

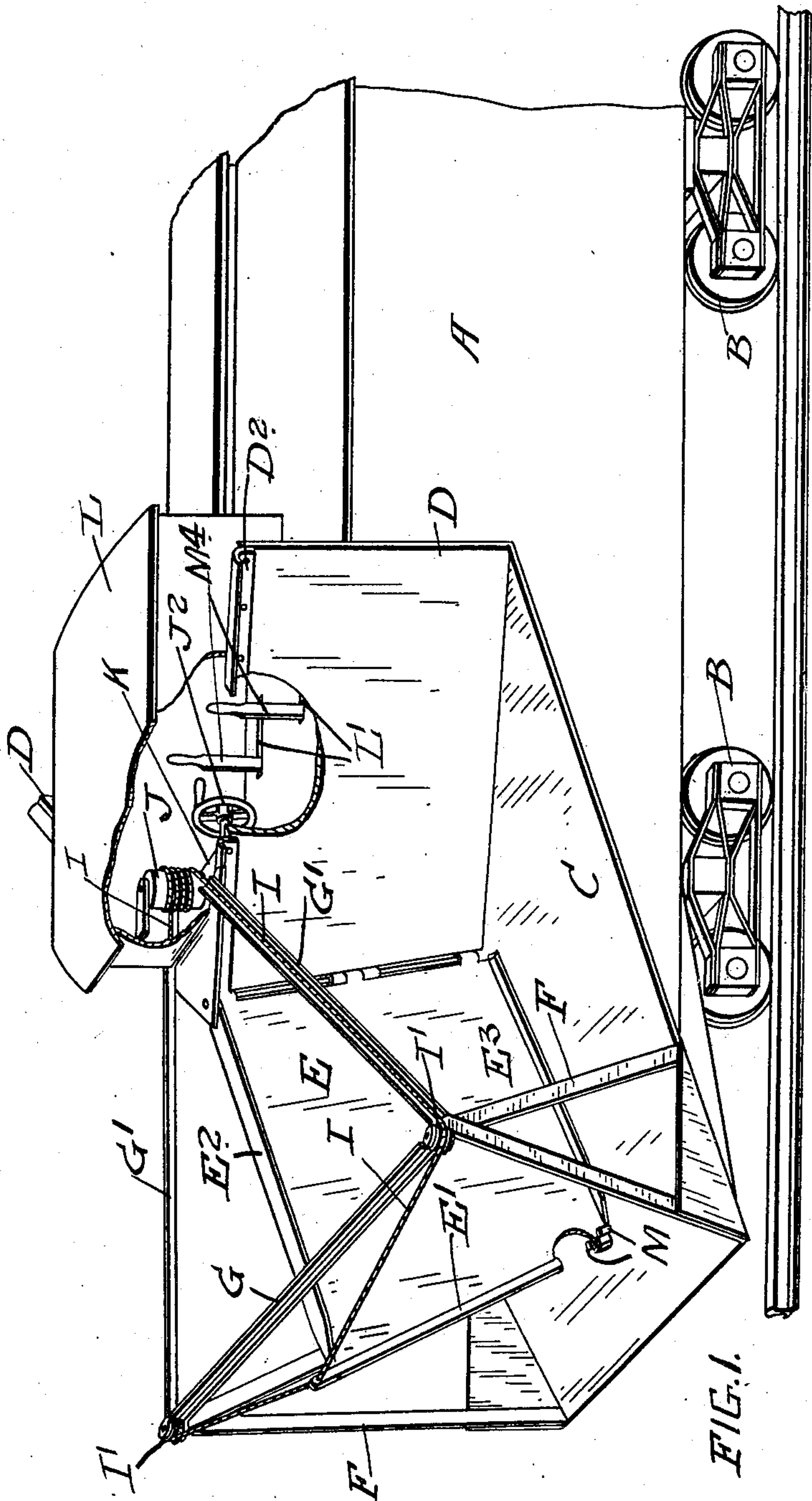
No. 889,211.

PATENTED JUNE 2, 1908.

A. DARLING.  
SNOW PLOW.

APPLICATION FILED MAY 25, 1907.

