H. RESLEY.

SNOW-PLOW.

No. 183,207. Patented Oct. 10, 1876.

Fig. 1.

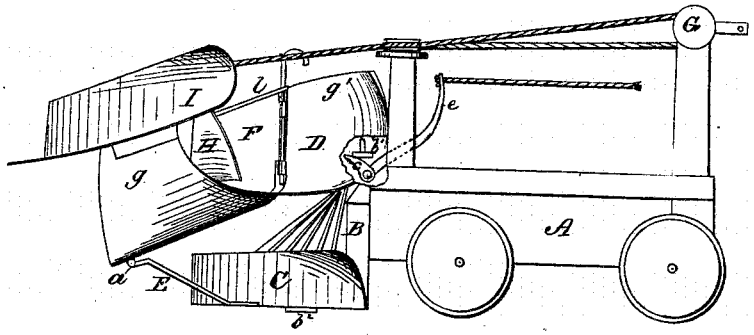


Fig. 2.

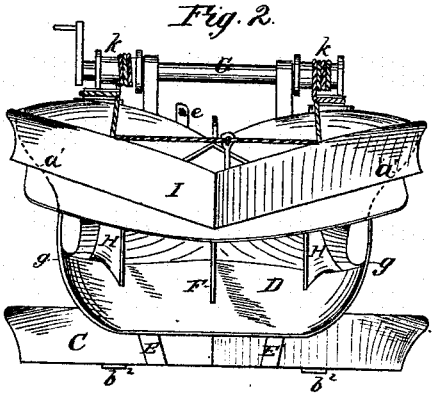
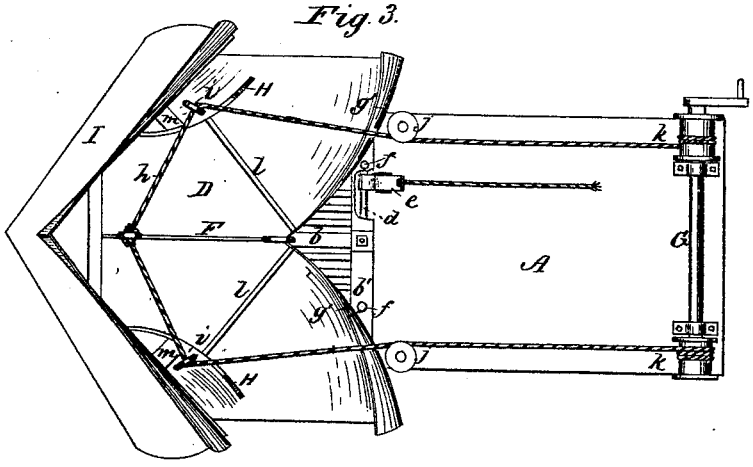


Fig. 3.



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UNITED STATES PATENT OFFICE.

HORACE RESLEY, OF CUMBERLAND, MARYLAND.

IMPROVEMENT IN SNOW-PLOWS.

Specification forming part of Letters Patent No. **183,207**, dated October 10, 1876; application filed August 24, 1876.

To all whom it may concern:

Be it known that I, HORACE RESLEY, of Cumberland, in the county of Alleghany and State of Maryland, have invented a new and Improved Railway Snow-Plow; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a front end view; Fig. 3, a plan view.

My invention relates to certain improvements in snow-plows adapted to be attached to the front of a locomotive or car, for the purpose of removing snow from the track.

My improvements consist in the particular construction and arrangement of the scoop with respect to the supplemental plow for removing the crust of snow, in the means for adjusting the scoop, and in the arrangement of cutter-blades at the points of the scoop where the divided columns of snow commence to turn, which blades divide the columns into smaller parallel columns, which permits the more easy deflection of the same to one side.

