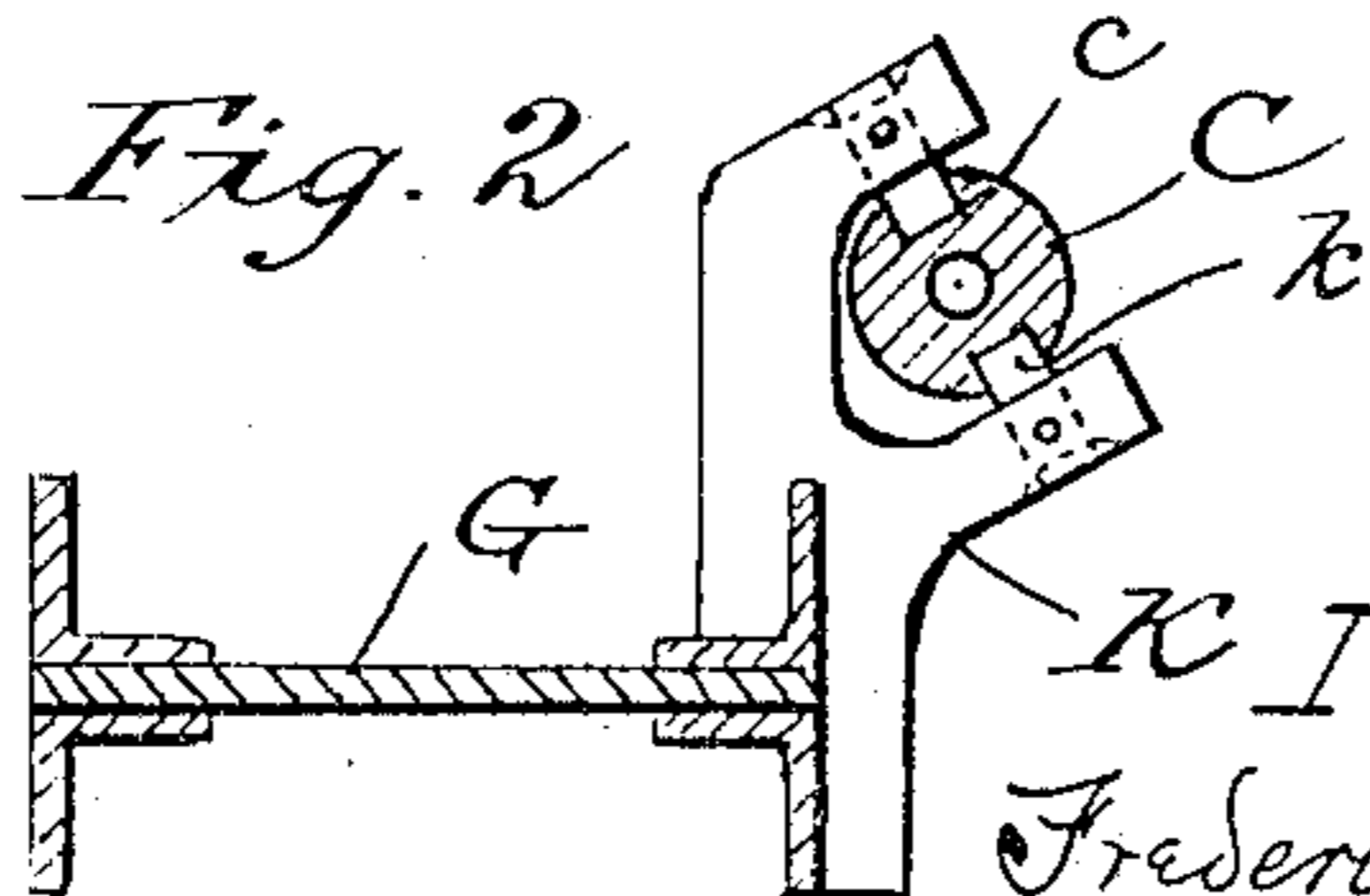
