Sept. 29, 1936. W. E. GIRARD 2,055,840

SNOW REMOVER

Filed March 24, 1936

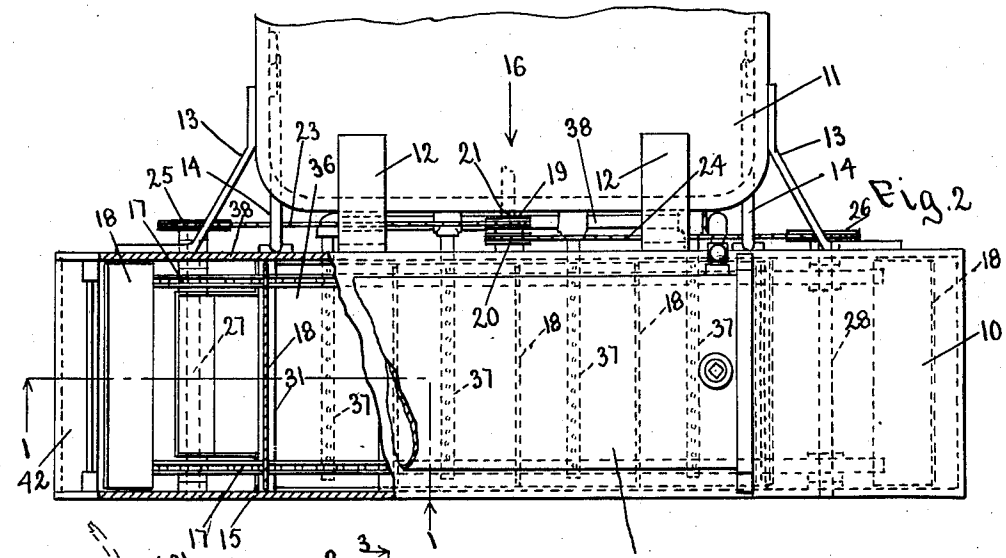


Fig. 2

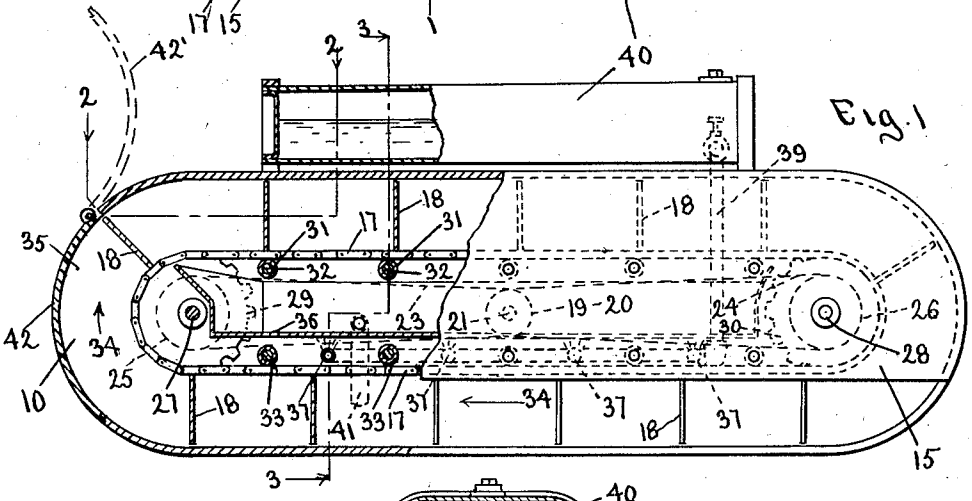


Fig. 1

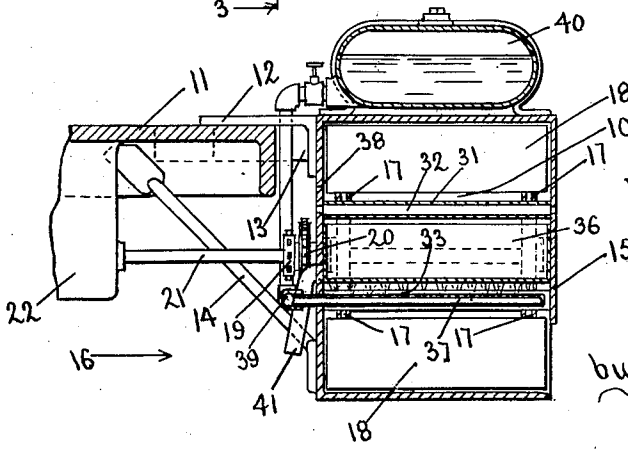


Fig. 3

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SNOW REMOVER

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4 Claims. (Cl. 37—12)

My invention relates to devices for disposing of snow, and particularly to mechanically operated devices for removing or melting snow.

One object of my invention is to provide a snow remover which is attachable to the ordinary motor truck, and which shall operate to plough through the snow as the truck advances, collecting the snow and either melting it and discharging the water from the device, or at will, discharging the snow collected at one side of the path of progress.

