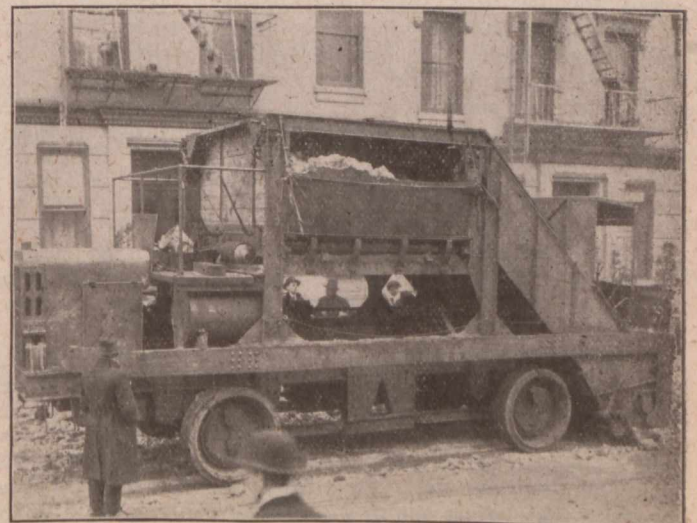
12 ins., 5 mi.; 8 ins., 7 mi. It is claimed that the machine will actually handle ice that is frozen solid to the pavement.

A flat car or any similarly shaped vehicle travelling parallel to the machine can be loaded at the rate of 50 cu. yds.



FRONT VIEW OF "SNOW TANK"

of snow per minute, or at the rate of 10 to 25 cu. yds. of solidly packed snow or ice per minute. It is stated that the machine can load a truck of 8 cu. yds. capacity in from 60 to 90 seconds, depending upon the condition of the snow or ice.



SIDE VIEW, FRIEDMAN "SNOW TANK"