R. DAVENPORT.

DUMPING CAR.

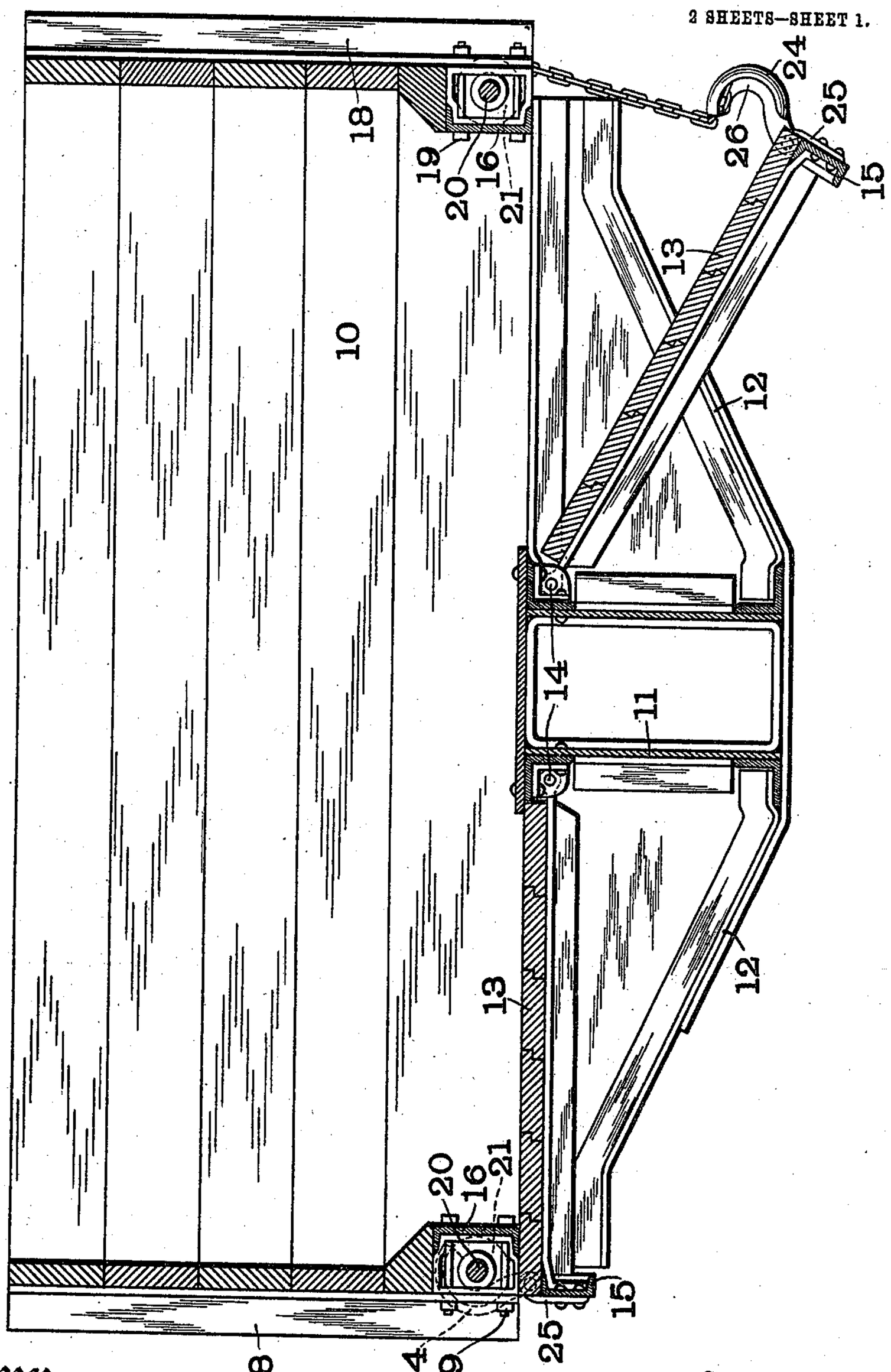
APPLICATION FILED APR. 16, 1909.

963,282.