In the accompanying drawing, A represents the truck portion of a locomotive, to which the devices are attached, having the ordinary cow-catcher or pilot B in front, which is fitted with the ordinary angular snow-plow C, provided with rubber scrapers or brushes b^2 to clean the rails. Just above this is located the scoop D, which is maintained, in front, upon supports E, attached to the pilot, and is connected with said supports by hinge *a*, so as to permit of the adjustment of the scoop as to its inclination to the earth. The rear portion of the scoop is provided with brace-bars $b\ b^1$, of which b^1 is arranged transversely to the car, and is supported upon the cams *c* of a rock-shaft, *d*, which latter is provided with a lever, *e*, a deflection of which lifts the cams and elevates the rear end of the scoop. The scross-bar b^1 also is perforated near its ends, and moves over studs *f f*, affixed to the locomotive-frame, which serve to guide the scoop in its adjustment, and hold it securely to the locomotive. The scoop is constructed with flanged or upturned front sides *g*, and its bottom surface curves upwardly to the rear at *g*, and then outwardly to each side of the locomotive. F is the deflector, consisting of a gate arranged upon vertical pivots in the rear at the central portion of the rear flange, and projecting downwardly and to the front end of the scoop. This deflector is provided with a vertical arm at its front end, to which is connected a rope, *h*, which passes through guide-eyes *i*, and thence around tightening-sheaves *j*, and is wound at its ends in the rear within convenient reach of the engineer, upon pulleys *k k* of a windlass, G, in opposite directions, so that the turning of the windlass winds up one end of the rope, and unwinds the other, so as to move the deflector to either side of the scoop, and thus divert the entire capacity of the scoop to either side of the track, for the purpose hereinafter described.

H H are blades, arranged vertically in the two natural channels of the scoop, and supported at the top by braces *l l*, which extend to the rear flange of the scoop, and *m m*, which extend to front side flanges of the scoop. These blades serve to cut the columns of snow, and enable them more easily to be diverted and dislodged. They also serve as side rests for the deflector when the latter is turned to one side. I is a supplemental plow, of an angular form, located above the scoop upon the braces *m m*, and designed to remove the upper stratum or crust of snow when the same is too deep to be successfully removed by the scoop alone. This plow will generally be used when the snow is in excess of three or four feet in depth, and is designed to throw the crust of snow entirely free from the train and upon the top of the snow upon the sides of the track; but when the snow is of less depth than that indicated this plow may be dispensed with and entirely removed. When the upper plow is dispensed with the front end of the scoop will, preferably, be modified by extending the flanges *g*, and flaring them outwardly, (at *a'*, as in dotted lines in Fig. 2,) so as to clear a place to accommodate the projecting steps of the cars.

The snow-plow, as thus described, may be made of iron, or of iron, steel, and wood combined.

The bottom plow now in use, when combined with my plow, serves to push the snow some six inches beyond the track, while the scoop

takes up the balance to the height of about three feet, and throws the snow entirely from the track and on the top of the snow on the sides of it. My improvements may be used without this bottom plow, but they operate to better advantage with it.

The deflector serves to throw the snow all to one side of the track, so as to avoid throwing it against a hill side, or upon another track, while the devices for elevating the rear end of the scoop serve to adapt it the better to run through and clear away drifts.

In defining more clearly the limit of my invention I would state that I am aware that a pivoted deflector is not, broadly, new for the purpose, and that the cutting-blades have been arranged at the front edges of the scoop. With respect to these features, therefore, I only claim the arrangement shown and described, in which the cutter-blades divide the columns of snow near the bend, whereby the discharge and dislodgment of the snow are rendered easier, and whereby, also, the cutter-blades co-operate with the deflector to form a back support or brace for the same against the heavy column of snow when the deflector is thrown to one side.

Having thus described my invention, what I claim as new is—

1. The upper supplemental plow I, detachably located upon supports *m m* above the scoop, in combination with the scoop, having flanged front sides *g* and supports *m m*, substantially as and for the purpose described.

2. The combination, with the scoop D, having upturned sides *g* and a pivoted deflector, F, of the cutter-blades H, arranged at the points of deflection of the snow-columns upon each side of the deflector, so as to form supports for the same, substantially as and for the purpose described.

3. The scoop D, pivoted at *a* upon supports E, in combination with rock-shaft *d*, with cams *c*, and lever *e*, substantially as and for the purpose described.

4. The combination, with the scoop D, arranged to throw the snow upon both sides of the cutter-blades H, arranged in the path of the two snow-columns, at the points of deflection of the same, for the purpose described.

HORACE RESLEY.

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