R. PAYNE.
Snow-Plow.

No. 221,094. Patented Oct. 28, 1879.

Fig. 1.

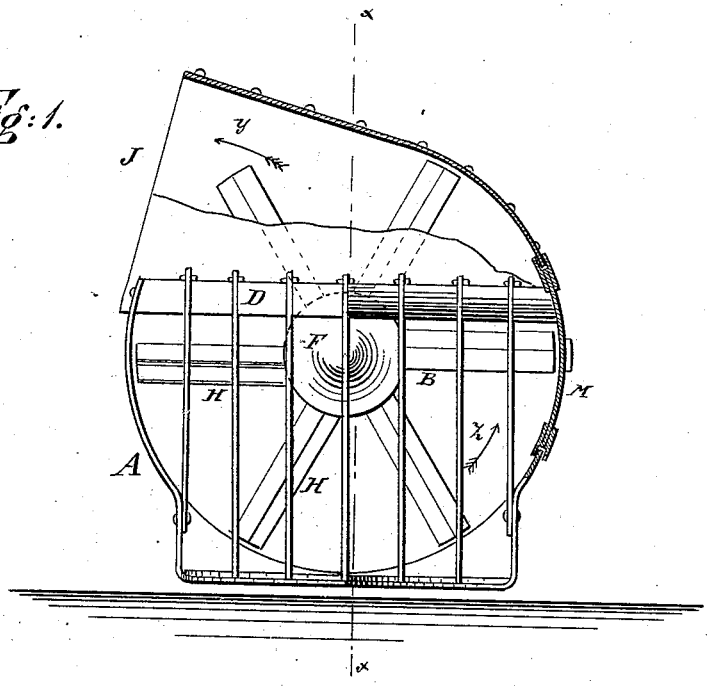
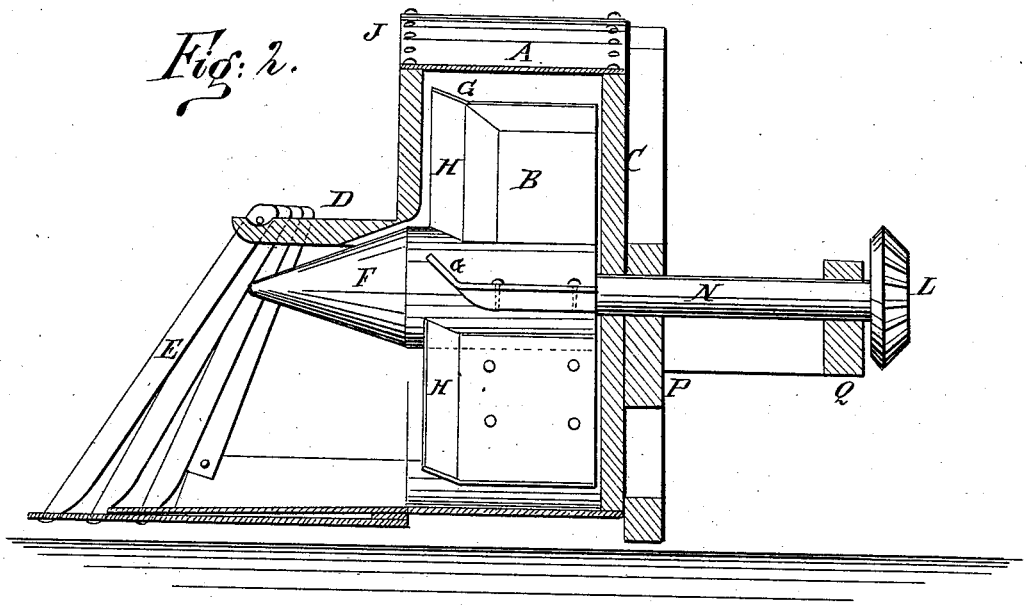


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROSSEEL PAYNE, OF OX BOW, NEW YORK.

IMPROVEMENT IN SNOW-PLOWS.

Specification forming part of Letters Patent No. **221,094**, dated October 28, 1879; application filed April 25, 1879.

To all whom it may concern:

Be it known that I, ROSSEEL PAYNE, of Ox Bow, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Snow-Plows, of which the following is a specification.

The object of my invention is to provide a plow that will remove the snow from a railroad-track and deposit it either to the right or left of the track, as may be desired, by means of a wheel with cutters revolving in the vertical plane and attached to the forward end of a platform-car.

The invention consists in the arrangement of an apron having cutters in the form of a grating, and a wheel provided with cutters rotating in the vertical plane and discharging the snow either to the left or right side of the track.

In the drawings, Figure 1 is a front view with part of the casing broken off. Fig. 2 is a longitudinal section on line *x x*.

Similar letters of reference indicate corresponding parts.

A is a circular casing, preferably of boiler-iron, in which the wheel B revolves, and C is the rear wall of the casing. An apron consisting of the top D and bottom S is in front of the wheel B, and has cutters E, in the form of a grating, extending from the top D to the bottom S. The bottom of this apron is pointed, so that the grating has the shape of a cow-catcher. This grating is to prevent obstructions from coming in contact with the cutters of the wheel and to slice the snow of heavy drifts.

F is the hub of the wheel, and is to be about one-third of the diameter of the wheel. The same projects out some distance from the wheel, and is tapered to a point, so that it can more easily part the snow. The hub being of a very large diameter and tapering, it has the tendency of forcing the snow away from the center of the wheel toward the periphery, which facilitates the discharging of the same.

The wings of the wheel are provided with metal knives or blades H, about six inches wide, and set at an angle, as shown at G, Fig. 2, to scoop the snow and press it toward the rear wall of the casing.

T is the discharge-opening, and M is the sliding door, that may be opened or closed, as may be necessary. N is the shaft that drives the wheel, and L the wheel-gearing by which N receives its power. P and Q are the bearings of the shaft N.

The apron is preferably made about eight feet wide, and the wheel with a diameter of about twelve feet.

The plow is attached to the forward end of a platform-car in such a manner that the bottom rests a few inches above the rails. It is driven by a separate engine on the platform-car, and the motion is transmitted by means of heavy gearing.

The operation is as follows: Power being applied to the cog-wheel L by the engine on the platform-car, the shaft N and wheel B will rotate in the direction of the arrow Z. The snow passes in between the cutters E as the car is pushed forward, and is then caught by the wings and blades H, and thrown out of discharge-opening J. If the snow is very deep the point of the hub F will force it toward the periphery of the wheel and prevent it from lying in the center of the wheel. If it is necessary that the snow be discharged on the other side, on account of contrary winds, &c., the sliding door M is opened and the snow discharged there.

I have shown only six wings on the wheel; as may be necessary, more or less may be used.

I am aware that snow-plows with wheels provided with blades and cutters have been heretofore used, and do not claim this broadly.

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

1. In a snow-plow, the combination of the wheel B, revolving in the vertical plane of the cutters E, and the casing A, for the purposes set forth.

2. The combination of the wheel B, hub F, discharge-openings J and M, and an apron consisting of top D, bottom S, and cutters E, as and for the purpose set forth.

ROSSEEL PAYNE.

Witnesses:
M. V. BRAINARD,
E. PAYNE.