Patented July 5, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

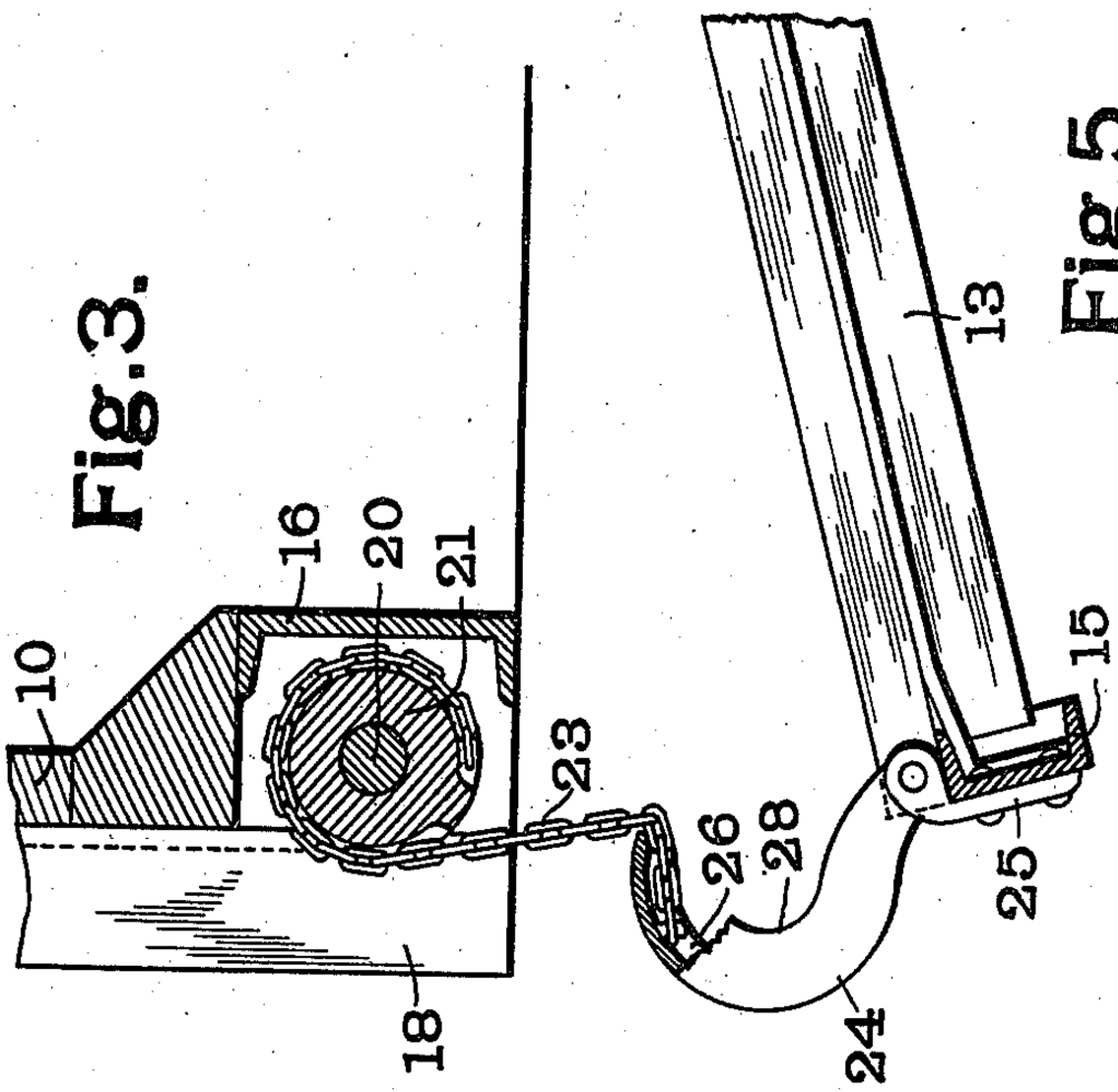


Fig. 5.

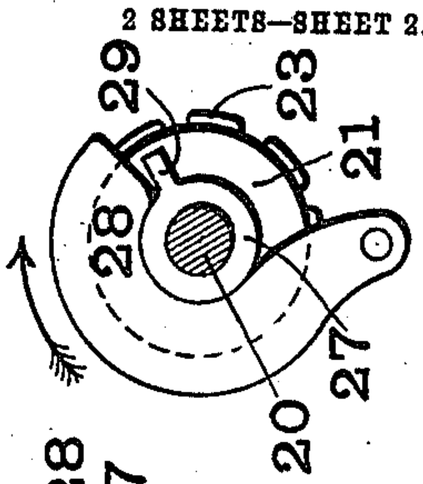


Fig. 4.

