(No Model.)

B. McARDLE.

DUMPING CAR.

No. 403,689. Patented May 21 1889.

Fig. 1.

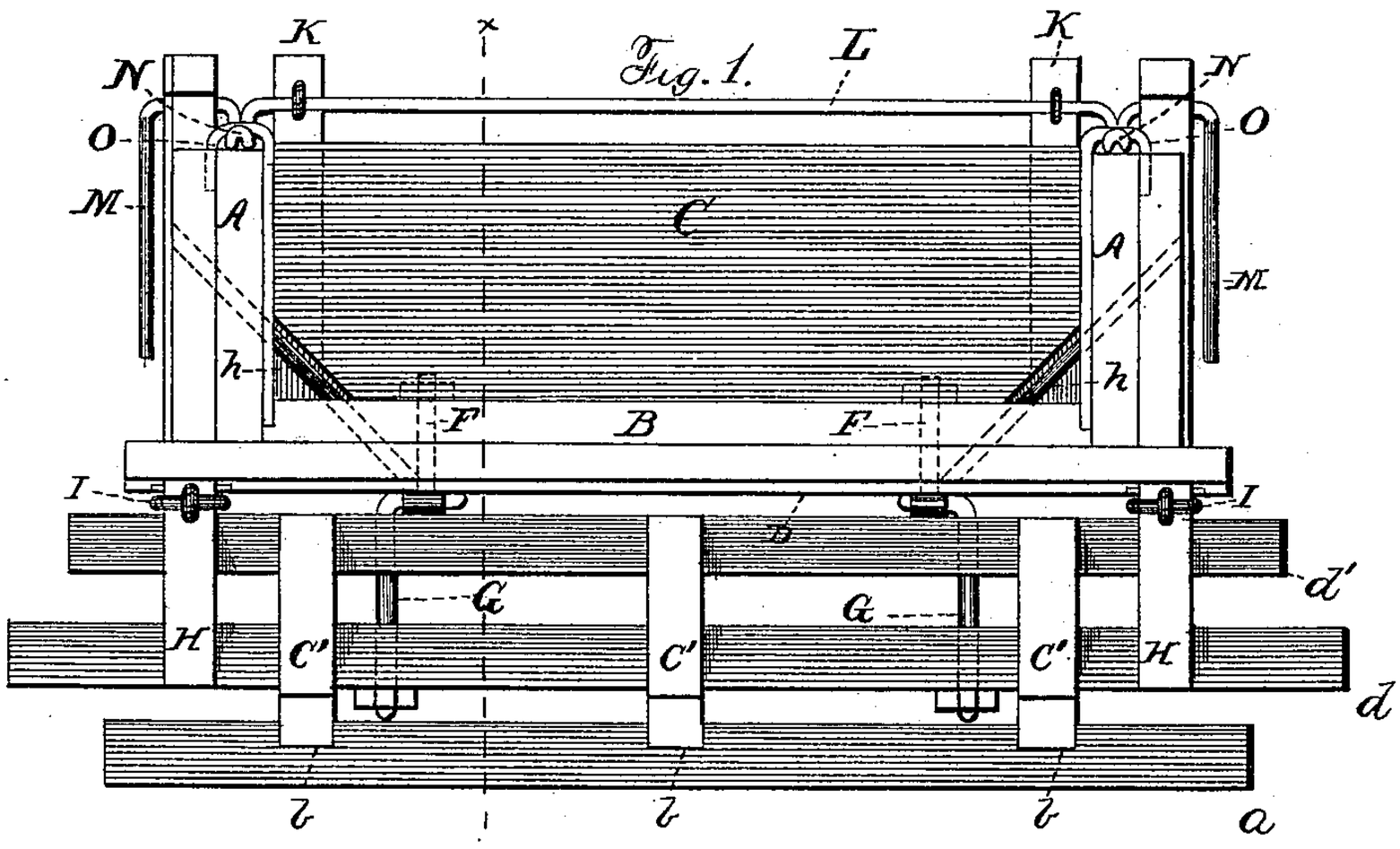


Fig. 2.

