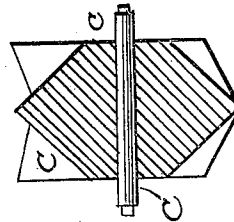
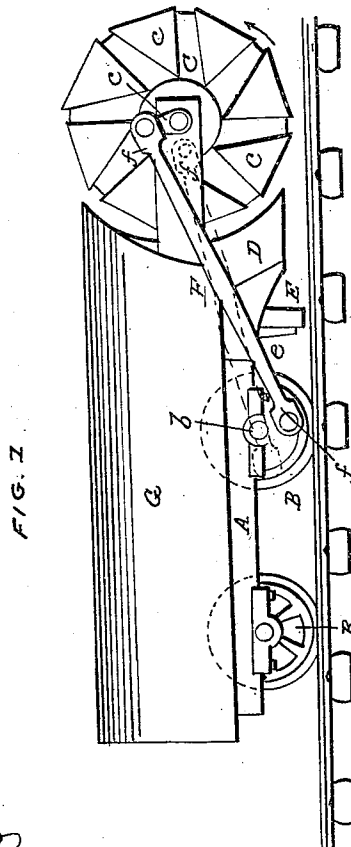
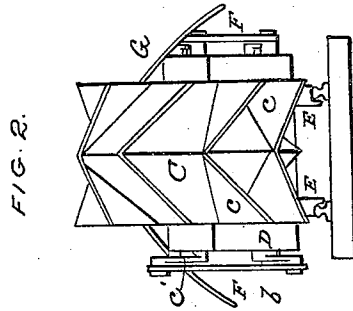


R. D. CHATTERTON.

Snow Clearer.

No. 81,343.

Patented Aug. 25, 1868.



WITNESSES.

J. J. Lunden Bell
Wm. H. Brewster

INVENTOR.

R. D. Chatterton
By Knapp & Co

United States Patent Office.

RICHARD DOVER CHATTERTON, OF BATH, ENGLAND.

Letters Patent No. 81,343, dated August 25, 1868.

IMPROVED SNOW-CLEARER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, RICHARD DOVER CHATTERTON, of Bath, in the county of Somerset, England, have invented certain new and useful Improvements in Snow-Clearers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which makes part of this specification, and in which—

Figure 1 represents a side elevation of my improved snow-clearer,

Figure 2 a front elevation of the same, and

Figure 3 a view, in section, of the bucket-wheel.

The object of my invention is to provide a suitable device for removing snow from railway-tracks and other roadways, to which end my improvements consist in mounting a wheel (which is made in the form of two frusta of cones, united at their bases, and provided with buckets, hereinafter described,) in bearings at the front of a car or carriage, constructed for the purpose, or the engine, and rotating the same by means of connecting-rods from the leading axle, and in a reverse direction thereto. An ordinary inclined snow-plow shield is placed in rear of this wheel, and behind the shield two spring-scrapers are arranged, which are pressed closely up to the top and inner surfaces of the rails, by which devices the track can be effectually cleared of snow, and with a comparatively small expenditure of power.

In the accompanying drawings, which show a convenient arrangement of parts for carrying out the object of my invention, A represents the frame of the car or carriage, and B its wheels. A bucket-wheel, C, is secured upon a shaft, C', which is mounted in bearings in the frame A, at the front of the machine. This wheel, which may be of wood or metal, as is found most desirable, is made in the form of two frusta of cones united at their bases, and its greatest diameter considerably exceeds that of the wheels of the carriage, for the purpose of increasing its circumferential velocity and power. Cranks *c'* are secured upon the ends of the shaft C', which are connected to cranks *b* upon the leading axle of the carriage by the connecting-rods F. The cranks are set at right angles to each other upon their respective shafts, and the connecting-rods are crossed, when on the centres, as shown in fig. 1, by which means the shaft C' and bucket-wheel C are caused to revolve in a contrary direction to the leading axle. The crank-pins work in slotted or elongated holes, *f*, in the connecting-rods, by which provision is made for the change in the working length of the rods in passing from one centre to the other. Buckets *c*, of boiler-iron, bent to an angle of forty-five degrees or thereabouts, are inserted in grooves in the wheel C, by which the snow is thrown to each side of the track, when the latter is rotated.

The circumferential velocity of the bucket-wheel being greater than that of the wheels of the carriage, owing to its greater diameter, the snow will be raised and discharged from the track faster than the train can be made to advance, and with comparatively small expenditure of power, as not more than three, or, perhaps, in heavy drifts, four of the buckets are full at the same time.

An inclined shield, D, is attached to the frame A, immediately in rear of the bucket-wheel, and behind the shield D are placed the scrapers E, which are pressed close up to the upper and inner surface of the rails by the spring *e*. The shield and scrapers serve to discharge any snow which the buckets *c* should fail to raise, and thus perfectly clear the track.

The carriage is covered by an inclined roof, G, which will deflect any snow that may be carried over by the buckets *c*.

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

The combination of the wheel C, shield D, and spring-scrapers E, arranged and operating substantially as described.

To the above specification of my improvement in snow-clearers, I have signed my hand, this 26th day of June, A. D. 1868.

RICHARD DOVER CHATTERTON.

Witnesses:

A. MACDONALD, N. P.

E. D. JAMES.