J. J. VAN WAGENEN & J. BUTLER.

Locomotive-Pilot and Snow-Plow.

No. 218,147. Patented Aug. 5, 1879.

Fig. 1.

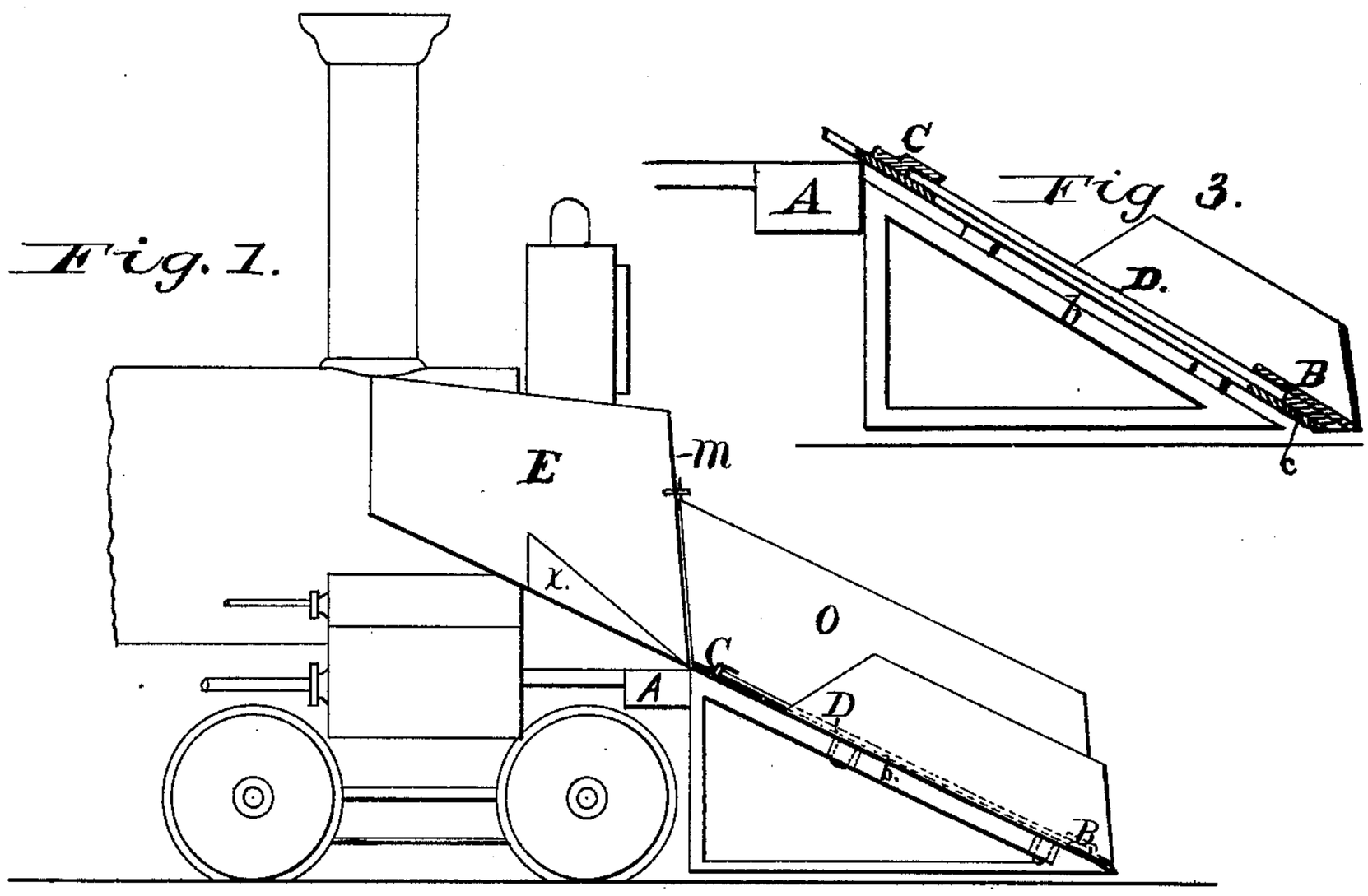
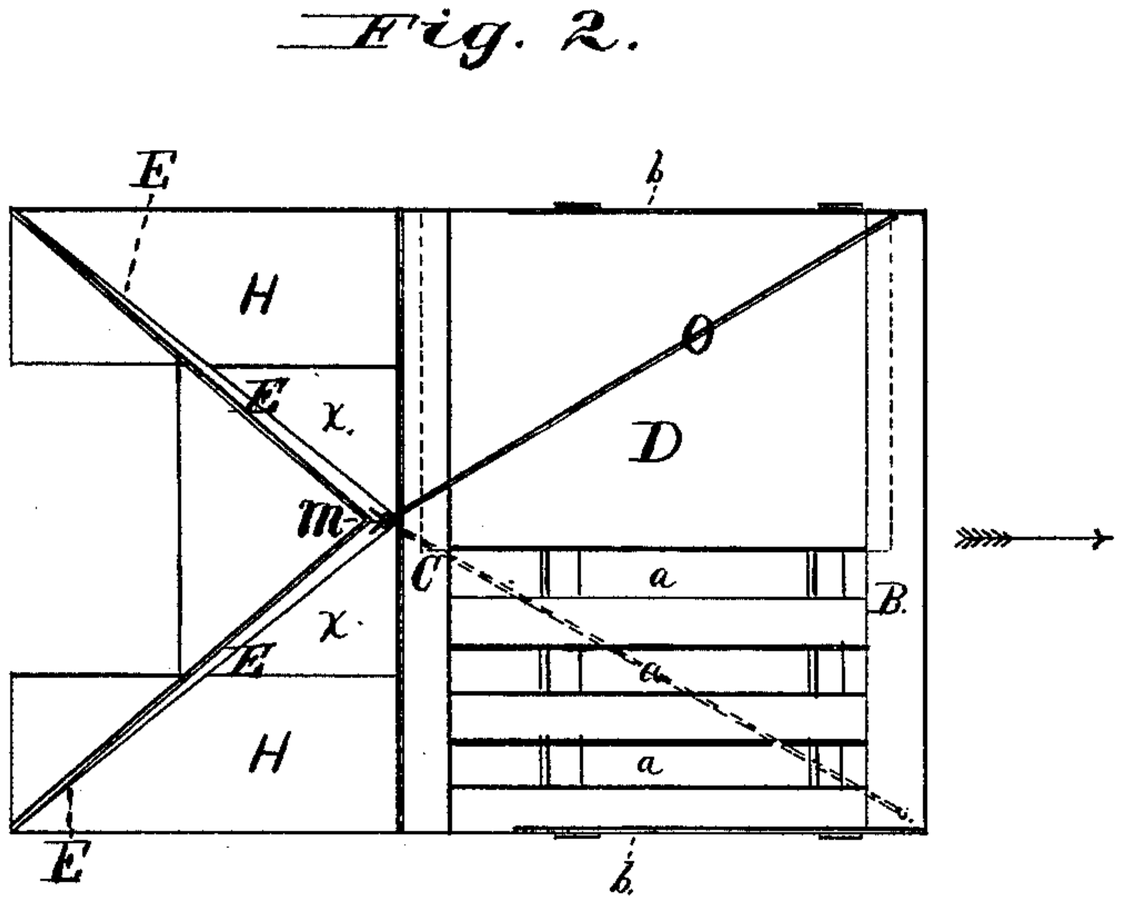


