

J. S. MUNSON.
Snow-Plows for Railways.

No. 133,792.

Patented Dec. 10, 1872.

Fig. 1.

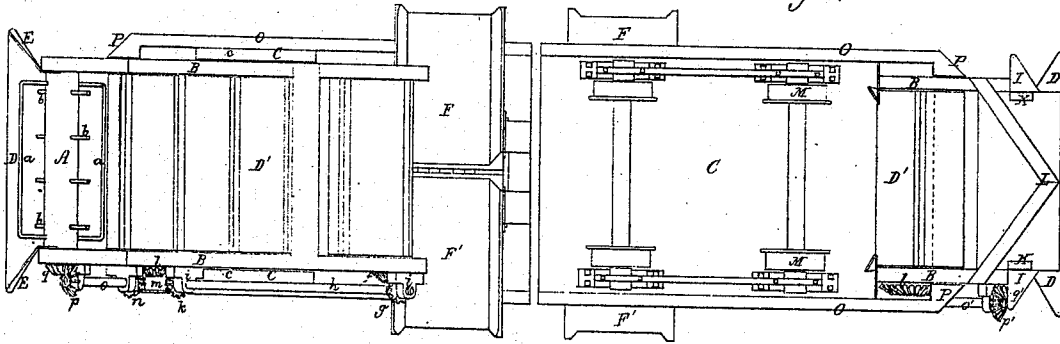


Fig. 4.

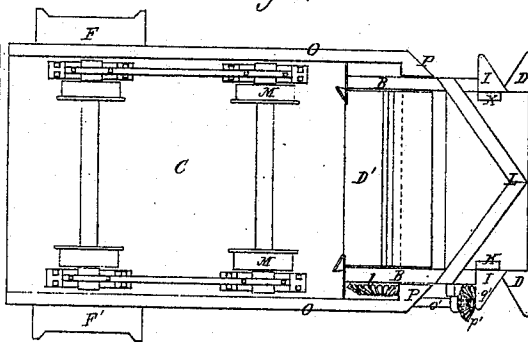


Fig. 2.

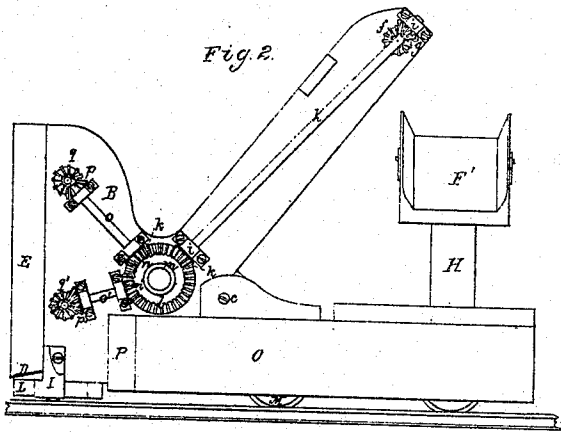


Fig. 3.

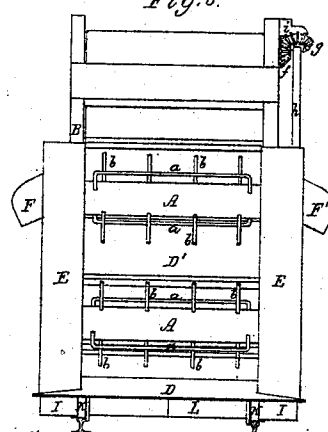


Fig. 5.

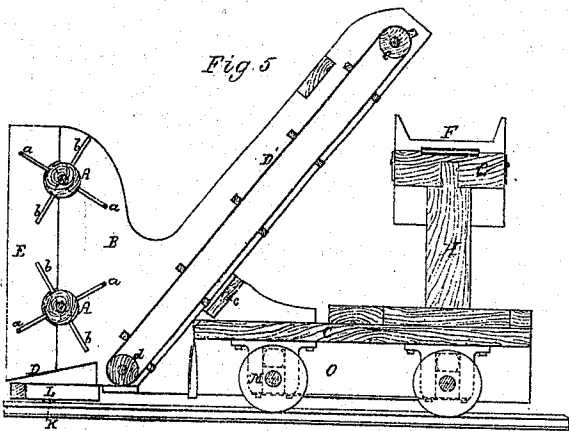
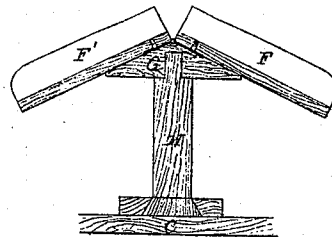


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

JULIUS S. MUNSON, OF JAMAICA PLAIN, MASSACHUSETTS.