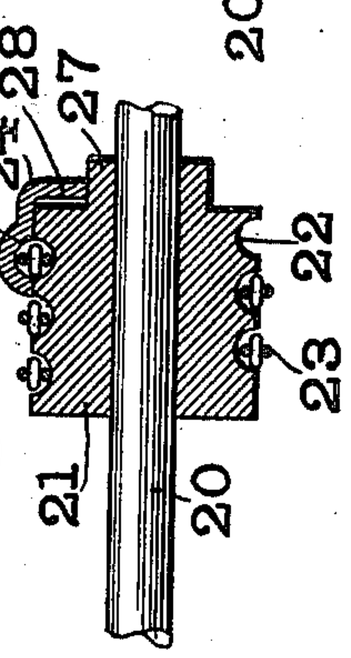
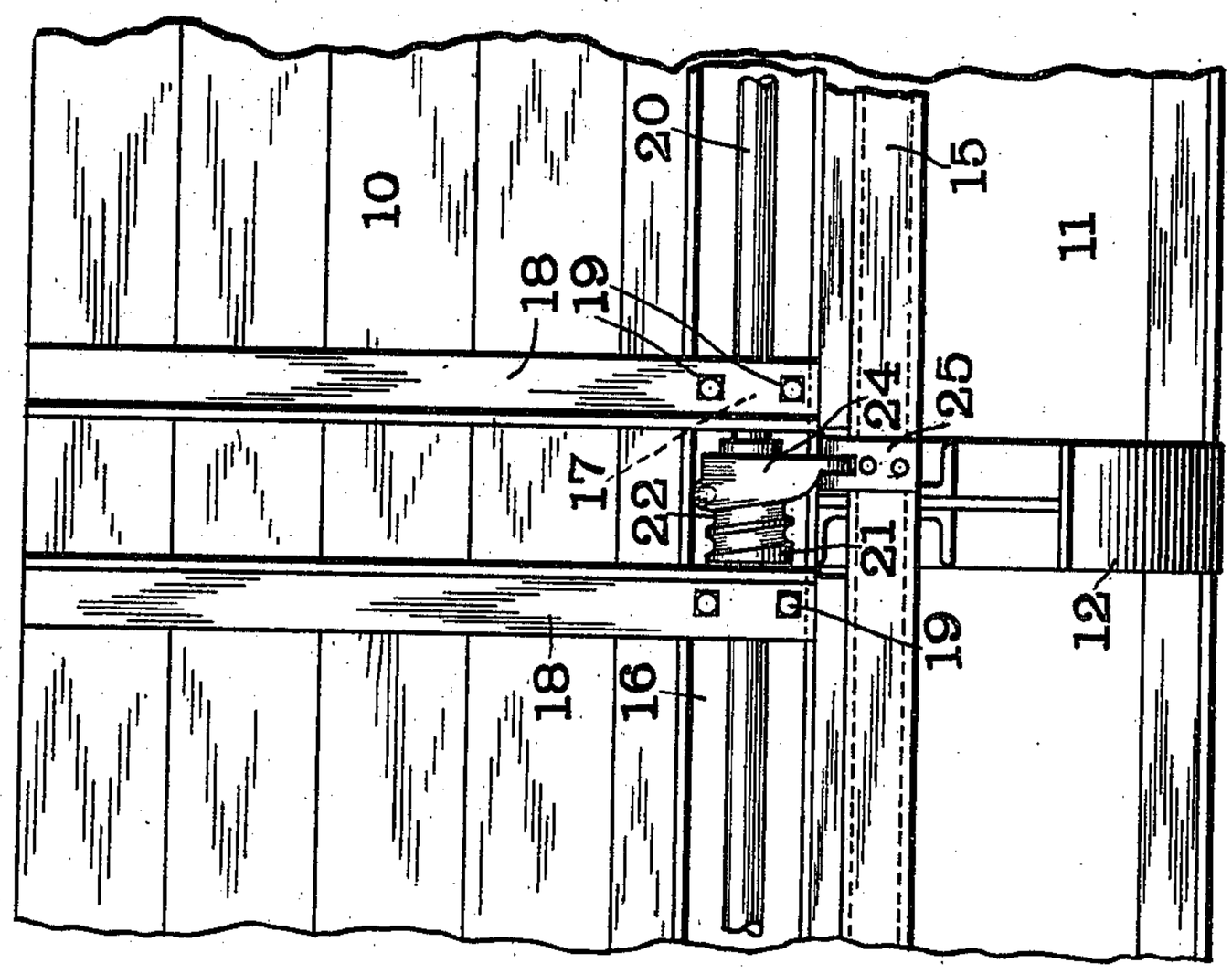


Fig. 2.



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UNITED STATES PATENT OFFICE.

RALPH DAVENPORT, OF CHICAGO, ILLINOIS.

DUMPING-CAR.

963,282. Specification of Letters Patent. Patented July 5, 1910.

Application filed April 16, 1909. Serial No. 490,287.

