

(No Model.)

2 Sheets—Sheet 1.

W. L. DAVIS.

DUMPING CAR.

No. 369,102.

Patented Aug. 30, 1887.

Fig. 1.

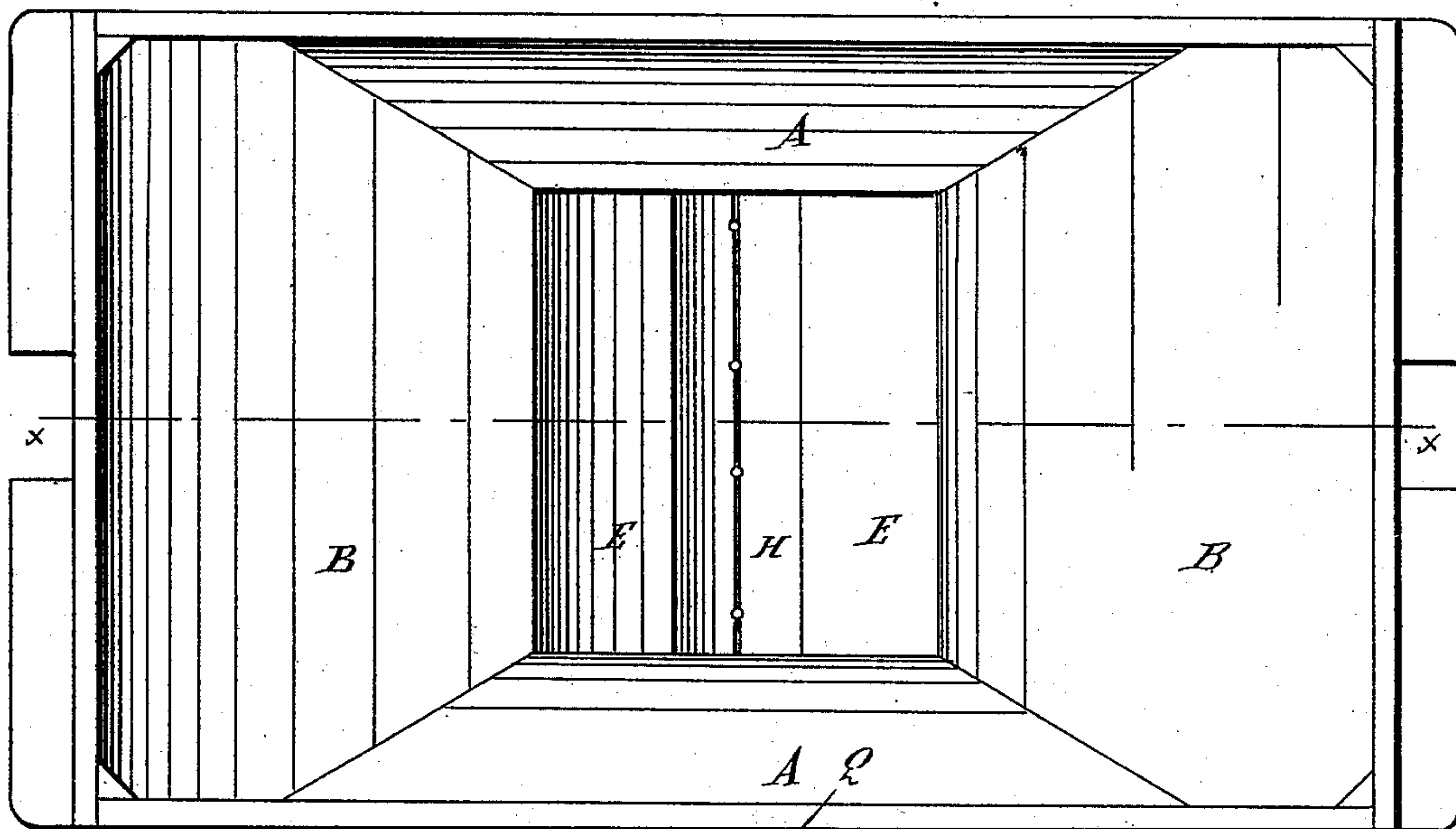
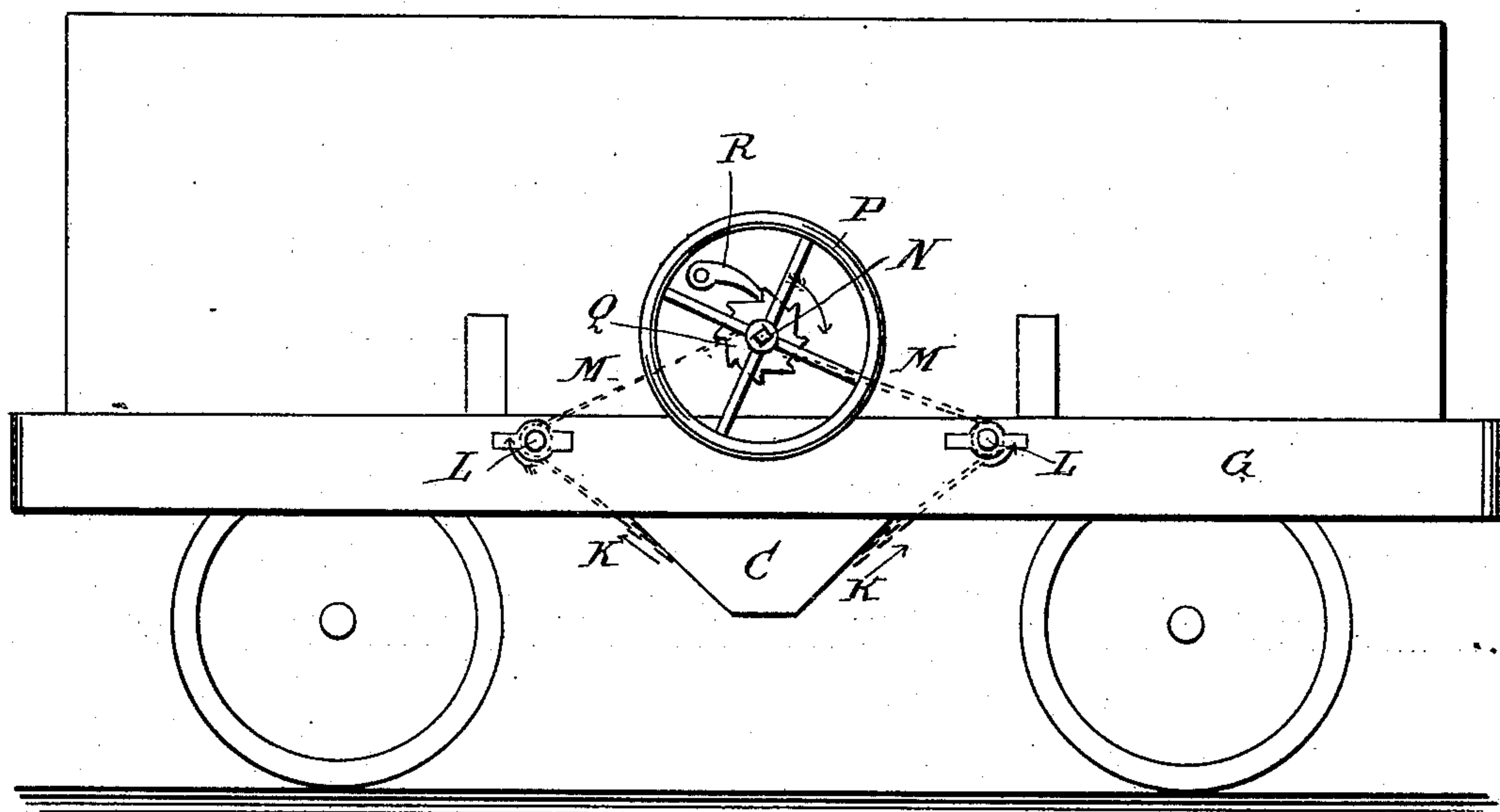


