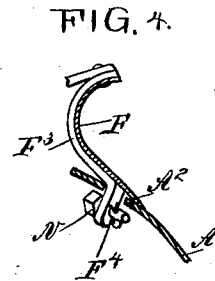
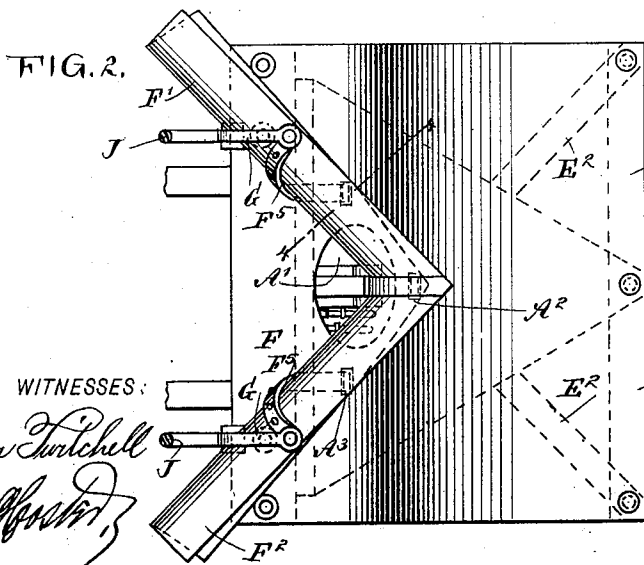
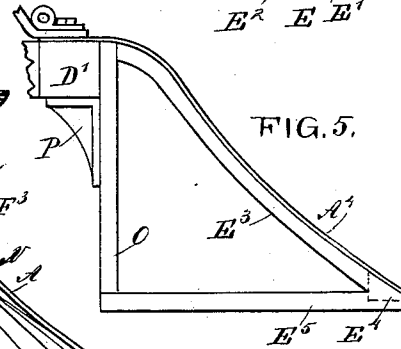
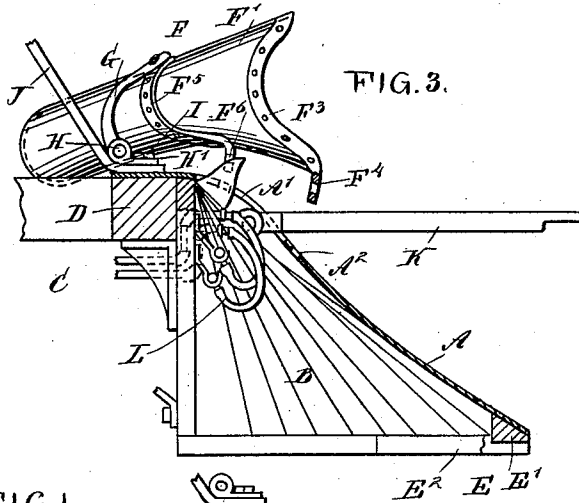
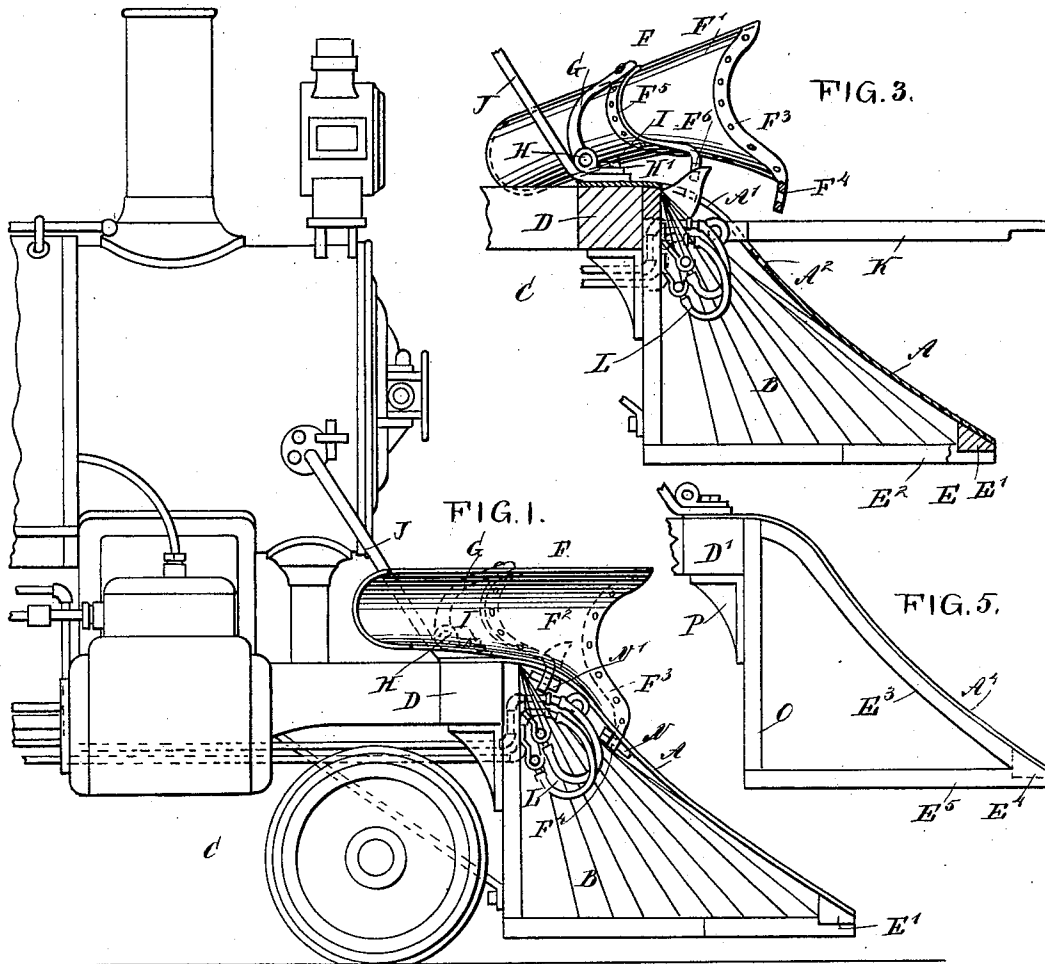


