2 Sheets—Sheet 1.

HORNBECK & CARNS.

Track Clearer.

No. 109,819. Patented Dec. 6, 1870.

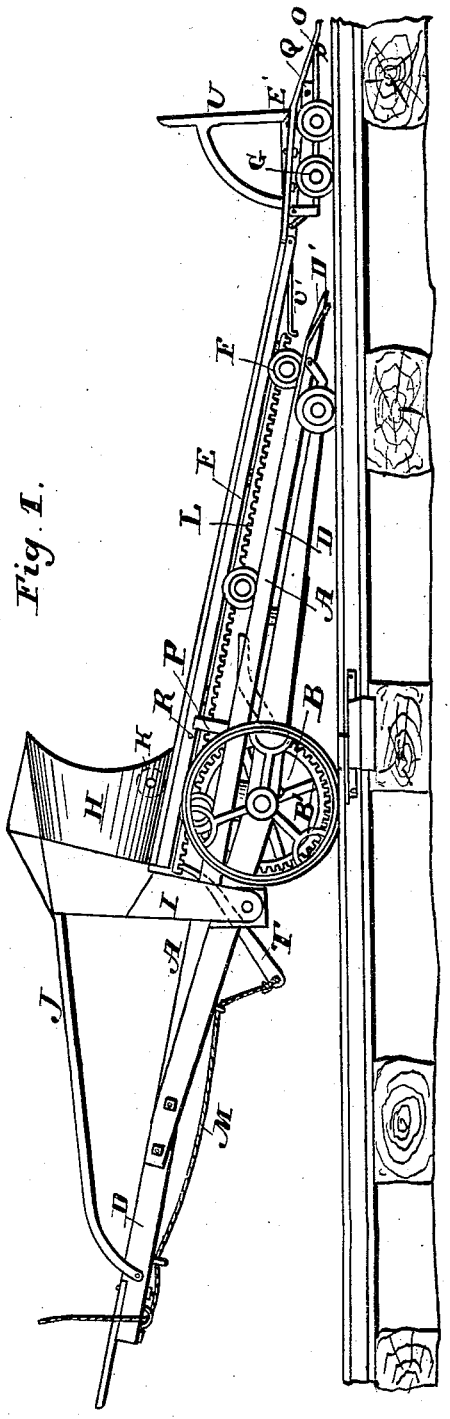

Fig. 1.

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2 Sheets—Sheet 2.

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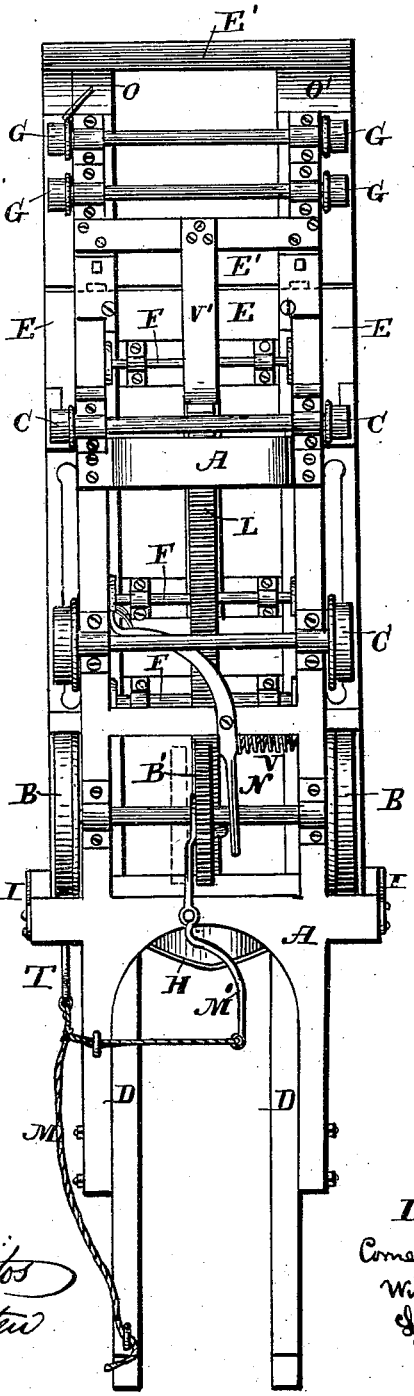
No. 109,819. Patented Dec. 6, 1870.

Fig. 2.



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United States Patent Office.