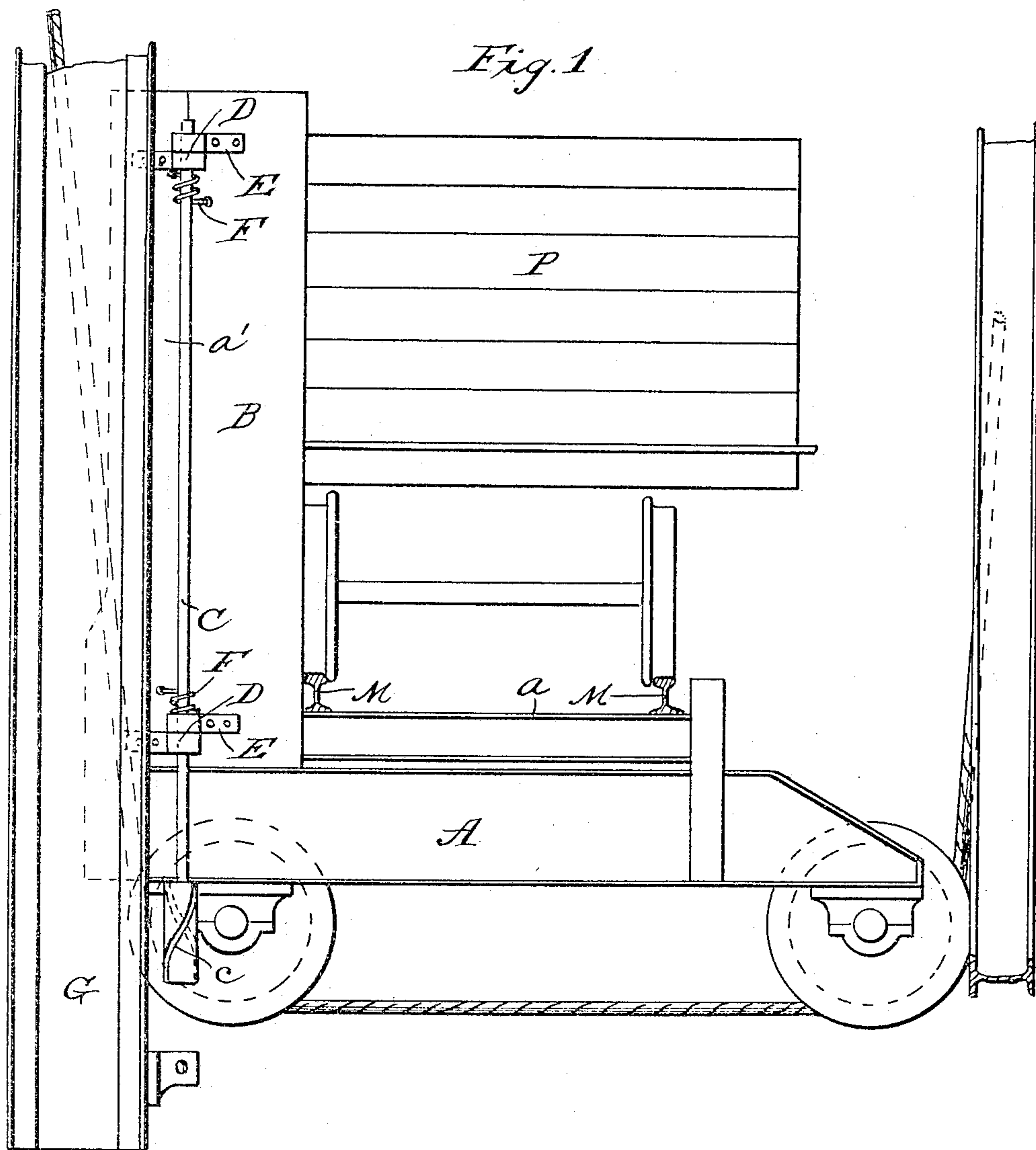