(No Model.)

W. R. LLOYD.  
SNOW PLOW.

No. 601,895.

Patented Apr. 5, 1898.



WITNESSES:

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INVENTOR  
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# UNITED STATES PATENT OFFICE.

WILLIAM RICHARD LLOYD, OF NEW YORK, N. Y.

## SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 601,895, dated April 5, 1898.

Application filed September 23, 1897. Serial No. 652,727. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM RICHARD LLOYD, of the city of New York, county and State of New York, have invented a new and Improved Snow-Plow, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved snow-plow arranged for convenient attachment to a locomotive or other motor and designed to readily remove snow from the track and discharge the same at the sides thereof, the construction of the plow permitting convenient coupling of the locomotive to locomotives or cars ahead of it, at the same time allowing the free use of the draw-bar and the steam and air couplings at the pilot.

The invention consists principally of a snow-plow body arranged for extension over the pilot and a movable clearer or deflector on the upper end of the said body for deflecting the snow passing up the body to the sides of the track, the said clearer normally closing an opening in the said body, but being arranged for uncovering the said opening for passing the draw-bar and couplings through the said opening.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is a plan view of the same. Fig. 3 is a sectional side elevation of the improvement with the clearer or deflector swung backward for coupling the locomotive to another locomotive or cars ahead of it. Fig. 4 is a transverse section of the snow-plow on the line 4 4 of Fig. 2, and Fig. 5 is a side elevation of a modified form of the improvement.

The snow-plow is provided with a body A, preferably made of sheet metal and extending over the pilot B of the locomotive C, with the upper end of the body secured to the top of the buffer-beam D, forming part of the front frame of the locomotive. The lower end of the body A is provided with a frame

E, formed by a transverse beam E', attached to the under side of the body A, at the lower edge thereof, to rest on top of the pilot-beam at the front end, as is plainly indicated in Fig. 1.

From the transverse beam E' extend diagonally and in a rearward direction the braces E, adapted to rest on the sides of the pilot-beam, as is plainly indicated in the drawings, to properly support the body in position on the pilot. On the upper end of the body A is arranged a movable clearer or deflector F, having two wings F' and F<sup>2</sup>, standing at angles to each other, with the apex of the clearer approximately at the middle of the body A, so that the snow passing up the latter is deflected by the clearer to both sides of the body and the track on which the locomotive travels.

The clearer F has its wings F' and F<sup>2</sup> provided at their rear faces with downwardly-extending hinge-leaves G, engaged by pintles or pivots H, held on brackets H', attached by bolts I to the body of the arch-braces J, having their lower ends resting on top of the upper end of the body A, so that the bolts I pass through the said body into the buffer-beam D to connect the several parts—that is, the bearing H', the lower end of the arch-brace J, and the upper end of the body A—to the said buffer-beam. (See Fig. 3.)

