R. W. BURNETT.

DUMP CAR.

APPLICATION FILED AUG. 30, 1912.

1,108,327. Patented Aug. 25, 1914.

Fig. 1.

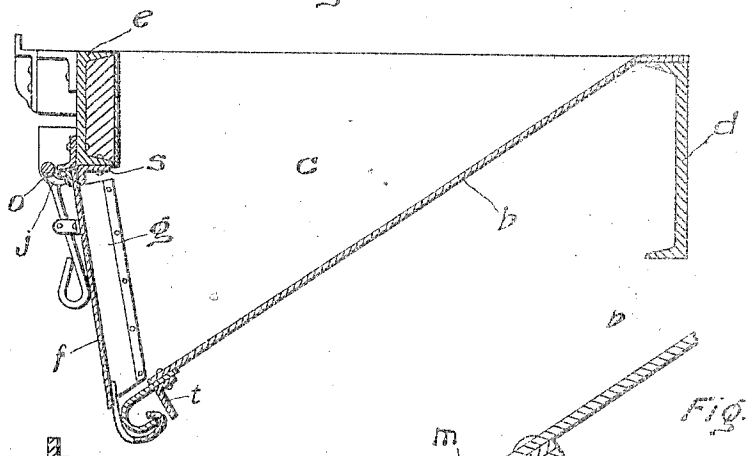


Fig. 2.

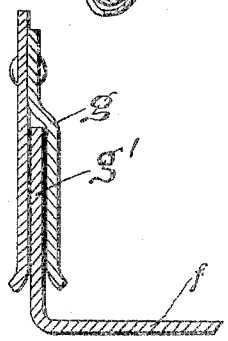


Fig. 3.

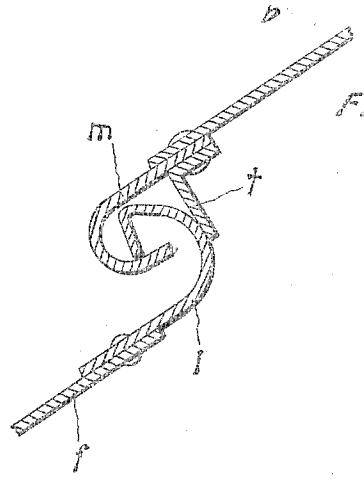
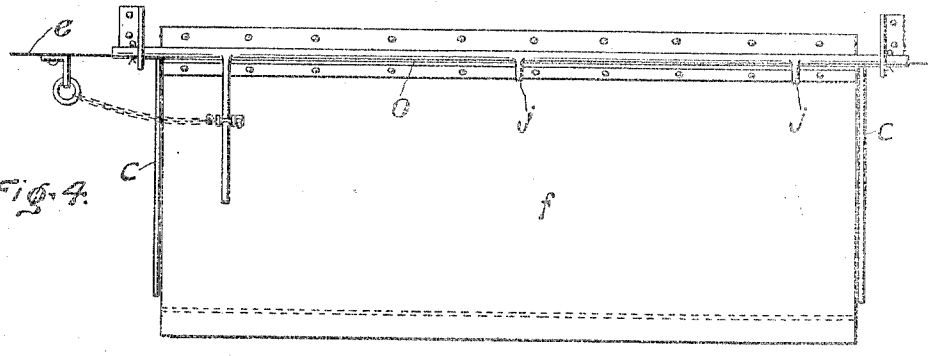


Fig. 4.



Witnesses.

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DUMP-CAR.

1,106,327. Specification of Letters Patent. Patented Aug. 25, 1914.

Application filed August 30, 1912. Serial No. 717,927.

To all whom it may concern:

Be it known that I, RICHARD WEBB BURNETT, a citizen of the United States of America, residing at the city of Montreal, Province of Quebec, Dominion of Canada, have invented certain new and useful Improvements in Dump-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to dump cars of the type disclosed in my United States patent application Serial No. 655253, filed Oct. 17th, 1911, which resulted in Patent No. 1,081,430, dated December 16, 1913.