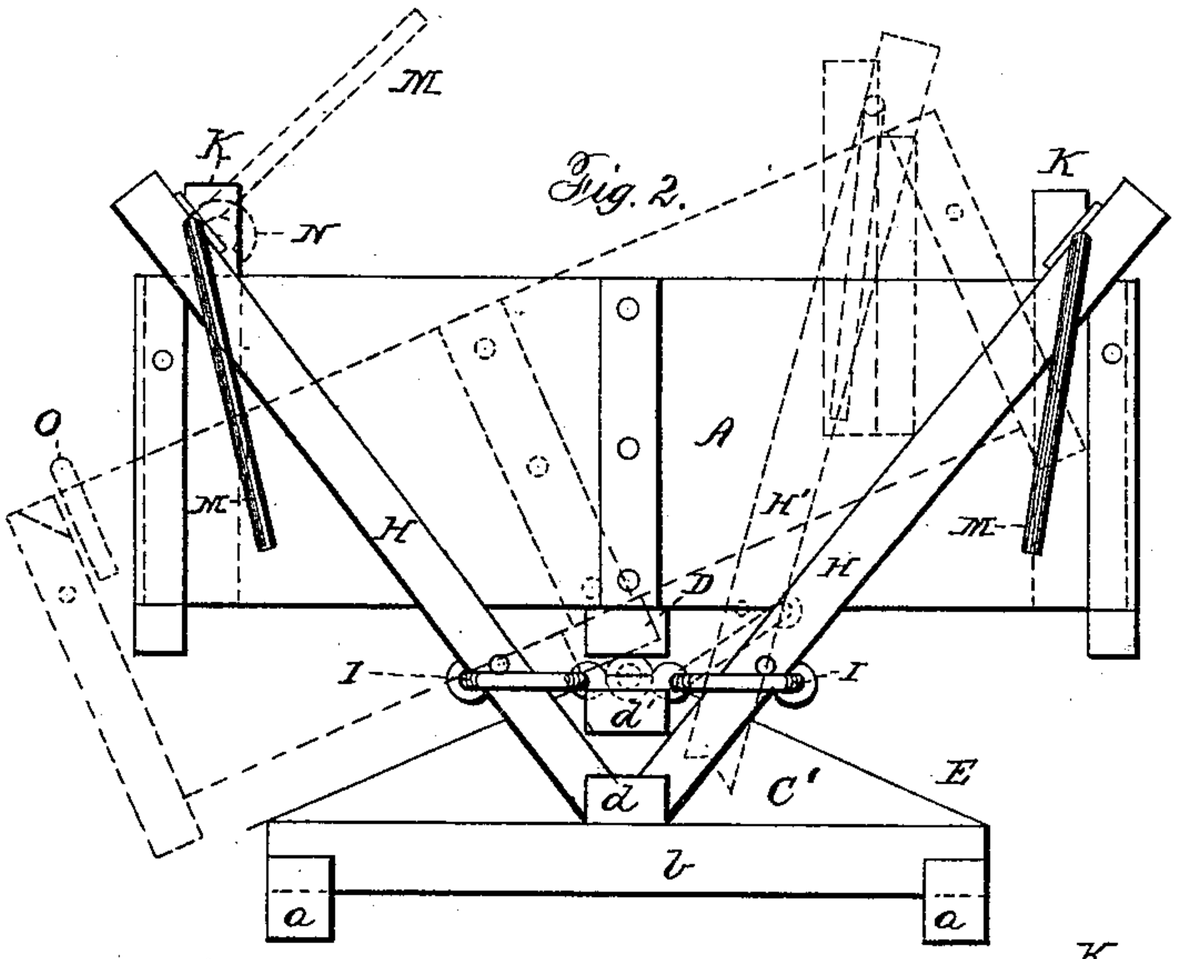
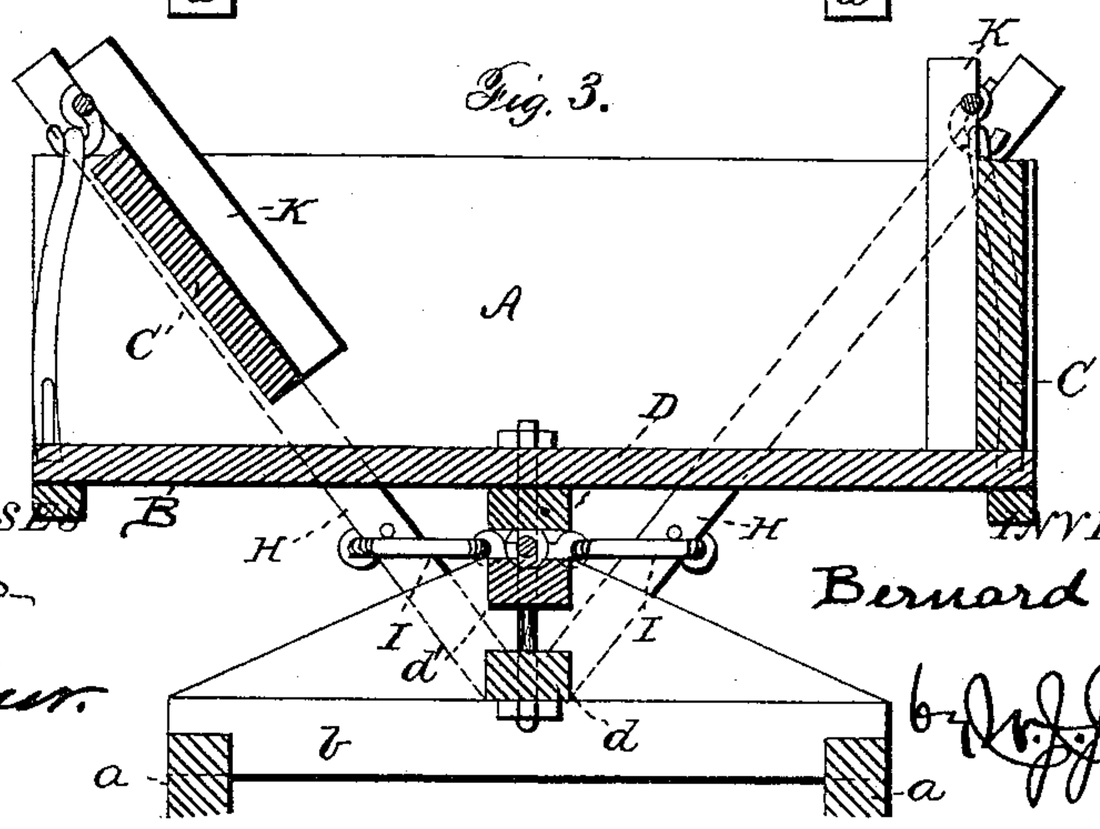


