T. A. DAVIES.

Railway Snow-Plows.

No. 136,709. Patented March 11, 1873.

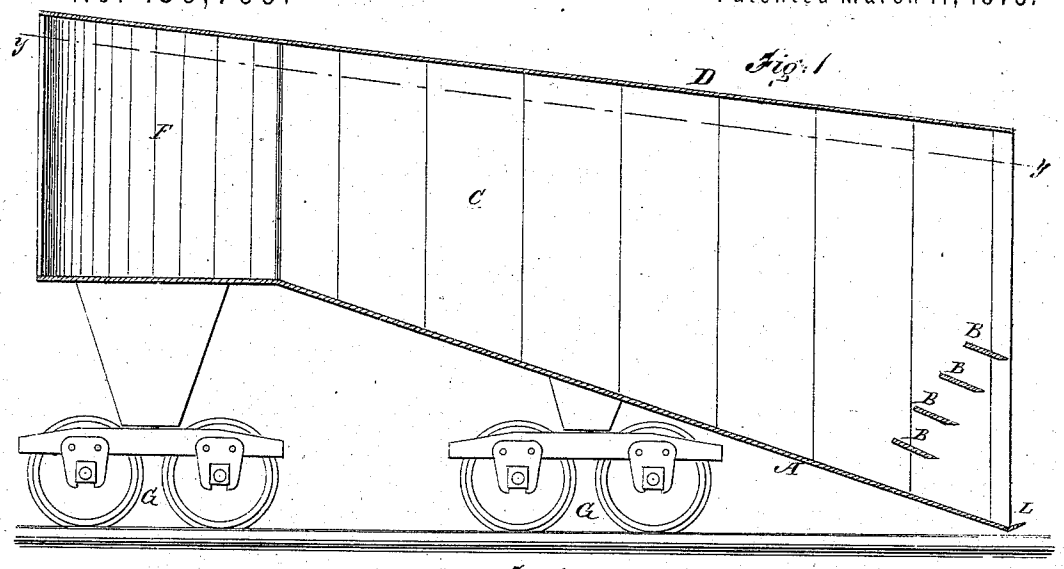

Fig: 1

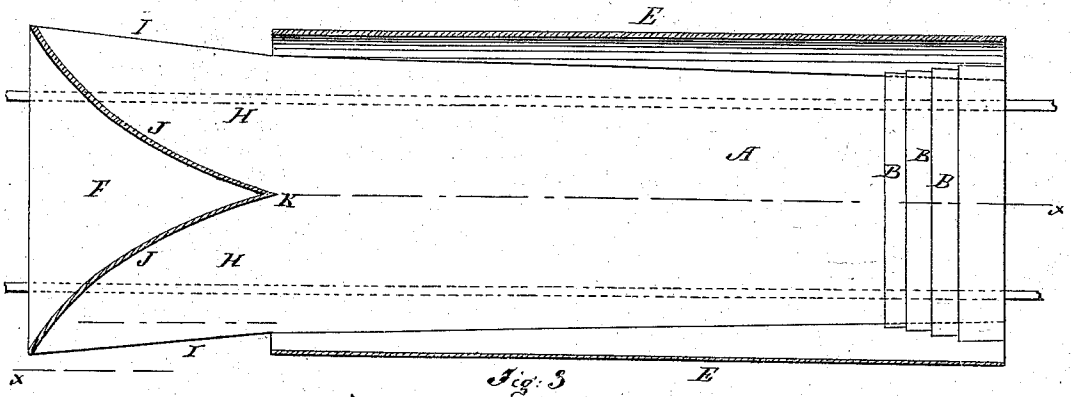

Fig: 2

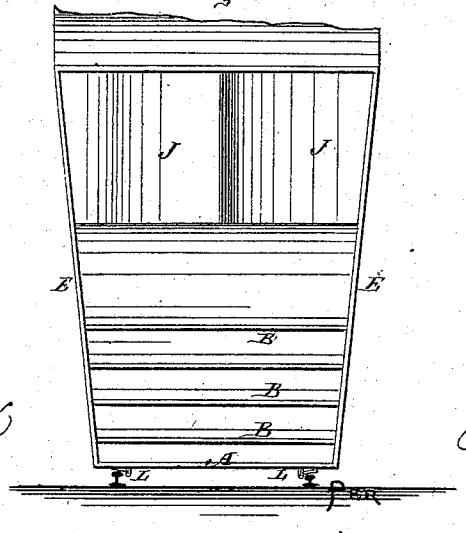

Fig: 3

Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS A. DAVIES, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILWAY SNOW-PLOWS.

