

Dec. 22, 1925.

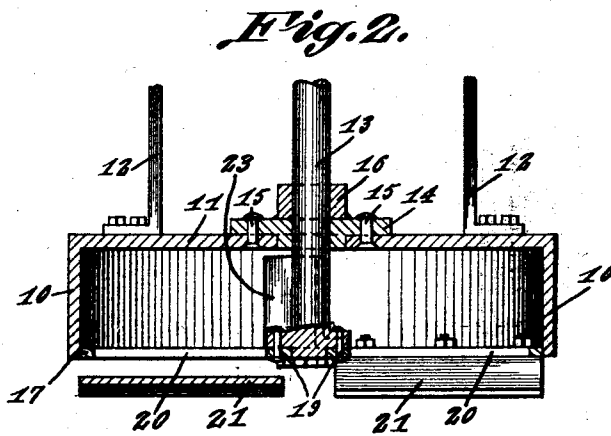
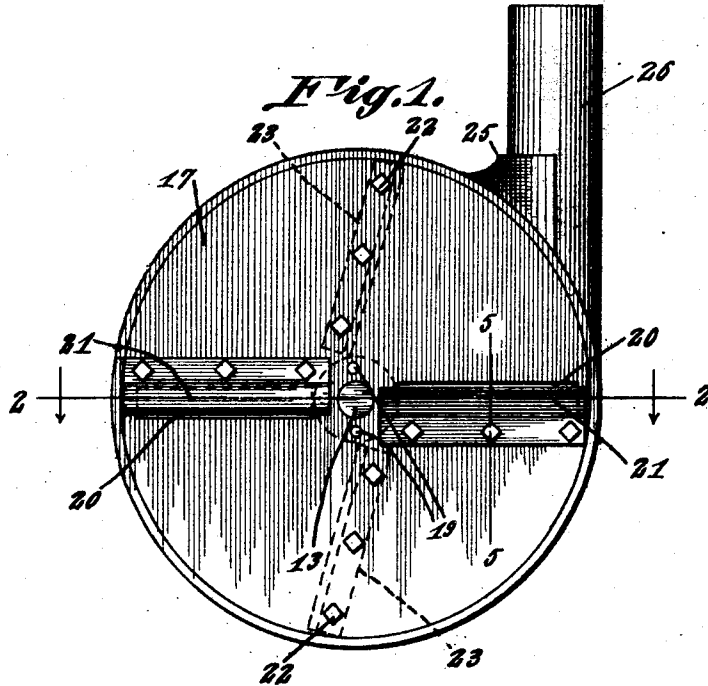
1,566,464

C. W. CATERSON

SNOW REMOVER

Filed Feb. 13, 1925

2 Sheets-Sheet 1



C. W. Caterson, INVENTOR.

BY

Geo. P. Kimmel, ATTORNEY.

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Fig. 3.

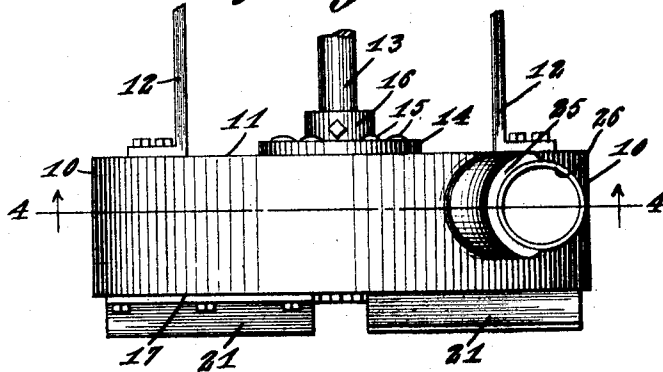


Fig. 4.

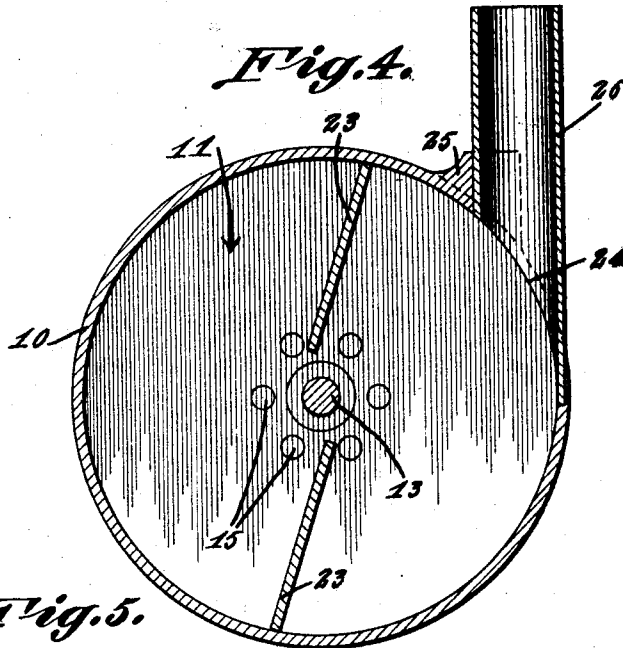
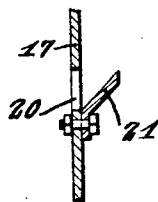


Fig. 5.



