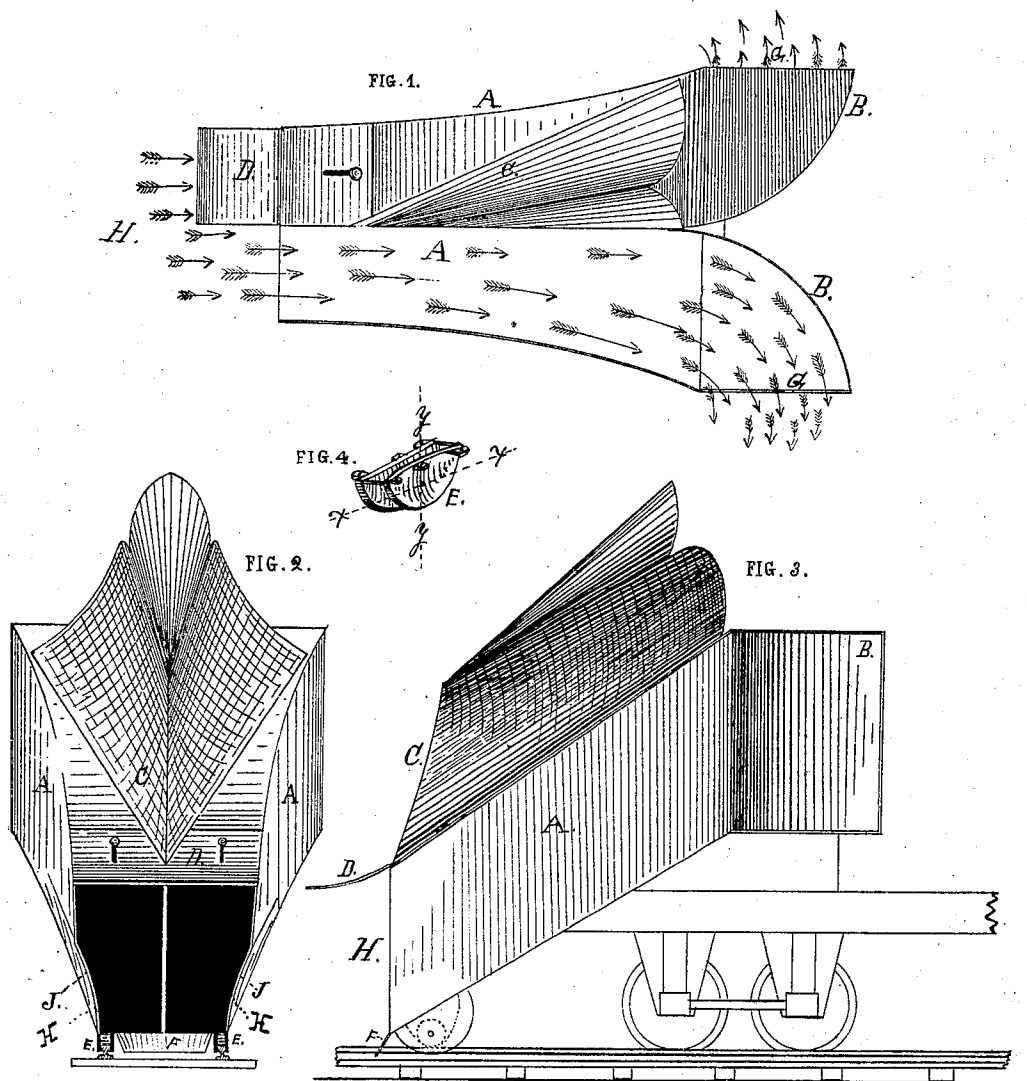


W. H. VAN GIESON.
Railroad Snow-Plows.

No. 136,346.

Patented Feb. 25, 1873.



WITNESSES,

Thos. Jewell
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UNITED STATES PATENT OFFICE.

WILLIAM H. VAN GIESON, OF WHITEWATER, WISCONSIN.

IMPROVEMENT IN RAILWAY SNOW-PLOWS.