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

BERNARD MCARDLE, OF GEAUGA LAKE, OHIO.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 403,689, dated May 21, 1889.

Application filed September 25, 1888. Serial No. 286,375. (No model.)

To all whom it may concern:

Be it known that I, BERNARD MCARDLE, a citizen of the United States, residing at Geauga Lake, in the county of Portage and State of Ohio, have invented certain new and useful Improvements in Dump-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in dump-cars; and it consists in certain details of construction and arrangement of parts, as is hereinafter more particularly described in the specification, illustrated in the drawings, and pointed out in the claims. Its object is to provide a car pivoted longitudinally at its center upon a truck and so arranged that it may be readily and easily tilted, so as to discharge its load at either side of the track.

In the accompanying drawings, Figure 1 is a side elevation of my car. Fig. 2 is an end view, the car being shown in a tilted or dumping position in dotted lines. Fig. 3 is a transverse section through the line *x x*, Fig. 1.

Referring more particularly to the drawings, A represents the ends of the car-body, B its bottom, and C its sides.

D is a longitudinal bed-piece bolted centrally beneath the bottom of the car-body.

E is the truck-frame, of which *a a* are the sides; *b b b*, the cross-pieces, upon each of which is secured a triangular-shaped cross-piece, C′, and *d d′* are longitudinal pieces secured centrally upon the truck-frame, one of which, *d*, rests upon the cross-pieces *b* beneath the triangular pieces C′, and the other, *d′*, is secured immediately above upon the center or apex of the triangular pieces C′.

