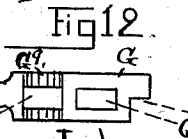
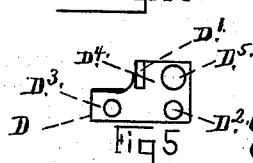
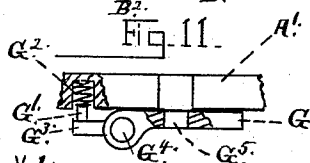
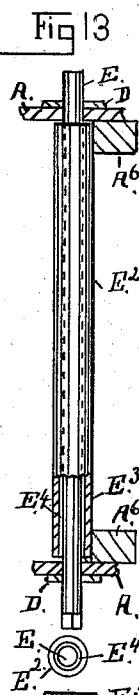
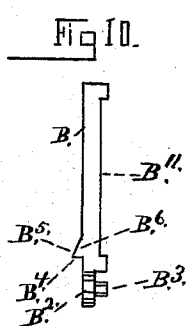
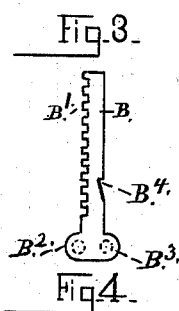
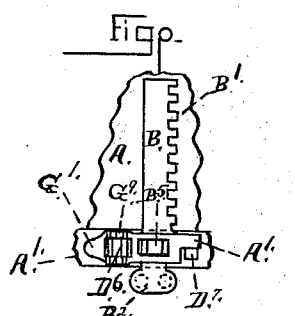
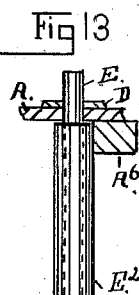
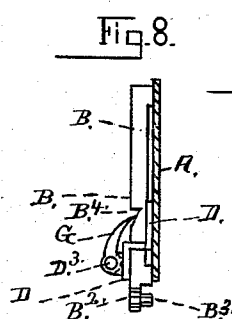
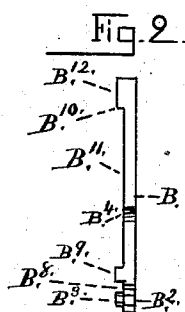
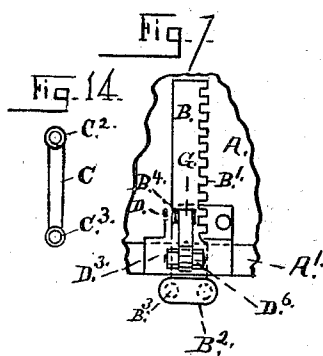
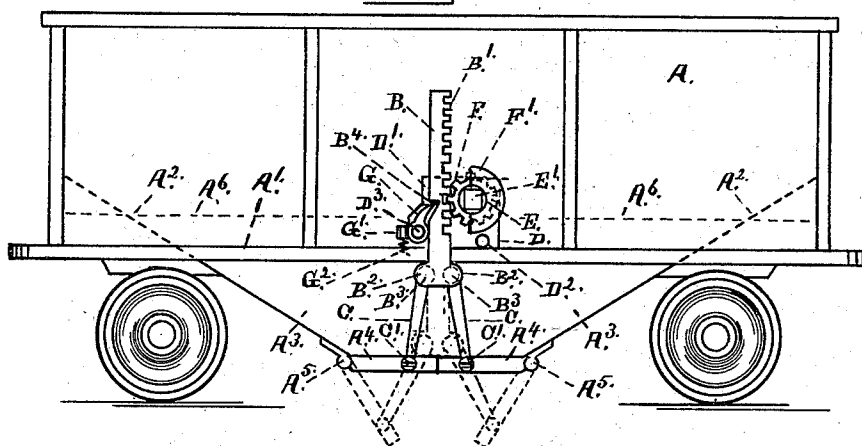


E. T. THOMAS & A. MELHADO.
DUMPING CAR.

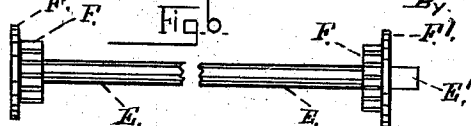
Patented Jan. 7, 1896.

Fig. 1.



Abraham Nelson
Nicholas Perrotty

Goldy D Thomas
 By: E. D. Thomas.
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UNITED STATES PATENT OFFICE.

EDDY T. THOMAS, OF NEW YORK, N. Y., AND ALEXANDER MELHADO, OF MONTCLAIR, NEW JERSEY.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 552,595, dated January 7, 1896.

Application filed March 6, 1895. Serial No. 540,728. (No model.)

To all whom it may concern:

Be it known that we, EDDY T. THOMAS, a resident of the city, county, and State of New York, and ALEXANDER MELHADO, a resident of Montclair, Essex county, and State of New Jersey, citizens of the United States, have invented a new and useful Improvement in Dumping-Cars, of which the following is a specification.

The object of this invention consists in providing a coal-car with facilities for unloading the car.

The invention consists in a rack and pinion, rack-links, pinion-flange, surface-plate, rack-lock, and shaft-guard.

