

G. W. GEBHART.
SNOW PLOW.
APPLICATION FILED FEB. 10, 1915.

1,153,776.

Patented Sept. 14, 1915.

Fig. 1.

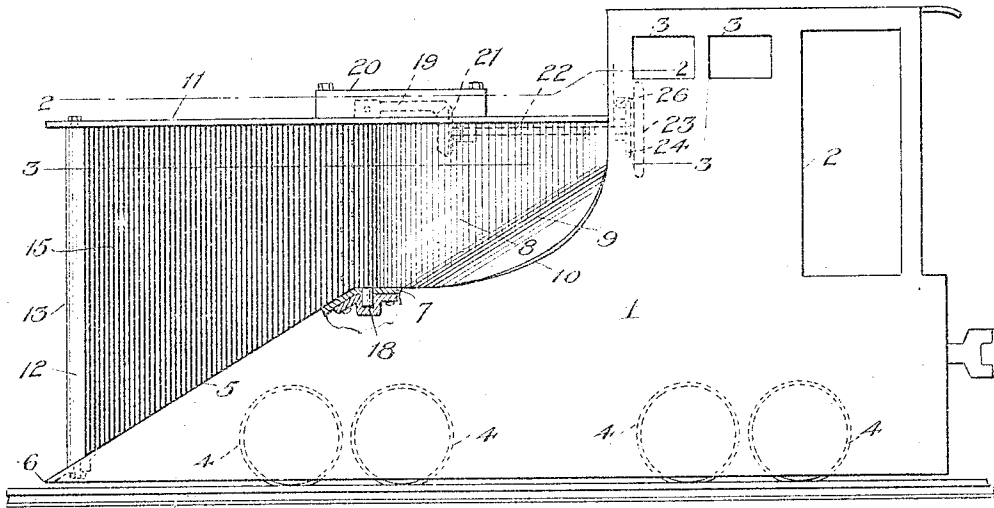


Fig. 2.

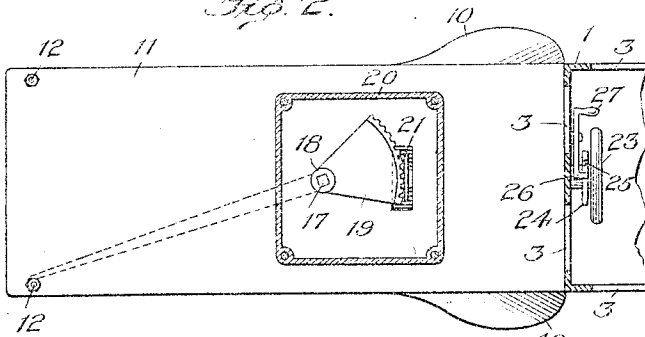


Fig. 4.

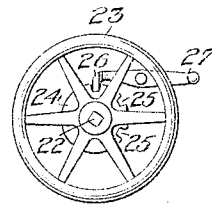


Fig. 3.

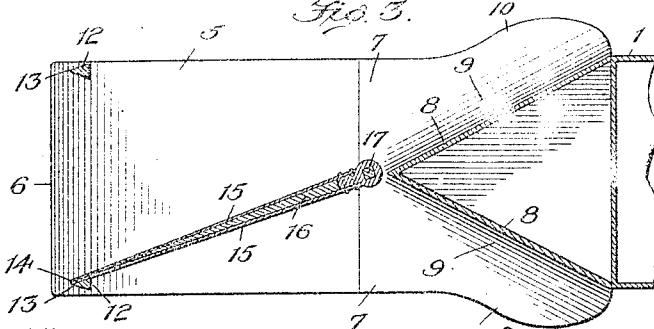
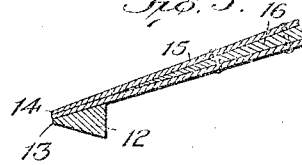


Fig. 5.



Inventor

Witnesses

Edwin L. Bradford
M. D. Ballou

George W. Gebhart,
By M. D. Wye
Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. GEBHART, OF SUNBURY, PENNSYLVANIA.

SNOW-PLOW.

1,153,776.

Specification of Letters Patent.

Patented Sept. 14, 1915.

Application filed February 10, 1915. Serial No. 7,252.

To all whom it may concern:

Be it known that I, GEORGE W. GEBHART, a citizen of the United States, residing at Sunbury, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Snow-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to snow plows, or power-driven track cleaners for removing snow from railway tracks.

It has for an object the construction of an implement of the class described which is at once simple and durable in construction, and highly efficient in the performance of its intended functions.

As a further object this invention contemplates and provides for a novel arrangement of plow-shares or mold-boards, and of an adjustable shunting board or slicing plate, whereby drifts may be readily cut up, divided and delivered to either or both sides of the plow as occasion requires.

As a further object this invention provides novel, convenient and effective means for throwing said shunting board or slicing blade from one operative position to another, means for temporarily locking and retaining same in any of its adjusted positions, and means for preventing drifts, into which the plow may be forced, from submerging the plow, and also interfering with the view of the engine operator.

With these and other objects in view the present invention will be hereinafter particularly described and pointed out in the claims.

In the accompanying drawings which form part of this application for Letters Patent, and whereon corresponding numerals refer to like parts in the several views:

Figure 1 is a side elevation of my invention in its entirety, mounted upon the rails of an ordinary railway track, and ready for use. Fig. 2 is a horizontal sectional view of the same taken on the line 2—2, Fig. 1, showing the bulk of the structure in plan. Fig. 3 is also a horizontal sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a detached detail view showing in side elevation an operating wheel for throwing said shunting board, and a locking dog for securing said wheel in adjusted positions, and, Fig. 5 is a

horizontal section taken through the leading edge of said shunting board or dividing plate.

