

A. STUTZMAN.

Improvement in Snow-Plows.

No. 114,623.

Patented May 9, 1871.

Fig: 1.

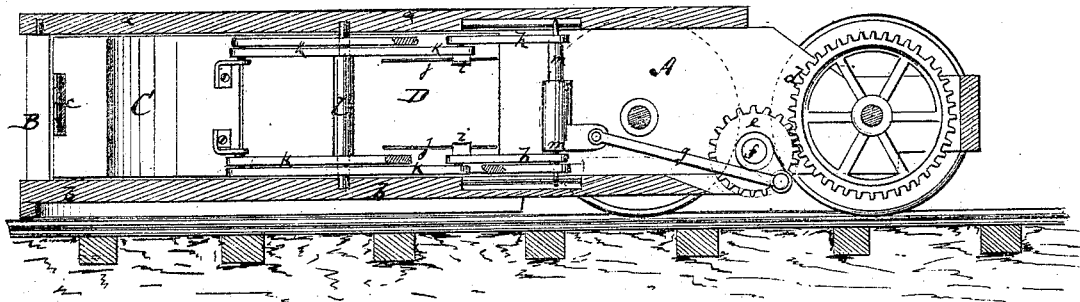
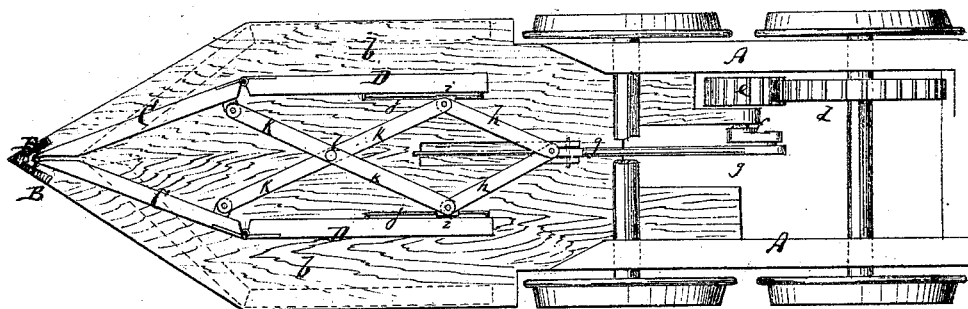


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SNOW-PLOWS.

Specification forming part of Letters Patent No. **114,623**, dated May 9, 1871.

To all whom it may concern:

Be it known that I, ALEXANDER STUTZMAN, of Somerset, in the county of Somerset and State of Pennsylvania, have invented a new and Improved Snow-Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a longitudinal section of my improved snow-plow. Fig. 2 represents a plan or top view of the same when the top-plate is removed.

Similar letters of reference indicate corresponding parts.

This invention relates to a new snow-plow which is to be used on railroads for clearing the track from snow.

The invention consists in the arrangement of a double pair of wings, which constitute the plow for entering, and also the spreaders for working aside the snow.

The invention also consists in the arrangement of levers and mechanism for imparting the peculiar movement to said wings.

A in the drawing represents a truck or small car to which my improved snow-plow is attached. *a* is the top, and *b* the bottom, plate of the snow-plow. These plates project forward from the truck, and are rigidly secured thereto. Their front ends are wedge-shaped or pointed, as in Fig. 2, and are at their points connected by a wedge-shaped post or upright, B.

The plow proper consists of two pairs of wings or side-boards, C C and D D. The front wings, C C, meet at their front ends, and are there hinged together, as at *c* in Fig. 2. The rear or side wings, D D, are at their front ends hinged to the rear ends of the front wings, C, as shown.

It will be seen that the rear wings are nearly parallel, while the front wings converge in front.

One of the axles of the truck A carries a toothed wheel, *d*, which meshes into a pinion, *e*, mounted upon a crank-shaft, *f*. A pitman, *g*, from said crank-shaft connects with an upright post, *m*, which it slides longitudinally between the top and bottom boards, *a b*.

To the post *m* are fitted the rear ends of levers *h h*, which are in front pivoted to loops *i i*, sliding on horizontal bars or rods *j*, that are affixed to the inner sides of the rear wings, D. To the loops *i* are also secured the rear ends of diagonal levers K K, whose front ends are pivoted to the inner sides of the front wings, C.

The levers K K, where they cross, are pivoted to an upright stationary post, *l*.

When, by the motion of the shaft *f*, reciprocating motion is imparted to the post *m*, the system of lazy-tongs *h h K K* is alternately expanded and contracted. The side wings, D, are thereby alternately pushed outwardly, and the front wings drawn back, as by dotted lines in Fig. 2, and drawn out, as by full lines in Fig. 2.

It is easily seen that the machine can be geared at pleasure, the higher the speed of *f* the less quantity of snow being pushed aside at each revolution, while the work is done more thoroughly.

During one half revolution the wings collapse; at the other they expand. When collapsed, the pressure of the snow in front, the cars being in motion, presses back against the front wings and assists in expanding the side wings, D; and when the wings are expanded, the snow, pressing against the side wings, assists the machinery again in contracting.

The front post B assists in supporting the upper platform, *a*, and cutting the snow. The lazy-tongs, operating from the center, act with equal and great power against both sides.

Motion can be imparted to the driving-shaft of the truck by suitable means from the locomotive or otherwise.

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

1. The snow-plow composed of the laterally-movable side wings, D D, and of the movable wedging-wings, C C, substantially as herein shown and described.

2. The sliding post *m*, levers *h h*, loops *i i*, rods *j j*, and levers K K, combined with the wings C D to operate the same, substantially as hereing shown and described.

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Witnesses:

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