Figure 1 represents an ordinary coal-car having the improvements applied. Fig. 2 is a side view of the rack. Fig. 3 is the left or opposite rack. Fig. 4 is the surface plate. Fig. 5 is an end view of Fig. 4. Fig. 6 shows the pinions and shaft. Fig. 7 shows how the lock may be applied vertically. Fig. 8 is a side view of Fig. 7. Fig. 9 shows how the lock may be made to swing horizontally. Fig. 10 is a side view of the rack shown in Fig. 9. Fig. 11 is a top view of the lock shown in Fig. 9. Fig. 12 is an enlarged view of the lock shown in Fig. 9. Fig. 13 shows the shaft and the guard, and Fig. 14 represents the rack-link.

A in the several figures represents a dump-car for coal, grain, and other commodities. This car is of usual construction, having a frame A', an inclined floor A² extending below the main body of the car and secured to the side A³, trap-door A⁴ hinged at A⁵, and supporting-timbers A⁶.

B in the several figures is a rack having teeth B', which engage with the pinion F.

B³, Figs. 1, 2, 8, and 10, are lugs cast or set into the wings of the lower end of the rack at B² B³.

C C, Figs. 1 and 14, are rack-links provided with holes C², which fit the lug B³ and the hole C³, through which the screw C' passes to fasten the lower end of the link to the trap-doors A⁴ A⁴, as shown in Fig. 1.

D, Figs. 1, 4, and 5, are surface plates supporting the several parts and holding them in place, the wood of the car not being of sufficient strength. D' is a lug which in connection with the pinion F supports the rack B in a vertical position in the space B⁴ of the plate. The lug D³ forms a pivot for the pawl or lock G, Fig. 1. The hole D² is for a bolt to fasten the plate to the car, while the recess D⁵ is for the pinion-shaft E.

F, Figs. 1 and 6, are pinions secured to the shaft E and operate the rack B. These pinions are provided with caps F', which extend over the racks B and hold them firmly against the surface plate D.

The pawl or lock-bar G (shown in the several figures in different forms) is to prevent the rack-bar B from being forced down and causing the doors A⁴ to open while the car is loaded or in transit. The spring G', Figs. 1, 9, and 11, operates against one end of the pawl or lock-bar G and automatically fastens the rack-bar to its highest position, as shown in Fig. 1, by the pawl or lock catching in the recess B⁴, as shown in Figs. 1, 2, 3, 7, 8, and 10.

The recess B¹¹, Figs. 2 and 10, of the rack-bar is to allow a clearance for the surface plate D, as shown in Fig. 1, while the lugs B⁹ and B¹² prevent the rack-bar from being forced down or up too far.

To prevent the accumulation of ice and coal on the shaft E a pipe E² is slipped on, as shown in Fig. 13, being of sufficient size to leave a space E⁴, as shown at E³, that the shaft may have a free play. E⁵, Fig. 13, shows how the top part of the shaft may be covered.

When the car is to be unloaded, the pawl or lock G is released from the rack-bar B, and the shaft turned until the trap-doors A⁴ are thrown open, as shown by the dotted lines in Fig. 1. After the car has been emptied the shaft is turned until the doors are closed and the rack-bar locked.

While a recess B⁴ is shown in Figs. 1, 3, and 8, a lug or shoulder B⁴ may be employed, as shown in Fig. 10, which would be a full equivalent.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. The car A, having doors A⁴, and the surface plate D, in combination with the rack bar B, having recess B⁴, and pivoted links C, operated by the pinion F, and locked by the pawl G, as and for the purpose described.

2. The car A, having hinged doors A⁴, and surface plate D, in combination with the rack-bar B, having recess B¹¹, and lugs B⁹, and B¹², and link C, operated by the pinion F, as and for the purpose described.

3. The car A, having doors A⁴, and surface plate D, in combination with the rack-bar B, having recess B⁴, and pivoted links C, operated by the pinion F, and automatically locked by the pawl G, having spring G², as and for the purpose described.

4. The car A, having doors A⁴, and surface plate D, the said surface plate D, being provided with holes D⁵, for supporting the arbor E, and pinions F, a lug D⁷, for holding the rack-bar B, vertically and constantly against the pinion, and a lug D³, on which the pawl G, is pivoted, in combination with the rack-bar B, having recess B⁴, and pivoted links C, operated by the pinion F, and locked by the pawl G, as and for the purpose described.

5. The car A, having doors A⁴, and surface plate D, in combination with the rack-bar B,

having recess B⁴, and provided with links C, operated by the pinion F, the said pinion F, having cap F⁷, to hold the rack-bar B, firmly against the plate D, and the pawl G, for locking the rack-bar B, as and for the purpose described.

6. The car A, having doors A⁴, surface plate D, and arbor E, covered by the pipe E², for preventing ice and coal from forming on the arbor E, in combination with the rack-bar B, having links C, operated by the pinion F, mounted on the arbor E, and the pawl G, for locking the rack-bar B, as and for the purpose described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 23d day of February, 1895.

EDDY T. THOMAS.

ALEXANDER MELHADO.

Witnesses:

JAMES A. CARTER,
ABRAHAM NELSON.