A second object is to provide a device of the character described, which is simple in construction, economical in operation, and one that can be attached to or removed from the front end of a truck or other vehicle with facility and without material change in the vehicle.

My invention consists in the novel construction and operation and the combination of elements to attain the specified objects. In the accompanying specifications and claims, and the drawing forming a part thereof, I have described and illustrated a preferred embodiment of my invention as adapted for use with a motor truck of the usual type, but modifications may be made within the scope of the claims, both in design and construction which would adapt the invention for use with other or smaller types of propelled vehicles.

In the drawing,

Fig. 1 is a front elevation of one embodiment of my invention, partially in section on the line 1—1, Fig. 2.

Fig. 2 is a plan showing the device as attached to the front of a motor vehicle, partially in section on the line 2—2, Fig. 1.

Fig. 3 is a sectional end elevation, substantially on the line 3—3, Fig. 1.

Referring to the drawing,

10 is a chamber, secured to the front end 11 of a motor truck by suitable braces 12, 13, 14. This chamber is an elongated chamber, and is attached to the truck lateral to the path of movement thereof. The front wall, 15, of this chamber, is open at the base, the opening extending between end walls, to permit the snow to enter as the truck advances in the direction of the arrow 16.

Mounted in this chamber and movable in the direction of its length, are the endless chains 17, connecting which are a plurality of blades 18, forming movable partitions as the chains are moved by suitable means, here shown by the sprockets 19—20 rigid with the shaft 21, connecting with motive power on the truck, and indicated at 22, chains 23, 24 transmitting movement respectively to the sprockets 25, 26, rigid with the shafts 27, 28 on which are also rigidly mounted the sprockets 29, 30, actuating the chains 17. Rollers 31 journalled on the cross rods 32 support the upper conveyor line of chain, and similar rollers 33 prevent the lower chain line from rising when in operation to move the collected snow. As the truck advances, with the snow remover in operation, the snow as it collects in the chamber, is moved by the conveyor blades in the direction of the arrow 34, and carried over within the chamber at 35, discharging between the chains 17 into the receptacle 36, pan like in form, and mounted between the chains, extending between the front and rear walls of the chamber to which it is secured.

Mounted beneath the receptacle are a plurality of burners 37, here shown as burning liquid fuel, and extending through the rear wall 38, of the chamber and connecting with the fuel main 39, supplied from the tank 40 mounted in a convenient location, here shown as on the top of the chamber. As the snow is melted the water discharges from the receptacle, through the pipe 41.

In some cases, particularly on wide main thoroughfares, it may be preferable to discharge snow from the chamber, rather than to melt it, and in that event I have provided a gate 42, at the end of the chamber toward which the snow is moved.

With this gate opened as at 42', the snow is discharged from the chamber at the right side of the road, clearing the path as the truck advances, but piling the snow instead of melting it, as is the case when the gate is closed and the snow carried over to discharge into the melting receptacle.

Having thus described my invention, I claim:—

1. A snow remover comprising in combination, an elongated chamber adapted to be secured laterally to the front of a propelled vehicle, and to be supported thereby adjacent to the road surface, and having its front wall open at the base between the end walls; an endless conveyor mounted within the chamber and movable in the direction of its length, comprising a pair of chains and a plurality of connecting blades, extending normal to the axes of the chain lines, and forming movable partitions; means for moving the conveyor continuously; and an opening in one end wall, through which snow admitted through the opening in the front wall may be discharged from the chamber; and a closure

movably secured to the chamber and operative to close the opening in the end wall; a receptacle mounted within the chains of the conveyor and secured to the front and rear walls of the walls of the chamber, and having a conduit discharging outside the chamber; and means for melting snow deposited in the receptacle by the conveyor.

2. In a snow remover of the character described in claim 1, means for heating the receptacle comprising a plurality of burners operative beneath the receptacle.

3. In a snow remover of the character described in claim 1, a plurality of burners operative to heat the receptacle; a source of supply for liquid fuel; and connections therefrom to the burners.

4. A snow remover comprising in combination, an elongated chamber adapted to be secured laterally to the front of a propelled vehicle, and to be supported thereby adjacent to the road surface, and having arcuate end walls, and having its front wall open at the base between the end walls; an endless conveyor mounted within the chamber and movable in the direction of its length, comprising a pair of chains and a plurality of connecting blades, extending normal to the axes of the chain lines, and forming movable partitions; means connecting with a source of motive power, whereby the conveyor may be moved continuously; a receptacle mounted within the chains of the conveyor and secured to the front and rear walls of the chamber, and adapted to receive snow from the conveyor as it moves thereacross, and having a conduit therefrom discharging outside the chamber; and means for heating the receptacle continuously when the snow remover is in operation to melt snow deposited therein by the conveyor.

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