PATENTED JULY 26, 1904.

APPLIOATION FILED DEC. 21, 1903.

2 SHEETS—SHEET 1.



Witnesses:

A. L. Lord,
J. B. Hull.

K Inventor:
Frederick W. Lovell,
By Thurston & Bates,
Attorneys.

No. 766,108.

PATENTED JULY 26, 1904.

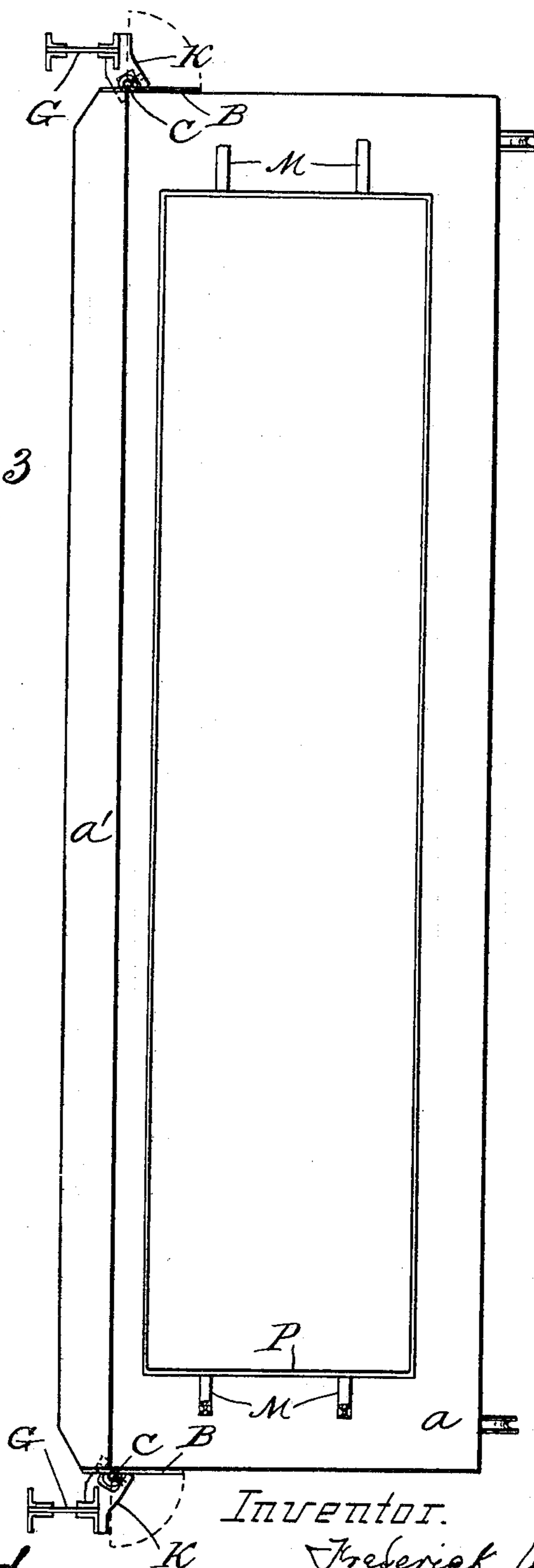
F. W. LOVELL.
CAR UNLOADER.

APPLICATION FILED DEC. 21, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

FREDERICK W. LOVELL, OF CLEVELAND, OHIO, ASSIGNOR TO JOHN
McMYLER, OF CLEVELAND, OHIO.

CAR-UNLOADER.

SPECIFICATION forming part of Letters Patent No. 766,108, dated July 26, 1904.

Application filed December 21, 1903. Serial No. 185,946. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. LOVELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Car-Unloaders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 This invention is an improvement upon that kind of car-unloaders which employ a cradle on which the loaded car is run, which cradle, with the car upon it, is lifted and turned over, thereby dumping the contents
15 of the car into a convenient chute. Such cradles include, essentially, a horizontal platform, on which is laid the tracks on which the car is run, and a substantially vertical front side extending the entire length of the cradle,
20 the front side being that which is held down as the cradle turns over. One purpose for which this side is provided is to catch that part of the load which falls from the car when the cradle is being turned over. When the
25 cradle has been tipped sufficiently, the part of the load which has fallen into the cradle slides down this side into the chute, said side being then, in effect, part of the chute. Heretofore a considerable quantity of the coal
30 which falls from the car into the cradle as the latter is being tipped over has fallen off the ends of the cradle, which ends must be unobstructed as the car enters and leaves the cradle. These falling bodies, which usually
35 are pieces of coal, are dangerous to persons standing near the device, and, moreover, this action deposits a considerable part of the load at a point where it is not wanted.