CORNELIUS F. HORNBECK AND WILLIAM J. CARNS, OF SLATERVILLE, NEW YORK.

Letters Patent No. 109,819, dated December 6, 1870.

IMPROVEMENT IN SNOW-PLOWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, CORNELIUS F. HORNBECK and WILLIAM J. CARNS, of the village of Slaterville, Tompkins county, New York, have invented an Improved Snow-Plow, of which the following is a specification.

Our object is to make a railroad snow-plow, adapted for use at all times, and especially useful in removing deep banks in cuts or other places where ordinary forms avail but little.

The nature of our invention will be apparent as we describe it.

Figure 1 is a side view of our plow, on a piece of track, and

Figure 2 is a view of the bottom of our plow when inverted, so as to show more clearly the working parts thereof.

In fig. 1—

A is a peculiar-shaped car on the road-track, and

B C, two or more pairs of wheels by which it is supported.

This car is made by the pieces D extending from near the locomotive to near the rails of the road-track and supported by an under frame.

The timbers or parts D are placed at a distance apart equal to the gauge of the railroad-track, and form rails for the wheels G to run on, as will be presently seen.

Near the inner sides of the rails D, and parallel to them, are secured two other similar pieces, D′, which, with the parts D, make a double track on top of the car A.

On one or both of these tracks is the platform-car E, with a flat and smooth upper surface, as wide, or a little wider than the track of the railroad.

The platform E is supported by the small wheels F on the rails on the main car.

To the forward end of the platform-car E is hinged the extension E′, which extension is supported by the wheels G, which rest on the railroad-track rails or are drawn on the main car-rails D at pleasure; and to aid in this retraction the inner rails D′ project a little further forward than the rails D, that the flange of the wheels G shall be caught in the space between the car-rails D D′ before the wheels G leave the road-rails.

At H is a dumping-plow, of any required shape, held by the rear brace J to the locomotive or to the main car-frame, and is mainly supported by the pieces I, connected with the main car-frame, and having a roller at K under the point.

A rack, L, is fast to the center of the platform-car E, on its under side, and on the shaft of the wheels B is a pinion, B′, which, by the cord M and lever M′, at the option of the engineer of the locomotive, is thrown into gear with the rack L, or by any of the well-known devices for the purpose.

A bent lever, N—a device so well-known as to need no full description—moved by the stop O on the extention E′, or other convenient place, throws the pinion out of gear as soon as the platform is dumped of snow.

The stops P Q R also limit the motion of the platform-car on the main car, and may be made of any suitable shape, and placed at any convenient points; and

T is a lever, arranged so as to hold the platform forward until the cord M is pulled, which releases the platform, as well as makes the changes for dumping the platform-car of snow.

At U is one of the two knives or cutters that part the snow, so that it lies on the platform.

V is a spring, (fig. 2), retracting the lever N; and

V′, a spring aiding the meshing of the pinion at the forward end of the rack L.

Figure 2 has the same letters.

The operation of our snow-plow is as follows:

When running in light snows, it is set as seen in fig. 1, and the snow is caught by the front E′ and slides on the top of the platform to the hood H, by which it is thrown off on each side of the railroad-track.

But when our plow encounters a bank or other deep snow that cannot be thus thrown off, the locomotive is stopped with the part E and E′, loaded up to the hood-plow H, when the engineer backs to a place where he can dump the load on E E′; he then, while still backing, pulls on the cord M and puts the pinion B′ in gear with the rack L, which retracts the platform-car under the plow H until it is unloaded, when the pinion is put out of gear.

The platform resumes its place, as seen in fig. 1.

The repetition of this action clears the bank, cut, or other deep place.

We intend to use our plow with or without the extension E′, as convenient or necessary.

The other advantages and uses of our invention are apparent to those skilled in the art to which it appertains.

Claims.

1. The plow-car A, with a single or double track on the top of it, the platform-car E, and unloading

hood or plow H, operating together, substantially as described.

2. The just-named plow, when further combined with the anterior road-attachment E', substantially as set forth.

3. The arrangement of the rack L on the platform-car, and the pinion B' on the shaft of the wheels B, the cord M and lever M', and the stops or cams required for these parts, for the purpose of moving and controling the platform-car E on the main car A, substantially as set forth.

4. The whole consisting of the platform E, and anterior hinged part E', hood-plow H, rack and pinion L, and cord M, combined and arranged so as to operate substantially as set forth.

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