(No Model.)

# L. D. CRAIG.

## DEVICE FOR REMOVING SNOW AS IT FALLS UPON AND CONTIGUOUS TO RAILROAD TRACKS.

No. 261,434. Patented July 18, 1882.

*Fig. 1.*

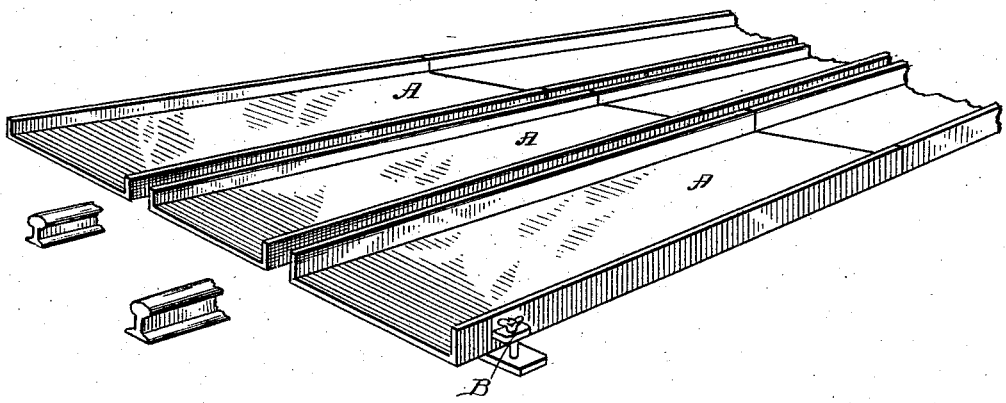
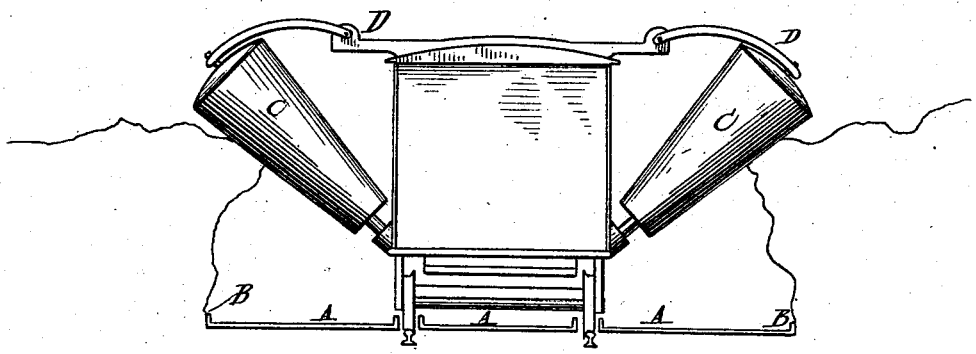



*Fig. 2.*




Witnesses
Walter D. Caldwell
S. V. Suy

Inventor
Lee D. Craig
by Ellis Spear
Atty

# UNITED STATES PATENT OFFICE.

LEE D. CRAIG, OF SAN FRANCISCO, CALIFORNIA.

## DEVICE FOR REMOVING SNOW AS IT FALLS UPON AND CONTIGUOUS TO RAILROAD-TRACKS.

SPECIFICATION forming part of Letters Patent No. 261,434, dated July 18, 1882.

Application filed April 8, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, LEE D. CRAIG, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Devices for Removing the Snow as it Falls upon and Contiguous to the Track on Railroads, of which the following is a specification.

My invention consists in the construction and arrangement of a series of shallow sluice-boxes between and contiguous to the rails of railroad-tracks, so that streams of water may be flowing through them, so as to carry off the snow as it falls, and leave the track clear or prevent the same from banking up and blocking up the road.

The nature of my invention will be understood by reference to the accompanying drawings and the letters marked thereon.

Figure 1 is a perspective view of the sluice-boxes arranged in connection with the railroad-track. Fig. 2 shows the front elevation of a box-car with rolls for pressing back the snow from the road-bed.

The following is the construction of the same: I construct the sluice-boxes A water-tight and flat on the bottom and as broad as may be conveniently employed between and on each side of the track. They may be made of wood, metal, or any other suitable material to secure the freest passage of water. I adjust these sluice-boxes A by means of the set-screws B, or by any other well-known equivalent device for leveling the same and regulating the flow of water. I lay these sluice-boxes A at a regular grade adapted to the grade and curve of the track, and so as to cause the water to flow evenly over the bottom of the same. I do not confine myself to this mode of placing the sluice-boxes in all instances, as under some circumstances it is necessary to elevate them to secure the required grade to secure the proper flow of the water. The middle sluice-box should always be placed low enough to be out of the way of the cow-catcher.

Rolls C, of strong durable material, may be attached to the side of a box-car, with bearings in a suitable jointed frame, D, to allow the same to move up and down freely and adjust themselves to the snow-bank at the sides of the car, as shown, loose bearings of sufficient depth for the lower pintles of the rolls to play freely in without being withdrawn therefrom being provided in or near the side sills of the car in any suitable manner.

The following is the operation of the same: Having arranged the sluice-boxes as shown in Fig. 1, a head of water is turned into them at the highest point to run the boxes as full as possible. The falling snow that drops into the sluices is dissolved or incorporated with the water and discharged when obstruction commences by snow, and fresh water is supplied to continue free flow. To prevent the freezing of the water it is let in when it is snowing, and when too cold to snow the water is shut off. The snow, as it falls or is drifted into the water, is dissolved and incorporated in the running stream; but when the water becomes too cold to dissolve the snow, and becomes too thick to run freely, then the stream is turned off and a stream of fresh water is turned in at that point. To effect this any number of suitable gates for discharge are arranged. When the embankment comes too close to the track to admit of the sluice-boxes at the side of the track, such boxes are elevated to a position to receive the falling snow. Where there are snow-sheds, then the sluices may be carried past such sheds in any suitable manner.

It will be seen that the water, when running around curves, will require to have the boxes adjusted to keep the stream even over the bottom of the sluice-boxes. Hence the set-screws B, or some equivalent device, are necessary.

I do not confine myself to any exact proportion in construction or mechanical device for carrying out the details of my invention. The rolls may vary in length to suit the height of the snow embankment liable to accumulate at the side of the road, and a wedge, lever, or cam may be employed to effect the same end in essentially the same way.

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

1. Combined with a railroad-track, continuous sluice-boxes placed contiguous to such track, substantially as and for the purpose set forth.

2. In combination with a railroad-track and with contiguous sluice-boxes, for the purpose described, an adjusting device for grading and leveling the boxes, as set forth.

3. In combination with a car having upper bearings in a jointed frame and loose lower bearings, the self-adjusting rolls C, as described.

LEE D. CRAIG. [L. S.]

Witnesses:
F. E. GAINES,
J. T. POMEROY.