2 SHEETS—SHEET 1.



**WITNESSES**

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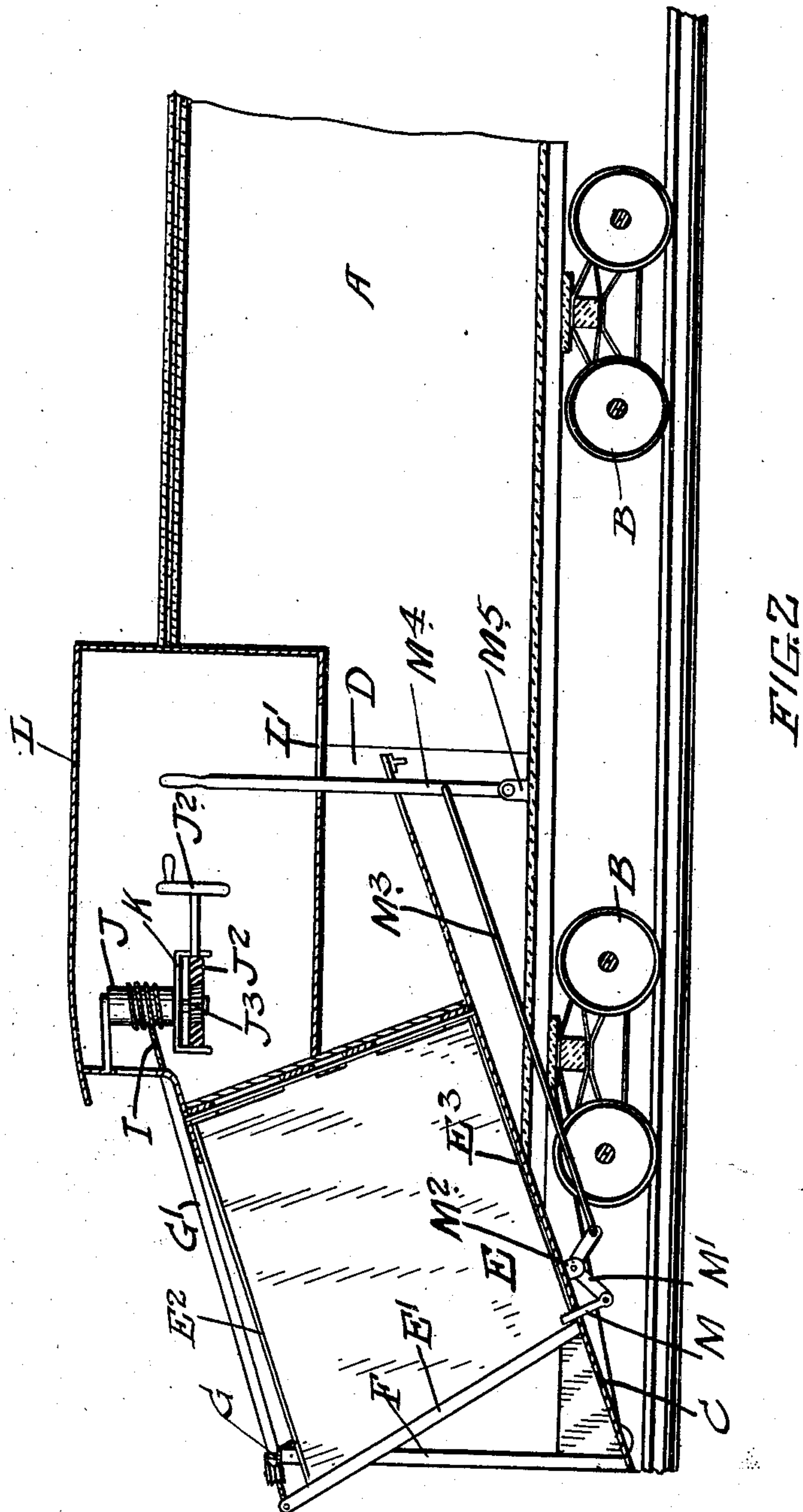
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2 SHEETS—SHEET 2.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

ALEXANDER DARLING, OF DUBLIN, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF TO EDWARD JOHN LITT, OF STRATFORD, CANADA.

## SNOW-PLOW.

No. 889,211.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed May 25, 1907. Serial No. 375,735.

*To all whom it may concern:*

Be it known that I, ALEXANDER DARLING, residing at Dublin, in the county of Perth, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Snow-Plows, of which the following is the specification.

My invention relates to improvements in snow plows, and the object of the invention is to devise a snow plow, which may be readily adjusted to throw the snow on either or both sides of the track as desired, and also insure of its being delivered below the level of the top of the plow, and thereby prevent any liability of the snow getting on to the top of the engine.

A further object is to provide a cupola in such a position that the man running the plow can readily see and control the operation thereof according to the nature of the drifts with which it has to contend.

To effect these objects I have constructed my plow with a front sloping scoop, a converging share located at the rear upper end of the scoop and having the planes of the two faces of the share at right angles to the plane of the scoop, a divider plate hinged at the converging front end of the share, uprights located at each side of the front of the scoop and connected at the top by a cross bar and by rearwardly extending bars to the plow at a point above the top of the converging share, cords or chains connected to the top of the divider plate and to a drum above the converging share, which is designed to be manipulated to adjust the divider plate, a cupola immediately above the converging share pins extending through the scoop on each side of the divider plate near the front edge, bell cranks extending under the scoop and connected at one end to the pins, and levers connected by rods to the bell cranks, the said levers extending into the cupola and the parts being otherwise constructed and arranged in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of a snow plow constructed in accordance with my invention. Fig. 2 is a longitudinal section.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the main body of the plow and B B the trucks, which carry it.

C is the front sloping scoop and D a converging share the planes of each side of

which are at right angles to the plane of the scoop. The shares are formed wider at the top than at the bottom to form slightly outwardly inclined sides, thereby leaving the bank of snow inclined to prevent it sliding on the track.

E is a divider plate, which is suitably hinged at the apex of the converging share.