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UNITED STATES PATENT OFFICE.

CLARINGTON W. CATERSON, OF ENDICOTT, NEW YORK.

SNOW REMOVER.

Application filed February 13, 1925. Serial No. 8,976.

To all whom it may concern:

Be it known that I, CLARINGTON W. CATERSON, a citizen of the United States, residing at Endicott, in the county of Broome and State of New York, have invented certain new and useful Improvements in Snow Removers, of which the following is a specification.

This invention relates to snow and ice removers adapted to be attached to a vehicle in advance thereof, more particularly to a motor driven vehicle, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention—

Figure 1 is a front elevation of the improved device.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a plan view.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is a detail in section on the line 5—5 of Figure 1.

The improved device includes a relatively short cylindrical shell formed with an annular rim or side 10 and a closed rear member 11, and open at the front. The shell is held from rotation by any suitable means, for instance, by frame members indicated at 12.

Extending through the shell is a shaft 13 with a bearing 14 attached at 15 to the shell and through which the shaft rotates, the shaft having a stop collar 16 to limit the movement of the shell in one direction on the shaft.

Bearing within the open front of the shell is a closure member 17. The closure 17 is attached at 19 to the shaft 13 and rotates therewith and is provided with radially directed openings 20. Attached to the front 17 of the shell adjacent each of the openings 20 is an inclined cutting blade 21, operative to sever and pick up the snow and ice and feed it into the shell as the closure is rotated.

Attached at 22 to the inner face of the

closure 17 are flights or conveyor blades 23, preferably set tangentially to the shaft and intermediate the openings 20, as illustrated in Figure 1.

The flights or conveyor blades 23 are shown disposed midway of the openings 20, but they may be arranged nearer to or farther from the openings, as required.

Formed through the side portion 10 of the shell is an opening 24 for the exit of the snow or ice thrown off by the flights 23, and formed on the shell at the inner side of the opening is a semi-circular guard or guide 25, to prevent the material thrown out by the flights from passing inwardly against the running gear of the vehicle to which the device is attached.

If required, a tubular extension 26 may be arranged over the opening 24 and within the guard 25 and operative to convey the severed material to any required distance away from the device and the vehicle to which it is attached.

The improved device is designed to be attached in any suitable manner to the front of a vehicle, for instance a motor driven vehicle, and the shaft coupled in any suitable manner to the motor, for rotating the same, the motor and its attachments not being shown, as they form no part of the present invention.

As the vehicle is moved forwardly and the shaft 13 and the closure 17 and its attached cutter elements 21 and flights 23 is rapidly rotated, the cutter elements displace the snow and ice and throw them through the openings 20 into the interior of the shell and into the paths of the rapidly moving flights 23 whereby they are thrown by centrifugal force through the opening 24.

The flights 23 being disposed at right angles to the cutter elements 21, leaves ample space for the reception of the severed material to be deposited within the paths of the flights and carried around thereby and thrown continuously through the opening 24. The improved device will effectually remove the snow and ice from the path of the advancing vehicle.

The improved device is constructed wholly of metal, and may be of any required size or capacity.

For the purpose of illustration, two of the openings 20, cutter elements 21 and flights

23 are shown, but this number may be increased, if required.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that modifications within the scope of the claimed invention may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:

1. An apparatus of the class described, comprising a cylindrical shell held from rotation and provided with a lateral outlet, a shaft extending through said shell, a closure for the open side of the shell and coupled to rotate with said shaft, said closure having radially directed openings, a cutting element attached to said closure externally thereof and at one side of each of the radial openings therein, and a plurality of blades attached to said closure internally thereof extending radially of the shell.

2. An apparatus of the class described, comprising a cylindrical shell held from rotation and provided with a lateral outlet,

an outwardly opening guard member extending from the inner side of the outlet, a shaft extending through said shell, a closure for the open side of the shell and coupled to rotate with said shaft, said closure having radially directed openings, a cutting element attached to said closure externally thereof and at one side of each of the radial openings therein, and a plurality of blades attached to said closure internally thereof extending radially of the shell.

3. An apparatus of the class described, comprising a cylindrical shell open at one side and held from rotation and provided with a lateral opening, a closure for the open side of the shell and provided with a plurality of radially directed openings, a cutter element attached to the outer face of said closure adjacent each of the openings thereof, a plurality of flight elements attached to the inner face of said closure intermediate the radial openings, and means for rotating said closure.

In testimony whereof, I affix my signature hereto.

CLARINGTON W. CATERSON.