To all whom it may concern:

Be it known that I, RALPH DAVENPORT, a citizen of the United States, residing at the city of Chicago, State of Illinois, have invented a certain new and useful Dumping-Car, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a dumping car, and more particularly to that class of dumping cars known as "drop-bottom" dumping cars.

The object of my invention is to provide a car of the class referred to in which the operating mechanism will be as simple as possible and at the same time strong and durable.

Another object of my invention is to provide operating mechanism such that the door will be locked in its closed position by its own weight irrespective of the locking of the operating mechanism.

In the accompanying drawings, which illustrate one form of car made in accordance with my invention, Figure 1 is a vertical cross-section; Fig. 2 is a side elevation of a portion of the car; Fig. 3 is an enlarged sectional view through one side of the car showing the door partially open and Figs. 4 and 5 are enlarged views showing details of construction.

Like marks of reference refer to similar parts in the several views of the drawings.

10 represents the body of the car.

11 is the longitudinal portion and 12 the cross members of the car under-frame.

13 are the doors which form the drop-bottom of the car. These doors 13 are pivoted to the longitudinal portion 11 of the under-frame at 14, as shown in Fig. 1. The doors 13 project beyond the cross members 12 of the under-frame and the ends of the doors at each side are connected by means of a carrying member 15.

Arranged under the sides of the car body 10 are journal irons 16. These journal irons 16 receive retaining members 17 to which are bolted the side stakes 18 of the car by means of bolts 19. These retaining members 17 also serve as bearings for the operating shafts 20, one of which is arranged at each side of the car, as best shown in Fig. 1.

Arranged between each pair of side stakes 18 is a drum 21 which is rigidly secured to the operating shaft 20. Each of the drums 21 is provided with a spiral groove 22 which receives the chain 23, one end of which is secured to the drum and the other to a hook-shaped member 24 which is pivoted by means of a strap 25 to the carrying member 15 hereinbefore described. The chain 23 is attached to the under face of the hook 24 and the said hook is formed with a groove 26 so that the chain 23 lies in the two grooves, as shown at Fig. 4, when the hook is in position to engage the drum. The drum 21 is provided with a hub 27 and the hook 24 is provided with a flange 28 adapted to take over the hub 27, as shown best in Fig. 5, so as to lock the door in its closed position by means of gravity. It will thus be evident that the door will be retained in its closed position against the weight on it without regard to whether or not the operating shaft 20 is locked. In order to release the hook 24 from the drum 21 the hub 27 is provided with a projection or lug 29 adapted to strike against the flange 28 when the shaft 20 is rotated in a direction opposite to that indicated by the arrow in Fig. 5 and thus disengage the hook from the drum.

The operation of my car will be evident from the above description. When the hooks 24 are in the position shown in Fig. 5 of the drawings, the door will be firmly locked in position without regard to whether or not the shaft 20 is locked. When it is desired to open the doors to discharge the contents of the car, the shafts 20 are rotated by any suitable mechanism which is not shown as it forms no part of my invention. The lugs 29 will thus release the hooks 24 from the drums 21 so that the doors will be free to fall down into the position shown on the right hand side of Fig. 1. To restore the doors to their normal position it is only necessary to rotate the shafts in the direction shown by the arrow in Fig. 5 until the hook 24 engages with the drum 21 so as to lock the door.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a dumping car, the combination with a car body provided with cross beams, of a door in the floor of said car extending beyond the cross beams, an operating shaft, a hook secured to said door at a point beyond the end of said cross beams, said hook being adapted to engage with said shaft to

lock the door, and a flexible connection between said shaft and hook.

2. In a dumping car, the combination with a car body, of a plurality of doors therefor pivoted at their inner edges, said doors extending beyond the cross members of the car under-frame, a carrying member continuous throughout the length of a plurality of doors and secured thereto beyond said cross-members, and operating means for said carrying member.

3. In a dumping car, the combination with a car body provided with cross beams, of a plurality of doors in the floor of said car extending beyond the cross beams, a carrying member continuous throughout the length of a plurality of doors and secured thereto beyond said cross beams, a hook secured to said carrying member at a point between the edges of two adjacent doors, an operating shaft with which said hook is adapted to engage, and a flexible connection between said shaft and hook.

4. In a dumping car, the combination with a car body provided with cross beams, of a plurality of doors in the floor of said car extending beyond the cross beams, a carrying member continuous throughout the length of a plurality of doors and secured thereto beyond said cross beams, a hook secured to said carrying member opposite the end of one of said cross beams, an operating shaft with which said hook is adapted to engage, and a flexible connection between said shaft and hook.

In testimony whereof I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

RALPH DAVENPORT. [L. S.]

Witnesses:

G. H. BLACKMAN,

A. F. GEORGE.