Reference being had to the drawings and numerals thereon, 1 indicates the body of the plow structure which may be formed of any approved material, or materials, but preferably of sheet steel and heavily weighted to hold same upon the tracks and increase its ramming properties when forcibly driven into a snow drift. This plow body 1 is provided with a suitable cab 2, having front and side windows 3, and is mounted upon car wheels 4 and ordinary tracks, as indicated by Fig. 1. The extreme front or advance end of body 1, constituting a scooping member 5, is rearwardly inclined from its lowermost horizontal leading edge 6 to an intermediate position, where this incline terminates in a narrow horizontal shelf 7. Immediately back of this, and continuing to the front wall of cab 2, is a mold-board 8 which rises vertically and is substantially V-shaped with its apex advanced to the center of said shelf 7. This mold-board member is also by preference constructed of sheet metal rigidly secured in place with its rearmost vertical edges flush with the extreme sides of cab 2, and its oppositely disposed lower edges curved laterally, as at 9, 9, and each provided with overhanging blades 10, 10 as a means of facilitating discharge of the snow and throwing it clear of the plow body 1 upon one or both sides, as will later appear.

Projecting forward from cab 2 immediately below its front windows 3 is a horizontally arranged canopy top 11, also of sheet steel, which serves in practice to confine the snow below windows 3, and which top is supported at its outer corners by uprights 12, 12 having cutting leading edges 13, 13 for slicing into drifts when necessary. Between these uprights 12, 12 is located the movable outer or free and sharpened edge 14, of a vertically arranged shunting board or drift divider 15, formed of oppositely disposed plates, and, if desired, an intermediate core of lighter material 16, having at its opposite or inner edge a vertical supporting shaft 17 journaled above and below as at 18, 18 in the longitudinal center of the structure, and projecting through the canopy top 11, as shown by Fig. 2. Roped upon the uppermost squared and projecting end of said shaft 17 is a segmental rack 19 over which is secured a housing 20, and is

termeshing with which rack is a beveled pinion 21 upon a rotatable horizontal shaft 22, the latter extending beneath the top 11 into the cab 2, as shown by dotted lines in Fig. 1. Upon the innermost end of said shaft 22 is rigidly secured an operating wheel 23, and upon this, or said shaft adjacent to it, is likewise affixed a locking rack 24 having peripheral notches 25, into one or the other of which the tooth 26 of a locking dog 27, pivotally mounted to the cab frame, is adapted to fit for the purpose of retaining said shunting board in any of its adjusted positions.

This being a description of my present invention in its preferred form of construction, it should be understood that I do not confine myself to any particular material or materials, or to any particular manner of uniting or securing them in complete operative position, as various changes in these respects may readily be made by persons skilled in the art to which this invention relate, without materially departing from the real scope and purposes of the invention herein disclosed.

In general operation the present plow does not differ materially from other devices of like character in common use, but in efficiency, construction, convenience of manipulation and durability the present invention is a distinct advance in the art. For example, it being desired to clear snow from above and between the rails of a railway track, and to deliver same to the right of the plow structure, it is necessary only to withdraw tooth 26 from engagement with locking rack 24, whereupon rotation of the operating wheel 23, acting through shaft 22, pinion 21, and segmental rack 19, forcibly swings the shunting board 15 upon its supporting shaft 17 into the position shown by Figs. 2 and 3 of the drawings, with its advance slicing edge 14 resting and supported throughout its entire width upon the side of one upright 12. In this position and relation of parts it will be apparent that when the plow is forced into a body of snow, such as a drift for instance, a portion sliced out by the advance cutting edges of both uprights 12, 12 is received upon the upwardly inclined scooping surface 5, is confined beneath canopy top 11, and is thereupon directed by the adjustable shunting board 15, to the right side of the mold board 8, whence

it is discharged, as the plow advances, over the right-hand blade 10, which latter by reason of its overhanging arrangement insures delivery outside of and to the right of the rails upon which the structure moves.

If for various reasons it is desirable to discharge to the left this may immediately be provided for by a reversal of the position of the adjustable shunting member 15, through the agency of the apparatus previously described; and should it be desired to run directly into a drift delivering, as above indicated, upon both sides of the road-bed, as for instance in a single track road, it only becomes necessary, by means of the same operating wheel 23 and coacting parts, to place the shunting board 15 in an intermediate position, and there secure it by means of tooth 26 engaging the intermediate notch 25.

Having thus described my invention, what I now claim and desire to secure by Letters Patent is:

1. In a snow plow the combination with a plow body having an advance upwardly inclined scooping surface, of a vertically arranged rearwardly diverging mold board having its apex adjacent to and directed toward said scooping surface, an adjustable shunting board pivoted vertically in advance of said mold board, a rack and pinion mechanism for swinging said shunting board, an operating wheel for controlling said mechanism, and means for locking said mechanism in any of its adjusted positions.

2. In a snow plow the combination with a plow body having an advance upwardly inclined scooping surface, of a vertically arranged rearwardly diverging mold-board having its apex adjacent to and directed toward said scooping surface, an adjustable shunting board pivoted vertically in advance of said mold-board, means for locking said shunting board in any of its adjusted positions, a closed top surmounting said scooping and mold-board elements, and stanchions for said top at the front of the structure, serving also as supports for the outer edge of the said shunting board.

In testimony whereof I affix my signature, in presence of two subscribing witnesses.

GEORGE W. GEBHART.

Witnesses:

I. A. DE WITT,
H. F. CLEMMER.