Fig. 3.

Fig. 2.



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JOHN J. VAN WAGENEN, OF SYRACUSE, AND JOHN BUTLER, OF OSWEGO, NEW YORK.

IMPROVEMENT IN LOCOMOTIVE-PILOT AND SNOW-PLOW.

Specification forming part of Letters Patent No. **218,147**, dated August 5, 1879; application filed June 23, 1879.

To all whom it may concern:

Be it known that we, JOHN J. VAN WAGENEN, of Syracuse, Onondaga county, New York, and JOHN BUTLER, of Oswego, Oswego county, New York, have invented a new and useful Improved Locomotive-Pilot and Snow-Plow, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side view thereof, and Fig. 2 is a top view.

Our invention consists of, first, an improved square or rectangular flat-faced pilot, square across the front, and which can be made open or tight by means of removable or hinged plates of metal or wood; second, of the combination, with such a pilot, of a rearwardly-superimposed snow-plow; third, in the combination of such a pilot and the rearwardly-superimposed snow-plow with the forward end of a locomotive frame and boiler.

It is constructed as follows: A is the ordinary cross-beam upon the forward end of the frame of the locomotive, and to this beam the pilot is attached. This pilot is made flat upon its upper surface by placing the slats *a a* parallel with each other within the right-angled frame-work, of which *b b* and *c c* are the sides. All of the slats are placed at the same angle of downward inclination, and fastened in the upper and lower sides of the frame-work. This angle can be varied as desired.

Across the lower end of the pilot, and attached to the bar *c* of the pilot-frame, is the slide-holder B, which extends upward over the slats a short distance. This is simply a sheet of metal fastened upon the frame-bar *c*, and extending above it over the slats *a a*, and raised above and free from the slats, so that a space is left between them, thus forming a sort of pocket to receive the lower ends of the removable slides, and allow them to readily slide in.

C is another similar slide-holder attached to the bar of the pilot-frame, opposite to the other slide-holder, and extending downward over the slats a short distance, creating another pocket like that made by the other slide-holder. This pocket is designed to receive the upper ends of the slides. The drawings show a slide in position, covering a portion of the face of the pilot, and closing the slats and spaces between them. We prefer to make this pilot of the same width across as the length of the cross-beam.

The frame-work and slats may be made of wood or iron, or both. The slides D D we prefer to make of iron, and two or three, or more, can be used to cover the space. These slides can also be hinged to the side bars, *b b*, respectively, or to a slat, *a*, in the center of the pilot, as desired. The under part of the pilot is made with suitable braces and supports to back up the frame-work and slats, and to hold the pilot-face up above or off from the track.

E E are the mold-boards of the snow-plow, so adjusted and mounted upon the apron or inclined plane H H that two ends come together and form a wedge-shaped divider, M, while the other ends flare outwardly at any angle desired. These mold-boards are made with more or less of the mold-board shape. The divider can be made so as to stand upright or incline either forward or back. The apron H is made of the same width as the face of the pilot or cross-beam. The front or lower edge of the apron can be attached or fastened, in any ordinary manner, to either the upper side of the pilot-face or to the cross-beam A. From thence the apron extends upward, at about the same angle as that of the face of the pilot, to the point of the divider, and along the lower edges of the mold-boards E E. These mold-boards are made of such height, or so mounted upon the apron, that their upper edges, at the top of the divider and back each way from it, will be of about the same height as that of the lower part of the head-light. From the head-light back the apron and mold-boards completely cover over the cylinders and steam-chests, and the boiler itself up to a point about on a level with the running-boards. In fact the back ends of the apron can be made to rest upon the extremities of the running-boards. The mold-boards E E are designed to extend outward, so that their outer ends, respectively, will be about on a line with the sides of the cab.

O is an adjustable wing for use upon a

double-track road. Its upper end is pivoted, and the pivotal point may be either at the upper edge of the face of the pilot on the cross-beam or at the point of the divider. The lower end can be fastened, in any manner desired, at either lower corner of the pilot. It can stand at any angle desired to the face of the pilot.

The face of the apron is made with a central raised portion, *x*, to allow the apron to fit over and rest upon the stay-rods extending downward from the front of the boiler to the cross-beam. This raised portion will vary in size or height, according to the height of these stay-rods, and on some locomotives may be entirely dispensed with, leaving the face of the apron perfectly smooth.

The upper part of this snow-plow can be supported or fastened in position in any desired manner.

The operation of our device is to scoop up the snow, and by means of the divider and mold-boards it is thrown off on either side clear of the track, and thus makes a path for the train.

What we claim as our invention is—

1. The above-described flat-faced rectangular-framed locomotive-pilot, having the slats *a a* and openings or spaces between them, and provided with pockets or slide-holders B C, or their equivalents, adapted to receive and hold the removable sliding plates, substantially as and for the purposes above set forth.

2. The combination, with a pilot for locomotives, constructed substantially as above specified, and the cross-beam A, of a rearwardly-superimposed snow-plow, constructed with an apron and mold-boards united so as to form a divider, for the purposes specified.

3. The combination of the hereinbefore-described pilot attached to the cross-beam A, and the rearwardly-superimposed snow-plow attached in front to the pilot-frame or cross-beam, and resting upon or against the forward end of the boiler and stay-rods, with the frame and boiler of a locomotive.

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JOHN BUTLER.

In presence of—
C. W. SMITH,
GEO. F. HINE.