Fig. 2.



WITNESSES:

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INVENTOR:

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Fig. 3.

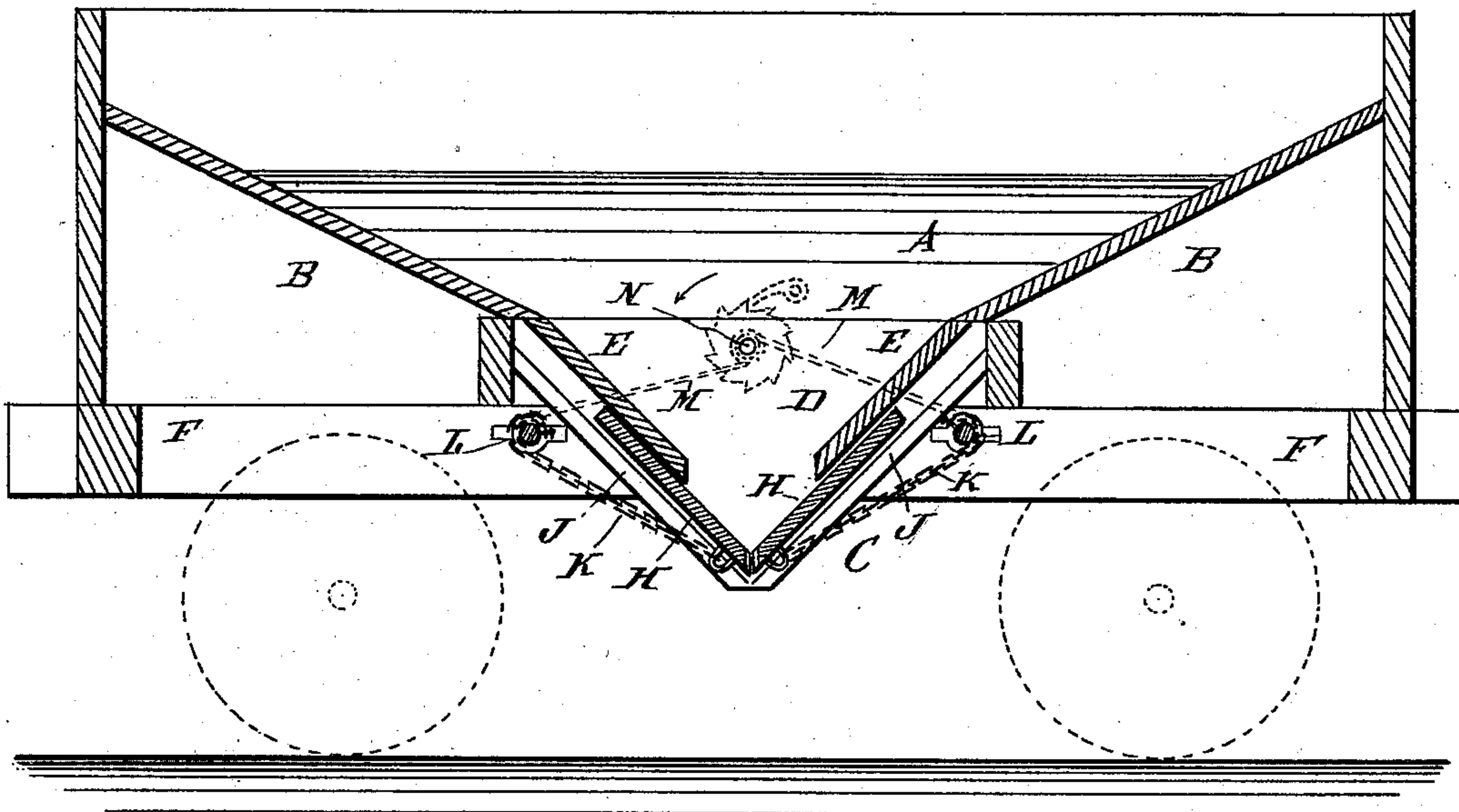
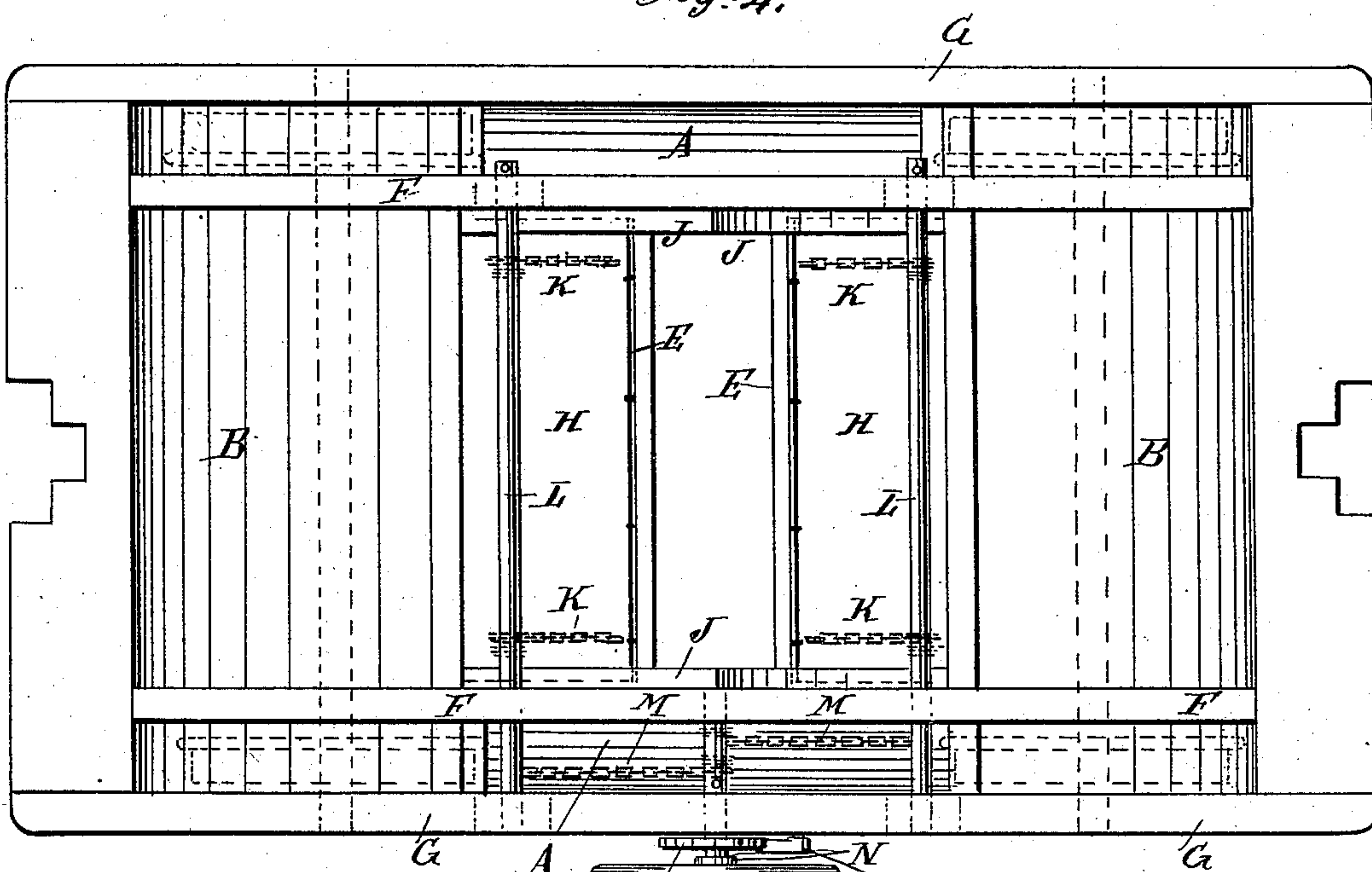