My invention consists in a hinge for hopper doors adapted to close to positions in approximately vertical planes, and comprises a pair of plates with intermeshing bent edges and with their edges engaging in such a manner that when the door is closed the bearing faces will be brought into engagement extending throughout the full length of the door,—the ends of the door having lateral flanges adapted to engage in pockets at the edges of the hopper end walls, the free edge of the door engaging a door jamb, and clamping devices acting upon such free edge of the door and retaining it rigidly in closed position. For full comprehension, however, of my invention reference must be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate the same parts, and wherein:

Figure 1 is a vertical sectional view of a dump car hopper taken on a line extending transversely relatively to the car; Fig. 2 is a sectional view through one end flange of the door and the pocket in the frame for receiving it; Fig. 3 is a similar view to Fig. 1 particularly illustrating the engaging edges of the hinge members of the door and door-frame; Fig. 4 is a front elevation of the door of the car with my invention applied thereto.

The hopper floor is indicated at *b* and the ends at *c*, the floor extending from the center sill *d* to within close proximity of the vertical plane of the side sill *e*, thus placing the discharge opening approximately perpendicularly. The dump door *f* is hinged to the lower edge of the floor member and engages pockets in the side edge of the ends and a flange *s* upon the side sill, and it is clamped in its shut position, after having been manually closed, by a rock-shaft *o* carrying a series of dogs *j*. This type of door forms an extension of the floor of the hopper and throws the lading a considerable distance laterally, which is an advantage in that it is thrown clear of the rails. With doors of this type and applied in the manner described to hoppers through which granular commodities are discharged, while the free edges are effectively closed against leakage by the clamping appliance described the hinged edge has been heretofore a source of trouble owing to leakagt due to wear, imperfect fitting, and, in some cases, inherent weakness unless constructed from extra heavy materials. In order to overcome these defects the hinge comprises a pair of hinged plates each equal in length to the hinged edge of the door and bent to spiral form, the spiral of one hinge member intermeshing with the spiral of the other and the convolutions being of sufficient length to present bearing surfaces throughout the length of the door in whatever position the latter may be, the preferred spiral being of convolute curvature or substantially so. The members of the hinge are arranged with that upon the hopper plate turned downwardly and the member upon the door turned upwardly for the purpose of preventing the lading being discharged from lodging therein. The pockets in the side edges of the hopper ends are formed by riveting offset plates to the hopper ends, and the ends of the door are flanged as at g^1 to enter these pockets.

An angle iron *t* is attached to the underside of the hopper floor contiguous to the hinge member *m*, its purpose being to prevent upward displacement of the door when open. This angle-iron is essential in hinge construction the members of which are not interlocking in all positions.

I do not herein claim the specific hinge construction as such forms the subject matter of a separate application.

What I claim is as follows;—

1. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly, and the other to the

door and turned upwardly, and each extending throughout the full length of the hinged edge of the door.

2. In a hopper for dump cars,—end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor, and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates bent to spiral form, one secured to the hopper floor and turned downwardly, and the other to the door and turned upwardly, and each extending throughout the full length of the hinged edge of the door.

3. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and the other to the door and each extending throughout the full length of the hinged edge of the door and means preventing relative lateral displacement of the said plates.

4. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly and the other to the door and turned upwardly and each extending throughout the full length of the hinged edge of the door and a stop upon one of the plates for preventing relative lateral displacement thereof.

5. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly and the other to the door and turned upwardly and each extending throughout the full length of the hinged edge of the door and an angle-iron upon one of the plates for preventing relative lateral displacement thereof.

In testimony whereof, I have signed my name to this specification in the presence of two witnesses.

Montreal August 21, 1912.

RICHARD WEBB BURNETT.

Witnesses:

GORDON G. COOKE,

JOHN P. MOYNAUGH.