F are upright frames substantially triangular in form and carrying at the top a cross bar G.

G' are bars, which extend rearwardly from the apex of the tri-angular side frames F to a plate D' immediately above the converging share D.

E' is a re-inforcing cutting edge strip at the front of the divider plate E.

E<sup>2</sup> is a double flange secured on the top of the divider plate E and designed, when the divider plate is thrown to one side, for directing the snow along the side of the divider plate and preventing it mounting over the top of the same.

E<sup>3</sup> is a double cutting flange extending to each side of the bottom edge of the divider plate. The plate E<sup>3</sup> is made a cutting plate in order, when the divider is moved laterally the cutting edge will clear the surface of the scoop from ice or snow.

I is a cord connected to the top of the strip E' and extending around the guiding pulleys I' at the top of the tri-angular frames F and backwardly along the bars G' around the drum J journaled in suitable bearings as indicated, and manipulated by means of a hand wheel J<sup>2</sup> provided with a worm, which co-acts with the worm wheel J<sup>3</sup> at the bottom of the shaft of the drum. The drum is supported on a suitable bridge K extending across the cupola L, which it is to be noted extends immediately behind the apex of the converging share and below the top of the same.

M are pins located one on each side of the front edge E' of the divider plate E. The pins M extend through the sloping scoop and are secured on one end of the bell cranks M', which are journaled in brackets M<sup>2</sup> at the bottom of the scoop and are connected by rods M<sup>3</sup> to the manipulating levers M<sup>4</sup>, which are fulcrumed in brackets M<sup>5</sup> on the bottom or floor of the snow plow body. The levers M<sup>4</sup> extend through slots L' in the floor of the cupola and thereby provide a means within reach of the man controlling the plow for manipulating the pins M.



When it is desired to throw the divider plate E to either side, so that the snow that is forced up the scoop may be carried to the opposite side of the plow it is simply necessary to manipulate one of the levers M<sup>4</sup>, so as to cause the pin M to recede when the hand wheel J' may be manipulated to adjust the divider plate, so that the front edge E' will lie close to one of the uprights of the triangular frame F.

It will be noticed that the front edge of the divider plate is at an incline to the top and bottom, that is to say is not at right angles to either the top or bottom, nor parallel to the back edge. The reason is so that the divider plate when adjusted laterally will have its edge lie close to the uprights of the triangular frame F and present no opening above the bottom in which the snow would be likely to choke, and prevent the working of the plow on that side, which is not actually in use when the divider plate is adjusted to throw the snow to the opposite side.

It will be seen that I provide an angle plate D<sup>2</sup> at the top of each side of the converging share and this is designed to prevent the snow from rising up above the top of the share.

By the use of a divider or divider plate, such as I describe, the man controlling the plow can with facility throw the divider towards one side and then towards the other or leave it central according to the set of the track ahead of him, that is shape and position of the drifts on the track. In case of a double track also it is essential that the divider plate be thrown to one side, so as to throw the snow on the opposite side to that in which the adjacent track is located.

What I claim as my invention is:

1. In a snow plow, the combination with the car body and the front sloping scoop, of a converging plow-share located at the upper rear end of the sloping scoop and having the plane of the faces of the share substantially at right angles to the plane of the scoop, a divider or divider plate hinged at the front converging edge of the plow-share and extending forwardly from the same, means for swinging the front of the divider from the center to either side, a cupola located immediately above the converging plowshare in which the manipulating devices are located, pins extending through the sloping scoop on

each side of the bottom front edge of the divider and means for raising and lowering said pins as and for the purpose specified.

2. In a snow plow, the combination with the car body and the front sloping scoop, of a converging plowshare located at the upper rear end of the sloping scoop and having the plane of the faces of the share substantially at right angles to the plane of the scoop, a divider or divider plate hinged at the front converging edge of the plow-share and extending forwardly from the same, means for swinging the front of the divider from the center to either side, a cupola located immediately above the converging plowshare in which the manipulating devices are located, pins extending through the sloping scoop on each side of the bottom front edge of the divider, the bell cranks supporting the pins, levers suitably fulcrumed and extending up in the cupola and the rods connecting the levers to the bell cranks as and for the purpose specified.

3. In a snow plow, the combination with the car body and the front sloping scoop, and a converging plowshare located at the upper rear end of the sloping scoop, of a divider plate hinged at the front end of the share, and a bottom cutting flange extending on each side of the bottom edge of the divider plate and lying on the surface of the scoop as and for the purpose specified.

4. In a snow plow, the combination with the car body and the front sloping scoop, and a converging plow-share located at the upper rear end of the sloping scoop, of a divider plate hinged at the front end of the share and a double top flange extending over each side of the divider plate as and for the purpose specified.

5. In a snow plow, the combination with the car body and the front sloping scoop, and a converging plow-share located at the upper rear end of the sloping scoop, of a divider plate hinged at the front end of the share, a double top flange extending over each side of the divider plate and an angle plate extending outwardly from the top edge of each side of the converging share as and for the purpose specified.

ALEXANDER DARLING.

Witnesses:

B. BOYD,

A. CRIGHTON.