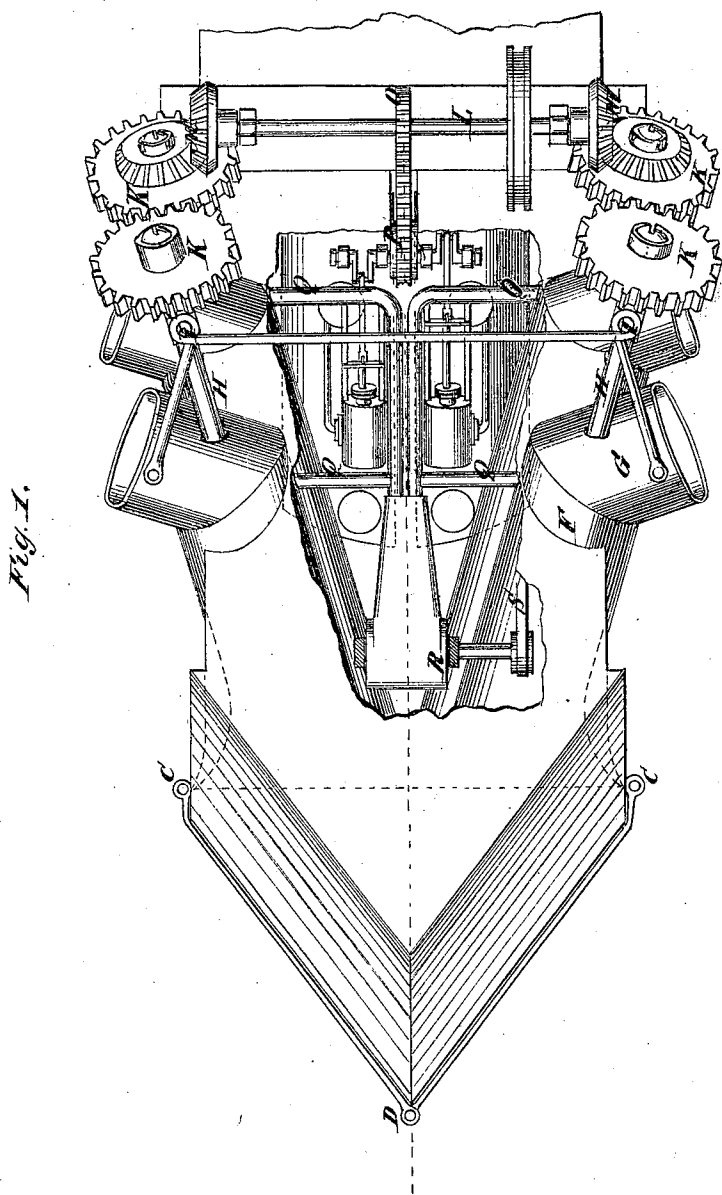


J. B. HULBERT & J. ANDERSON.

Improvement in Railway Snow-Plows.

No. 132,834.

Patented Nov. 5, 1872.



Witnesses:

E. Wolff.
H. A. Graham.

Inventor:

J. B. Hulbert.
James, Anderson.

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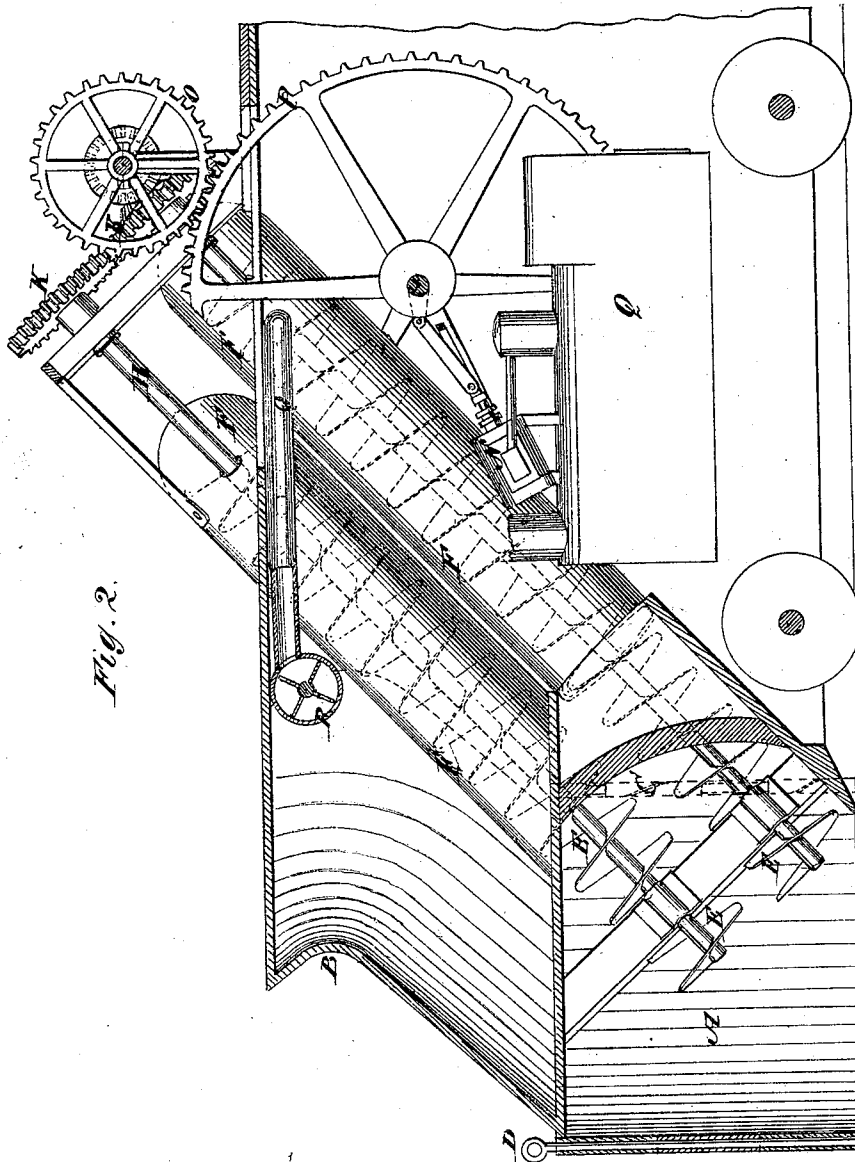


