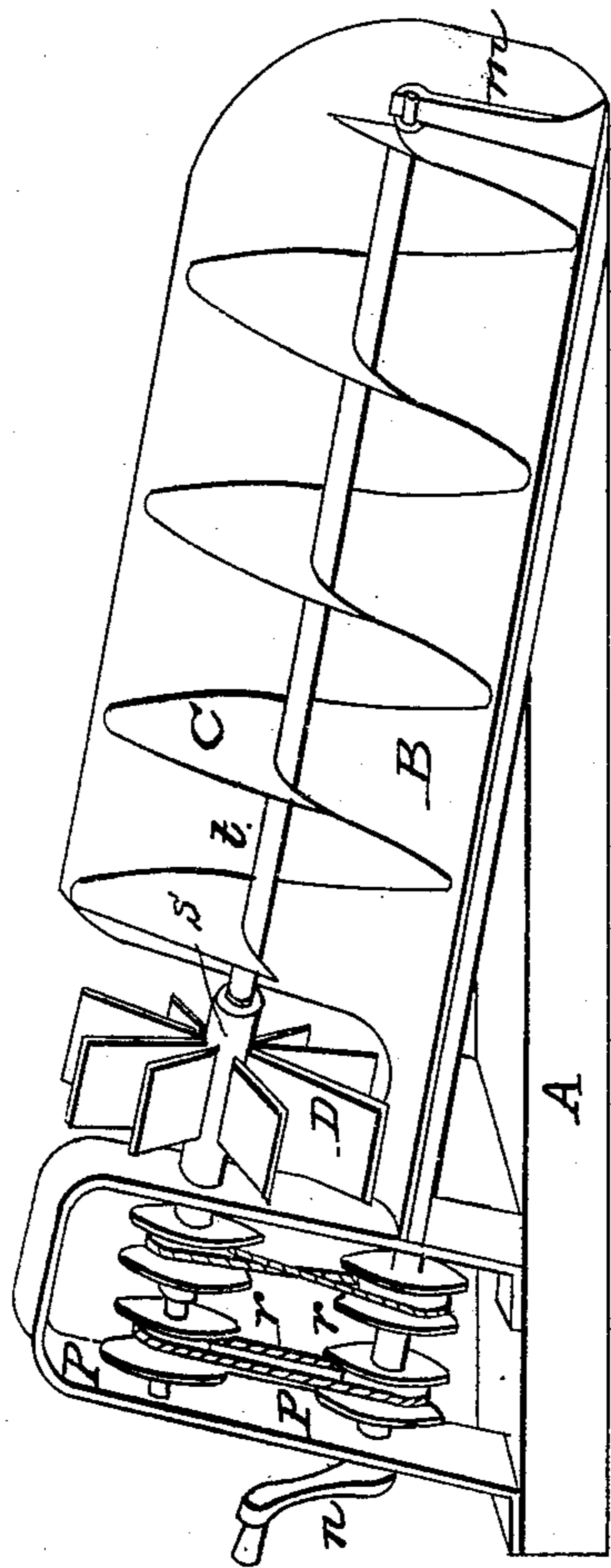


C. W. TIERNEY.

Snow Plow.

No. 87,989.

Patented March 16, 1869.



# UNITED STATES PATENT OFFICE.

CHARLES W. TIERNEY, OF ALTOONA, PENNSYLVANIA.

## IMPROVED SNOW-PLOW.

Specification forming part of Letters Patent No. 87,989, dated March 16, 1869.

*To all whom it may concern:*

Be it known that I, CHARLES W. TIERNEY, of Altoona, in the county of Blair, in the State of Pennsylvania, have invented a new and useful Machine for Removing Snow from Railroad-Tracks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to introduce into use a more complete and successful machine for removing snow from the tracks of railroads than has heretofore been in use; and it consists in the use of a revolving shaft having spiral wings, in the form of a screw, thereon, in combination with a revolving fan which distributes the snow after the screw has raised it.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the drawings, A is the supporting-frame, upon which the screw case or box B and screw C, and the driving mechanism is secured, and which may be attached to the forward part of a locomotive in any secure manner. B is a case or box having a bottom and sides, but open on top, resting upon the frame A, and inclined to give sufficient elevation to the screw C. The screw C is made of sheet metal, and attached in any secure way to the revolving shaft *t*. Both must be of sufficient strength to be rapidly revolved, and carry a body of snow from the track to the fan. This screw may be constructed so as to be either what is termed right or left hand, and the shaft *t* may be made to revolve in either direction, as the case may be.

Shaft *t* rests in bearings on standards, and may be operated by pulleys P P and belt, as shown, or by any other means that will produce the revolution of the shaft *t* from the locomotive.

On shaft *t* is a hollow shaft, *s*, to which is

attached fan D and pulley *r*. Fan D is made to revolve upon shaft *t*, but may revolve in the same direction, or in the reverse direction, as desired, by changing the belt upon pulleys *r r*, to cross or not, as necessary.

The case B is made of sheet metal or other suitable material, and wide enough to admit the passage of the locomotive in its width.

The screw C is large enough in diameter to nearly fill the case B, when the locomotive is put in motion on the railroad-track. The screw-shaft *t* is connected, in any suitable manner, with said locomotive, to be rapidly revolved thereby, and, coming in contact with the snow drifted upon the track, at once carries the snow to the fan, which, by its rapid revolution, throws the snow right and left, distributing it at a distance from the track, and so as to be entirely clear from the same.

In case there is a double track, the case B may be closed by sliding or hinged doors on one side, and opposite the fan, so that the snow raised by the screw and delivered to the fan will all be discharged upon one side of the same; and when necessary to change the direction that the snow should be deposited, the belt or pulleys *r r* will be changed or crossed, the opening closed, and the door or slide on the opposite side opened, so that, as the revolution of the fan is changed, the snow will be discharged on the opposite side of the track.

I am aware that screws have been used for the purpose of elevating the snow from the track of a railroad. A screw alone I do not claim; but

What I do claim, and desire to secure by Letters Patent, is—

The combination of the screw C and fan D, when arranged to operate together in case B, substantially in the manner and for the purpose described.

CHAS. W. TIERNEY.

Witnesses:

THEO. PETERSON,  
G. S. LACKEY.