Specification forming part of Letters Patent No. 136,346, dated February 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM H. VAN GIESON, of Whitewater, in the county of Walworth and State of Wisconsin, have invented certain Improvements in Snow-Plows, of which the following is a specification:

My invention has for its object the clearing of snow from railroad-tracks, either for steam or horse cars, to prevent the same from becoming an obstruction to travel. It consists in the arrangement and combination of devices, hereinafter shown and described, by which the snow is elevated above the track or bed of the road while the machine is in motion, and ejected on one or both sides, into, over, and upon the snow adjoining said track or bed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same, reference being had to the accompanying drawing, in which—

Figure 1 represents a top view of my improved plow, one-half of the top being removed to show the construction. Fig. 2 represents a front view, showing the several parts of the plow combined together for united action. Fig. 3 represents a side elevation of the plow; and Fig. 4 represents a view of a detached shoe or guide, one of which is placed over each rail and secured to the under part and near the mouth of the inclined tube, as clearly shown in Fig. 2.

A A represent two inclosed inclined planes, gradually enlarging in every direction from front to rear, so that there may be a continually-increasing space for the snow as it passes toward the outlets G G. B B represent outwardly-curved guides, the object of which is, in combination with the inclined planes A A, to force or eject the snow through the exits G G. C represents the ordinary arrow-headed plow, placed on top of the inclined tubes A A. D represents a pressure-plate, curved and horizontally inclined, which is made adjustable on top of the inclined tubes A A, and projects any desired distance beyond said tubes. E E represent double curved shoes, either with or without rollers, one of which is shown detached in Fig. 4. F represents a portion, either attached to or made solid with the inclined planes A A, and which passes between the rails and below the tops thereof. H H represent the mouths of the inclined tubes A

A, which I shape substantially as shown in the drawing.

Operation.

The machine being in motion, the snow entering the mouths H H of the inclined tubes A A, is, by the continued pressure consequent upon the advance of the plow, forced through and out of said tubes, the gradual enlargement of the same in every direction from the mouth affording an easy passage and avoiding any tendency to clog. When in operation, the downward pressure of the snow upon the inclined planes is very great, making it necessary to support the front ends of said planes. This I do by the employment of the double curved shoes E E, which not only sustain the downward pressure of the snow, but also prevent the plow from being crowded sidewise by drifts which sometimes lie only upon one side of the track. To further sustain and, in addition, to equalize this downward pressure, I provide a curved pressure-plate, D, which is adjustably secured, by bolts or other suitable means, to the tops of the forward ends of the inclined tubes A A. The snow striking against this plate D will tend to relieve the pressure on the inclined planes A A, so that the entire force of the resistance of the snow will be equally distributed between the pressure-plate D and the bottoms of the inclined tubes A A. The improved configuration which I give to the mouths of the inclined tubes, while it leaves the snow in the best possible shape to support itself, and prevents its caving or falling in after the passage of the plow; also sustains the weight of the contained snow in its passage through the tubes.

It will be seen that, in the construction of my improved snow-plow, the lower lines of the discharging-orifices of the tubes A A are higher than the upper lines of the receiving-orifices of said tubes. This I deem a very important feature, as, by raising the rear ends of the tubes in this manner, the plow in forcing its way through deep snow makes an easy passage, without crowding the discharging-orifices against the banks.

What I claim, and desire to secure by Letters Patent, is—

1. The inclosed inclined planes A A, gradually enlarging in every direction from front to

rear, with the rearwardly and outwardly curving pieces B B, substantially as and for the purposes herein set forth and described.

2. The horizontally inclined and curved plate D, adjustable on top of the inclined tubes A A, acting as an equalizing-pressure plate, and projecting any desired distance beyond the said inclined tubes.

3. The mouths H H of the inclined tubes A A, shaped substantially as shown and described.

4. The outwardly and upwardly curving supporting-shoes or guards E E, with or without rollers, substantially as and for the purposes herein described and shown.

5. So constructing the inclosed inclined planes A A that the lower lines of the discharging-orifices thereof will be higher than the upper lines of the receiving-orifices.

6. The combination of the inclosed inclined planes A A, the curving pieces B B, the front portion F, the curved pressure-plate D, the mouths H H, and the supporting-shoes E E, each and all constructed as shown, and operating in the manner and for the purposes set forth and described.

W. H. VAN GIESON.

Witnesses:

THOS. JEWELL,
JAMES S. GRINNELL.