Fig. 2.

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UNITED STATES PATENT OFFICE.

JEROME B. HULBERT AND JAMES ANDERSON, OF HERMON, NEW YORK.

IMPROVEMENT IN RAILWAY SNOW-PLOWS.

Specification forming part of Letters Patent No. 132,834, dated November 5, 1872.

To all whom it may concern:

Be it known that we, JEROME B. HULBERT and JAMES ANDERSON, of Hermon, in the county of St. Lawrence and State of New York, have invented a new and Improved Snow-Plow, of which the following is a specification:

The invention consists, first, in making the lower part of the sides of a snow-plow vertical, and the upper part of said sides backwardly sloping, so as to cause the snow to rise as it is pushed laterally after passing the point, and the less compacted upper portion thereof to be turned over one side of the track. Secondly, it consists in hinging the sides of a snow-plow so as to adapt it to light or heavy snows. Thirdly, it consists in the mode of combining an open-front plow and screw with elevations, drive mechanism, and air-forcing apparatus, as hereinafter fully described.

Figure 1 is a longitudinal sectional elevation of our improved snow-plow, and Fig. 2 is partly a plan and partly a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

The front end of the plow or hollow shell thereof is formed with vertical sides A for about half the height, arranged in the manner of the two sides of a triangle, meeting together at the center of the front, and the upper part, which is also triangular, slopes backward to a short distance from the top and then curves forward, as indicated at B, to throw the snow off at the sides after allowing it to rise sufficiently. The aforesaid sides A are hinged to the body of the shell at the base of the triangular part, as shown at C, and at the front they are connected together by a rod, D, extending down through long tubes or scrolls formed on the edges of the doors, which are of sheet metal, in the manner of the knuckle-joints of a hinge; or it may be in any other suitable or approved way. These doors are kept closed when the snow is not so deep as to prevent the plow from throwing it off at the sides in the ordinary way; but when it is too deep to be thus disposed of the said sides or doors are opened and swung back against the sides behind the hinges C, and the snow is allowed to be pressed back into the case to the lower ends of the screws E, of which there are two each side of the center, one above the other, slanting backward and outward in their ascent to the top, where the cases or tubes F

terminate in elbows G, which discharge over the sides of the top of the shell, and the shafts H are extended through to the bearings I and gear together by wheels K, and with the shaft L by bevel-wheels M, and this shaft gears with the crank-shaft of the engine N by the wheels O P, and the said engine is mounted on the boiler Q within the shell of the plow, as clearly shown in the drawing. The said engine may be used only to propel the screws, leaving the plow to be moved along the track by another locomotive, or it may be used also for that purpose, in which case it will be connected with the driving-wheels in the ordinary way of gearing a locomotive, but which is not shown in the drawing, as not being necessary. In order to facilitate the discharge of the snow from the elbows of the tubes where the screws cannot work we propose to discharge blasts of air into them behind the snow through pipes Q, through which the air is blown by a fan, R, pump, or the like, to be worked by the engine in any approved way. In this instance the said fan is represented as being worked by the belt S and suitable pulleys.

We propose to make the sides of the plow incline outward from the bottom upward, so that the walls of the cut through the snow will slope downward, and thus the banks will be less liable to fall in upon the track than if the walls are left perpendicular.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A snow-plow having its front composed of sides that form an acute angle, are vertical for part of their height, then backwardly sloping, and finally thrown forward at B, as described, and for the purpose set forth.

2. A snow-plow provided with hinged sides and an internal screw or screws, E, as described, to adapt the same plow to operate in light or heavy snows.

3. A snow-plow comprising the hollow shell or case with open front A, elevating screws and tubes, driving mechanism, and air-forcing apparatus, all constructed, combined, and operating substantially as specified, for compressing, elevating, and discharging snow.

JEROME B. HULBERT.
JAMES ANDERSON.

Witnesses:

R. M. STOCKING,
D. VANDERHOOF.