40 The object of the present invention is to prevent the coal or other material which falls from the car into the cradle from falling out of the end of the cradle.

45 The invention consists in a pair of doors hinged on a vertical axis to the ends of the front side of the cradle, combined with means whereby when the cradle reaches its lowest position these doors are automatically opened, but when the cradle begins its upward movement and before it begins to tip over the

doors close automatically, forming thereby 50 sides or guards at the ends of that vertical front side.

The invention also consists in the more specific combinations of parts hereinafter described, and set forth definitely in the claims. 55

In the drawings, Figure 1 is an end view of the cradle with a car in it and some of the operating mechanism and the adjacent corner-posts of the tower which supports the lifting-cables and other parts of the apparatus. Fig. 60 2 is a sectional plan view of one of the rear corner-posts, showing the bracket secured thereto by which the guard-gates on the cradle are opened. Fig. 3 is a plan view of the parts which are shown in Fig. 1. It has not
65 been thought necessary to show the means for lifting and turning the cradle or for holding the car upon the tracks, such mechanism being well known in a great variety of specific forms and no part of the present inven- 70 tion.

Referring to the parts by letters, A represents the cradle, which is provided with a horizontal platform *a*, whereon the tracks M are laid for the car P to run on, and a verti- 75 cal front side *a'*, rising from the front edge of said horizontal platform and extending the entire length thereof.

B represents the guard-doors, which are hinged to the ends of this vertical front side 80 and are substantially as high as said side and are wide enough to lap considerably past the adjacent end of the car. A pair of hinge-brackets D D are secured to this vertical side *a'*, and the other hinge-brackets E are secured 85 to the door and are likewise secured to the long pintle C of the door-hinge. Rat-trap springs F surround this pintle and exert their force against the side *a'* and the door in a direction tending to close the door—that is, to 90 turn it so that it will stand at right angles to said side *a'*. On the lower end of this pintle, which projects below the platform of the cradle, is a spiral groove *c* or rib, as preferred, the drawings showing the groove. 95 Secured to the adjacent corner-post G of the tower is a bracket-plate K, having a lug *k*, adapted to engage with this spiral on the

hinged pintle. In the specific construction shown this lug enters the spiral groove.

When the cradle is lowered, this spiral comes into engagement with said lug, and as the 5 cradle is still further lowered to its "rest" position this lug engaging with said spiral turns the pintle, and thereby opens the door, so as to permit the car to pass from the cradle or onto the same. The described construction 10 is found at both ends of the cradle.

I claim—

1. In a car-unloader, the combination of a tilting cradle having a horizontal platform, on which are laid the tracks for the car to run 15 on, and an upright front side extending from end to end thereof, with doors hinged to the ends of said side, springs for closing said doors, and means, which operate when the cradle is nearing its lowest position, for opening said doors against the force of said springs, 20 substantially as and for the purpose specified.

2. In a car-unloader, the combination of a tilting cradle having a horizontal platform and a front side which extends from end to end 25 thereof, with doors hinged to the ends of said front sides and secured to their hinge-pintles, which pintles extend downward below the cradle, spirals, and lugs for engaging therewith, one of said parts being fixed, and the other 30 being formed upon the downwardly-projecting part of each hinge-pintle, and springs for

closing said doors, substantially as and for the purpose specified.

3. The combination of a tilting cradle having a horizontal platform and a front side 35 which extends from end to end thereof, with doors hinged to said front side, each of said doors being secured to the hinge-pintle which extends downward below the cradle and is provided on said downward extension with a 40 spiral, and fixed brackets engaging said spirals to open the doors, and springs for closing said doors, substantially as and for the purpose specified.

4. In a car-unloader, the combination of a 45 tilting cradle having a horizontal platform and a front side rising from the front edge of the platform and extending from end to end thereof, doors hinged to the ends of said front side and secured to the hinged pintles, each of 50 which pintles extends below the platform and is provided with a spiral groove, fixed brackets having lugs which enter said grooves, and springs for closing said doors, substantially as and for the purpose specified. 55

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FREDERICK W. LOVELL.

Witnesses:

E. L. THURSTON,

B. W. BROCKETT.