IMPROVEMENT IN SNOW-PLOWS FOR RAILWAYS.

Specification forming part of Letters Patent No. 133,792, dated December 10, 1872.

To all whom it may concern:

Be it known that I, JULIUS S. MUNSON, of Jamaica Plain, of the county of Norfolk and State of Massachusetts, have invented an Improved Snow-Plow for use on Railways; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view; Fig. 2, a side elevation; Fig. 3, a front elevation; Fig. 4, a bottom view; and Fig. 5, a longitudinal section of it.

In such drawing, A A denote two rotary shafts, each being provided with one or more slicing-bars, *a*, and one or more series of arms, *b*, all arranged and formed essentially as shown, each, in the direction in which it is to cut, being made sharp, if necessary. These devices or rotary cutters are arranged across the front open end of a rocker-frame, B, which, at *c*, is to be pivoted or hinged to a carriage, C, and provided with an elevator or endless apron, D', arranged within it, as shown. The front of the rocker-frame is furnished with cutter-wings, formed and arranged as represented at D E E. The endless apron D' is supported by two rollers, *d e*, there being fixed on the journal of the upper of them a bevel-gear *f*. This gear *f* engages with another such gear, *g*, applied to a shaft, *h*, supported in boxes *i i*, such boxes being secured to the side of the rocker-frame. On the lower end of the said shaft *h* is a bevel-gear, *k*, to engage with a larger bevel-gear, *l*, fixed to a driving-pulley, *m*, duly pivoted to the rocker-frame. Other gears *n n'*, carried by shafts *o o'*, engage with the gear *l*, there being also upon such shafts *o o'* gears *p p'* to engage with similar gears *q q'* fixed upon the shafts A A. By a driving-belt being run upon the pulley *m* rotary motions will be simultaneously imparted to the series of rotary knives and to the elevator. In rear of the elevator are two lateral dischargers or spouts, F F', inclined in opposite directions and hinged together or to a standard, G, pivoted to a base-piece, H, so as to be capable of being revolved horizontally.

Figure 6 is a longitudinal section of the discharging-spouts F F' and the supporting-standard G.

Immediately in rear of each of the side

wings E E is a small plow or deflector, I, provided with a roller, K, to rest on the railway track. Between the two plows I I, and extending underneath and backward from the horizontal wing D, is another angular plow, L, all being formed and arranged as shown. This latter plow serves to remove from the railway track snow that may not be raised by the scraper or wing D, such snow being deflected into the furrows made by the side plows I I. Between the elevator and the front wheels M M of the carriage C there may be a series of scrapers and brooms to aid in clearing the track. Furthermore, on each side of the carriage is a wheel shield or guard, O, arranged as shown, and provided with a chisel-cutting edge or cutter, P, at its front end, the object of such guard or cutter being to enter and deflect the snow and protect the carriage-wheels from being clogged by such.

The trough, being composed of two spouts hinged together, and provided with a rotary standard, as shown, may be converted into a single conductor to discharge in one direction, such being accomplished by raising up one spout into prolongation with the other. The combined spouts may be turned about or adjusted as occasion may require.

The object of pivoting the rocker-frame to the carriage is to enable the former to be turned down upon the latter and up from and off the track, as occasion may require, whether for the better passage of obstacles or otherwise.

In operating with my improved snow-plow, like other plows it is to be impelled forward against the snow by a locomotive steam-engine. While being so driven forward, and its cutter-shafts in revolution, the cutters *a a* will pass easily in curved paths through the snow, the slices of which, while being removed by such cutters from the drift, will be cut into parts by the arms or bars *b*, the snow thus separated from the drift being thrown back from the elevator, by which it will be raised to and will fall upon the lateral dischargers F F', down and from which, by its gravity, it will be caused to flow out of the track of the train. The wings D E E will aid in cutting a path through the drift, the snow removed by them being by the rotary knives thrown upon the elevator.

In the said snow-plow I claim as my invention as follows, viz:

1. One or more rotary cutters, as described, the series of wings D E E, the rocker-frame B, the carriage C, and one or two lateral discharging-spout or spouts, F or F', arranged and combined substantially as shown and described.

2. The bottom and side plows L I I, the rocker-frame B, the wings D E E, one or more rotary cutters, as described, the elevator D', and the carriage C, all arranged and combined substantially as explained and represented.

3. The wheel-guards O O and chisel ends

or cutters P P, the carriage C, and the rocker-frame B, all arranged and combined as set forth.

4. The two spouts F F' and their rotary standard G, all combined and arranged together and with the carriage C, the elevator D, and the rocker-frame B having one or more rotary cutters, as set forth, all being constructed essentially in the manner, and to operate substantially, as explained.

JULIUS S. MUNSON.

Witnesses:

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