

P. A. SMITH.  
Railway Snow-Plows.

No. 136,272.

Patented Feb. 25, 1873.

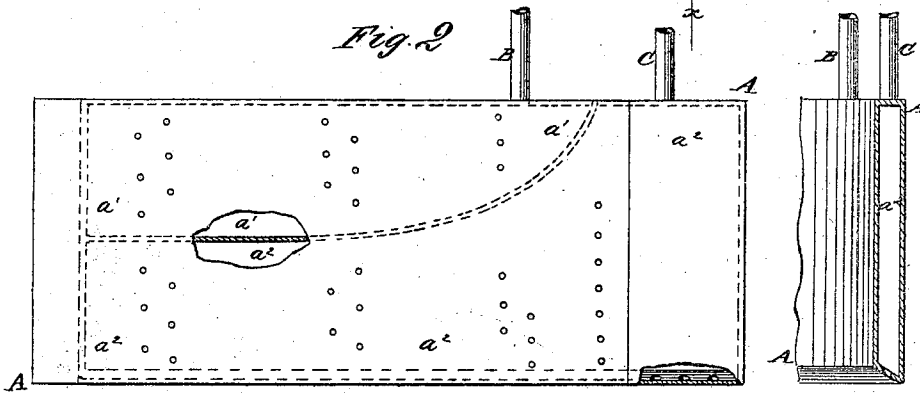
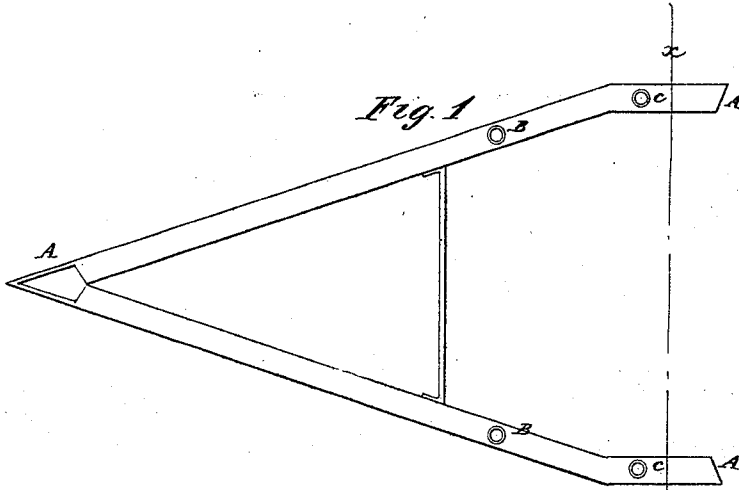


Fig. 3

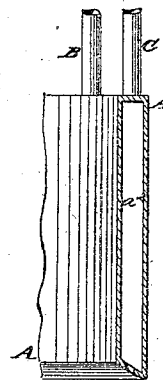


Fig. 4

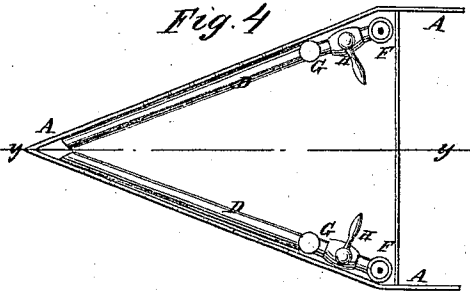


Fig. 5

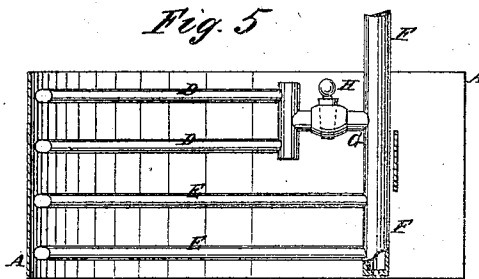
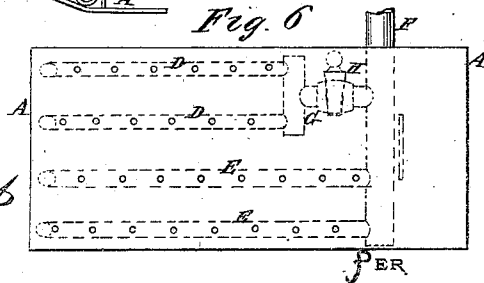


Fig. 6



Witnesses:

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# UNITED STATES PATENT OFFICE

PETER A. SMITH, OF NEW YORK, N. Y.

## IMPROVEMENT IN RAILWAY SNOW-PLOWS.

Specification forming part of Letters Patent No. 136,272, dated February 25, 1873.

*To all whom it may concern:*

Be it known that I, PETER A. SMITH, of the city, county, and State of New York, have invented a new and useful Improvement in Device for Removing Snow from Railroad Tracks, of which the following is a specification:

Figure 1 is a top view of my improved device. Fig. 2 is a side view of the same, part being broken away to show the construction. Fig. 3 is a detail section of the same taken through the line *x x*, Fig. 1. Fig. 4 is a top view of a modified form of the same. Fig. 5 is a detail longitudinal section of the same taken through the line *y y*, Fig. 4. Fig. 6 is a side view of the same.

Similar letters of reference indicate corresponding parts.

The invention consists in the improvement of snow-plows, as hereinafter described and pointed out in the claim.

A is the plow, which is made V-shaped, and the rear parts are bent inward so as to be parallel with each other and directly over the rails of the track. The walls of the plow A are made double to form chambers  $a^1 a^2$ . The chambers  $a^1 a^2$  may be formed by flanging the inner plate and riveting it to the outer plate, or in any other convenient manner. With the chamber  $a^1$  is connected a pipe, B, and with the chamber  $a^2$  is connected a pipe, C. The pipes B C may be connected with the steam-drum, or with the exhaust of the engine, or with both, to enable steam to be introduced into the said chambers  $a^1 a^2$ . In the outer plate of the plow A are formed a number of small holes, through which the steam blows upon the snow. The rear or parallel parts of the plow A have a number of small holes in their bottoms, through which the steam may blow upon the rails to remove any snow or ice that may adhere to said rails.

If desired, instead of making the walls of the plow double, the steam-chambers may be

formed by two sets of steam-pipes, D E, each set consisting of one, two, or more pipes. One set, D, of the pipes extends along the upper part of the inner surface of the sides of the plow, and the other set, E, extends along the lower part of said sides. The lower set, E, of pipes are connected with a pipe, F, connected with the steam-drum or exhaust of the engine, or with both. The upper set of pipes D is connected with the pipe F by a short connection-pipe, G, which is provided with a stop-cock, H. The pipes D E are secured to the side plates of the plow A, and through their outer sides are formed holes leading through the said plates to allow the steam to escape against the snow. In the lower end of the pipe F is formed a hole to allow the steam to blow upon the rails.

By this construction, when the snow is shallow the steam may be admitted into the lower chamber or pipes, and when the snow is deep by opening the stop-cock H steam may be introduced into both chambers or sets of pipes.

When the train is moving forward the chambers or sets of pipes may receive steam only from the exhaust; but, should the snow pack against the plow so as to clog or stop the train, steam may be used from the steam-drum, which will quickly melt the snow away from the plow and allow the train to again move forward. In this way a train may be worked through drifts of any size.

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

A snow-plow, double walled to form chambers  $a^1 a^2$ , perforated in its outer shell to allow exit of steam, and provided with a distinct steam-inlet pipe for each chamber, as and for the purpose described.

PETER A. SMITH.

Witnesses:

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