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM L. DAVIS, OF SOUTH AMBOY, NEW JERSEY.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 369,102, dated August 30, 1887.

Application filed January 21, 1887. Serial No. 225,020. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. DAVIS, of South Amboy, in the county of Middlesex and State of New Jersey, have invented a new and Improved Dumping-Car, of which the following is a full, clear, and exact description.

My invention relates to that class of dumping-cars ordinarily employed for transporting coal, and which discharge their load through an opening in the bottom of the car-body closed by suitably-operating doors.

The object of the invention is to provide doors for regulating the discharge-opening and mechanism for operating the doors, so constructed and arranged that the same can be easily opened to any desired extent and will be held in such adjustment, can be quickly and securely closed to cut off the discharge, and are not liable to become disarranged, and that the operating mechanism will be wholly on the exterior of the load-bin, so as not to interfere with the free passage of coal, &c., through the discharge-opening.

The invention consists in the construction, combination, and arrangement of parts, as hereinafter accurately described, and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved dumping-car, the discharge-opening being closed. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal sectional view on the line *xx* of Fig. 1. Fig. 4 is an inverted plan view of the car-body, showing the discharge-regulating doors opened.

The car-body is adapted to be supported on trucks of the usual description, and the lower parts of the sides A and ends B of the load-bin converge from the body-walls toward the discharge-chute C, which forms the bottom of the bin.

The sides D of the chute C are vertical, and are supported by bottom beams, F, running lengthwise of the car-body a short distance within the bottom side beams, G, of the same. The end walls, E, of the chute converge, the space between the lower ends of the same forming the discharge-opening. The dis-

charge-opening is regulated by weighted doors H, sliding on the under side of the inclined walls E of the chute, parallel with the same, in converging guides J, attached to the opposite vertical sides D of the chute and to the inner bottom beams, F, the sides D of the chute extending below the ends E of the same to carry the doors and guides to a meeting and close the sides of the chute automatically. Chains K are attached to either end of each sliding door H at the lower edge of the same, and are connected at their upper ends to transverse shafts L, journaled in suitable bearings in the inner bottom beams, F.

The ends of the shafts L at one side of the car-body project through the corresponding inner beam, F, and are also journaled in bearings in the outer beam, G.

Chains M, attached to the shafts L between the beams F G, are wrapped around the same in opposite directions, and are connected to a short shaft, N, journaled in the beams F and G.

The short shaft N projects through the outer beam, G, and carries a hand-wheel, P, by turning which the chains M are wound on the shaft N, revolving the shafts L in opposite directions, and, through the medium of the chains K, retracting the doors H.

For holding the doors open I provide a ratchet-wheel, Q, on the adjusting-shaft N, which wheel is engaged by a dog, R, pivoted to the car-body. On releasing the dog R the doors descend by gravity to their meeting point and close the discharge-opening, the weight of the contained load offering no obstruction to the closing, as is the case with the usual drop-doors.

The door-operating mechanism being entirely without the load-bin, the coal, &c., has a free passage in its discharge, and when frozen does not hinder the working of the doors.

In some cases I may use friction-rollers journaled to the sliding doors or to their guides, to render the operation of the doors more easy and convenient.

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

1. In a dumping-car, the combination, with the load-bin having a bottom discharge-opening, of a self-closing regulating-door therefor

mounted to slide in an inclined plane, and means for raising and opening the said door, substantially as shown and described.

2. In a dumping-car, the combination, with the load-bin having a bottom discharge-opening, of regulating-doors therefor mounted to slide in downwardly-converging planes, substantially as shown and described.

3. In a dumping-car, the combination, with the load-bin having a bottom discharge-opening, of a pair of regulating-doors therefor arranged below the bin transversely of the car and movable lengthwise thereof, an adjusting shaft or shafts journaled transversely of the car, and chains connecting said shaft or shafts with the doors, substantially as shown and described.

4. In a dumping-car, the combination, with the doors for regulating the discharge-opening, of chains connected with each door, shafts on which the chains are wound, and means for revolving the shafts simultaneously, said door-operating mechanism being located outside of the load-bin, substantially as shown and described.

5. In a dumping-car, the combination, with the discharge-regulating doors, of chains connected with the same, horizontal shafts below

the load-bin, on which shafts the chains are wound, other chains, and an adjusting-shaft for revolving the horizontal shafts thereby, substantially as shown and described.

6. In a dumping-car, the combination, with the body having a load-bin, one wall of which is separated from the wall of the car-body, of a door or doors for regulating the discharge-opening in the load-bin, chains connected with the doors, winding shafts journaled transversely below the load-bin, other chains, and an adjusting-shaft journaled transversely of the space between the bin and body-walls, the latter chains being wound on the adjusting-shaft between the bin and body-walls, substantially as shown and described.

7. In a dumping-car, the combination, with the sliding discharge-regulating doors descending by gravity, of an adjusting-shaft therefor, and mean connections, a hand-wheel on the adjusting-shaft, and ratchet-and-pawl mechanism for holding the adjusting-shaft in position, substantially as shown and described.

WILLIAM L. DAVIS.

Witnesses:

ROBT. D. BENDER,

NATHANIEL DAYTON.