The two pivots H for the wings F' and F<sup>2</sup> stand in transverse alinement with each other, so that the clearer can be readily swung downward into an active position, as shown in Fig. 1, or rearward and upward, as indicated in Fig. 3, to uncover the opening A', formed in the upper portion of the body A. This opening A' permits the introduction of the draw-bar K for connecting the latter with the draw-head of the locomotive in order to couple this locomotive C to a locomotive or car ahead for pulling the same over the track wherever desired. The opening A' also permits of using the air and steam couplings L, carried under the pilot B, to connect the coupled locomotives or cars with the fluid-pressure-brake mechanism of the snow-plow locomotive. Normally, however, the opening A' is closed by the apex end of the clearer F, as is plainly shown in Figs. 1 and 2, so that the snow passing up the body A does not reach the opening

A', but is caused by the wings F' and F<sup>2</sup> to pass sidewise for discharge at the sides of the body A, as previously explained.

When the clearer F is in its normal position, it is securely locked in place, and for this purpose I provide the following device: The forward ends of the wings F' and F<sup>2</sup> are connected with each other at their backs by a brace F<sup>3</sup>, formed at its lower end with a lug F<sup>4</sup>, adapted to pass through an opening A<sup>3</sup>, formed in the body A below the opening A'. A bolt or lynch-pin N is passed through an aperture in the lug F<sup>4</sup> to engage the under side of the body A, so as to lock the clearer F in place. Similar braces F<sup>5</sup> are provided on each of the wings F' and F<sup>2</sup> and are formed with lugs F<sup>6</sup> at their lower ends, which pass through openings A<sup>3</sup>, formed in the body A at the sides of the opening A', as indicated in Figs. 1 and 2, the lower ends of the said lugs being engaged by lynch-pins N', similar to the pins N, and likewise resting against the under side of the body A, to assist in locking the clearer F in active position.

When it is desired to couple the locomotive C to the train ahead, the pins N and N' are first removed, after which the clearer F is swung upward out of engagement with the body A to uncover the opening A', as is plainly shown in Fig. 3, in order to permit the use of the draw-bar K and the air and steam couplings L, as previously explained, it being understood that the said devices are extended through the opening A', so as to allow of making the usual connection.

In case the locomotive is without a pilot B the body A of the snow-plow is provided with a frame having side beams E<sup>3</sup> riveted to the body near the sides thereof and connected with the cross-beam E<sup>4</sup> at the lower end of said body. Braces E<sup>5</sup> extend from the cross-beam E<sup>4</sup> rearwardly to abut against the vertical bars O, carried by the buffer-beam D', and also against the pilot-brackets P, carried on the said beam. Otherwise the construction is the same as above referred to in reference to Figs. 1, 2, and 3.

Now it is evident that by the arrangement described the snow-plow can be readily attached to a locomotive without rendering the

latter "dead"—that is, allow the locomotive to be coupled to cars or locomotives ahead.

The wings F' and F<sup>2</sup> of the clearer are preferably curved, as indicated; but I do not limit myself to any particular construction of the same, as it is evident that other forms may be readily employed. It is, however, expressly understood that the clearer F is movable on the upper portion of the body A, so as to uncover the opening A', for the purpose previously mentioned.

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

1. A snow-plow comprising a snow-plow body arranged for extension over the pilot and formed near its upper end with an opening for the passage of the draw-bar, couplings, &c., and a movable clearer on the upper portion of the said body and normally closing the said opening, the said clearer being movable to uncover the said opening for passing the draw-bar and couplings through the said opening, substantially as shown and described.

2. A snow-plow provided with a body arranged for attachment to the pilot of the locomotive, a clearer fulcrumed on the upper portion of the said body and normally resting thereon, and means substantially as described, for locking the said clearer in place on the said body, substantially as set forth.

3. A snow-plow provided with a body extending over the pilot of the locomotive and provided at its lower end with a frame for connection with the pilot, the upper end of the said body being attached to the buffer-beam of the locomotive, and a clearer having wings standing at angles to each other and pivoted on the upper end of the said body, the said clearer normally resting on and being locked to the upper portion of the said body and arranged to swing out of engagement with the body to uncover an opening in the upper portion thereof for the passage of the draw-bar, couplings, &c., substantially as shown and described.

WILLIAM RICHARD LLOYD.

Witnesses:

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GEORGE M. PRIM.