Specification forming part of Letters Patent No. **136,709**, dated March 11, 1873.

To all whom it may concern:

Be it known that I, THOMAS A. DAVIES, of the city, county, and State of New York, have invented a new and useful Improvement in Snow-Plows, of which the following is a specification:

As is well known to all who have had the requisite practical experience, or otherwise become acquainted with the subject, locomotive-plows constructed on the ordinary double mold-board plan are quite competent to clear the snow from the track if not of a depth much exceeding its own height and not "packed" to an unusual degree, but are nearly useless for encountering large drifts. It is therefore the object of my invention to provide a plow which, while adapted to perform the functions of the old style, shall be likewise adapted for tunneling through drifts or large compact masses of snow without serious difficulty or great expenditure of fuel and loss of time. To this end I find the following features of construction indispensable: A bottom forming an inclined plane of gradually-increasing width from front to rear, and straight in cross-section at any point; sides inclining outward from bottom to top and front to rear, and a top or cover corresponding to the bottom in outline, but placed at a less horizontal angle. By this arrangement of parts I obtain a cubical capacity at the mouth of the plow that may be numerically represented by 70, which at six feet from the mouth decreases to 57, at twelve feet from the mouth to 45, and so on in regularly decreasing ratio. It will therefore be apparent that a moderate quantity of snow may be constantly taken into the plow, and will spread out over the bottom, thus finding easy exit or discharge at the side apertures, while if the snow be of great depth the plow may be driven into it with sufficient force to fill it, and, the locomotive being run back, the quantity thus taken up will be discharged from the mouth of the plow upon the track, whence it may be readily taken up again and discharged in the usual way, when the locomotive is again run forward.

In the accompanying drawing, Figure 1 is a vertical longitudinal section of a snow-plow constructed according to my invention, the section being on the line *x x* of Fig. 2. Fig. 2 is a sectional plan view, the section being taken on the line *y y* of Fig. 1. Fig. 3 is an end view.

Similar letters of reference indicate corresponding parts.

A is the inclined plane or bottom of a tube, C, constituting the plow. The bottom widens from front to rear, as shown, and is straight in any cross-section. D is the top of the tube, which is set at a less angle to the horizon than the bottom A. E E are the sides, which incline outward from bottom to top throughout their whole length, and also from front to rear. The rear end of the tube is an elevated section, F, in which are formed passages H H and openings I I, through which the snow is discharged. J J are curved plates, which come together in the center of the tube and form an acute angle or edge, K. At this point the ascending snow is divided and thrown in opposite directions, in the usual way, at nearly right angles with the line of motion, and so as to be delivered on the surface of the surrounding snow. The mouth of the tube and width of the inclined plane will be at least equal to the space occupied by a train of cars. The tube and inclined plane are preferably made of boiler-iron of suitable strength. The forward end of the inclined plane has a shoe, L, to raise it just above the rails of the track, and the forward ends of the side pieces are brought to an edge so as to easily enter and cut their way through the snow. Cutters B B may be employed to break up the hard masses of snow or ice.

The mode of operation is believed to have been already indicated with sufficient clearness.

I desire to have it understood that I claim nothing, broadly or essentially, novel in any feature of the plow, taken separately. I do not claim a snow-plow provided with a bottom increasing in width from front to rear, and straight in any cross-section; but

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The tubular snow-plow herein described, having the inclined bottom A made straight transversely and increasing in width from

front to rear, the top or cover D of corresponding form, but placed at a less horizontal angle, the sides E inclining outward or from each other, from bottom to top and front to rear, and a discharging section, F, all as shown and described, whereby the cubical capacity of the plow is greatest at the mouth and least at the rear end, and the same adapted for tunneling through or removing snow from a track, in the manner hereinbefore set forth.

THOS. A. DAVIES.

Witnesses:

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