F are eyebolts, which serve to secure the longitudinal bed-piece D to the bottom of the car-body, and G are corresponding hooks, which extend down through the central longitudinal pieces, *d d′*, of the truck-frame, and serve, in connection with the eyebolts F, as hinges to pivot the car-body to the truck.

H H are diagonally-arranged supports at the ends for the car-body. The foot or lower end of each is notched, and when in its normal position fits and rests loosely upon the top and side of the longitudinal piece *d*, which extends beyond the car-body, as shown in Figs. 2 and 3. These supports are hinged to the longitudinal piece *d′* of the truck by means of the links I, and their upper ends extend outward slightly above the sides of the car-body.

The sides C of the car-body are made separate, and are secured at their ends to cleats K, which extend above the sides, and are hinged or pivoted at their upper ends to a rod or rock-shaft, L, journaled in the top or upper end of the diagonal supports H, so that they will swing freely. Their outward motion is, however, limited by diagonal braces *h* at the lower outer corners of the car-body, which serve as stops, and when the car is loaded they are closed and serve as tight-fitting sides.

The rock-shafts L are provided at their outer ends with crank arms or levers M, whereby they may be rotated, and at the points over the ends A of the car-body with hooks N, which engage with loops or staples O, secured upon the top of the ends H of the body, as shown in Fig. 1.

Having thus described the several parts of my invention, I will proceed to describe its operation.

Suppose the loaded car has arrived at its destination and it is desired to dump the load. The operator, who may be stationed at either end of the car, seizes the crank-lever M of the side at which it is desired to dump the load and swings it inward and upward, as shown in the dotted lines, Fig. 2, thereby rotating the rock-shaft and disengaging the hooks N from the staples O, releasing that side of the car-body, which is at once carried downward away from the side C, which is suspended from the rock-shaft. Meantime the diagonal supports on the opposite side, which are still attached to the car-body by the hooks on their rock-shaft, being pivoted near their bottom to the truck by the hinged links *l*, are carried upward and forward with that side of the body to the position shown by the dotted lines at H′, Fig. 2, and the load is freely permitted to slide off from the car.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a dump-car, the combination, with the truck and the car-body pivoted centrally and

longitudinally thereon and provided at its ends with loops or staples, of the diagonal supports hinged near their lower ends to the central piece of the truck, and the rock-shafts journaled in the upper ends of the diagonal supports and provided with the lever-arms for actuating same and with hooks for engaging the loops or staples in the car-body, substantially as described.

2. In a dump-car, the combination, with the car-body pivoted centrally and longitudinally on the truck and supported in position by a rock-shaft provided with hooks adapted to engage with loops or staples in the end of the car-body and journaled in the outer ends of the diagonally-arranged hinged supports, of the swinging sides pivoted to the rock-shafts, substantially as and for the purpose described.

3. In a dump-car, the combination of the truck, the car-body pivoted centrally and longitudinally thereon, the diagonally-arranged supports resting upon the central longitudinal pieces of the truck, the hinged links pivotally connecting the lower end of the supports to the truck, the rock-shafts journaled in the outer ends of the supports and provided with the hooks adapted to engage the loops or staples in the car-body, and the lever-arms, all combined and arranged substantially as and for the purpose described.

4. The combination, in a centrally-pivoted car-body adapted to tilt toward either side, of the swinging gate C, hinged or pivoted to a frame supported upon the truck independent of the car-body, whereby it serves to close the side when the car-body is in its normal position and is held away from the body when the car is tilted, substantially as and for the purpose described.

5. In a dumping-car, the combination, with the truck provided with the longitudinal central bed-pieces, *d d'*, and the body centrally pivoted thereon, of the diagonal end supports resting upon and hinged near their lower ends to one of the bed-pieces of the truck, and the rock-shafts journaled in the outer ends of the supports and provided with hooks for engaging with staples on the car-body, and the gates C, hung to the rock-shafts and adapted to close the sides of the body when the car is in its normal position and to automatically open them when the car is tilted, substantially as and for the purpose described.

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

BERNARD McARDLE.

Witnesses:
JOHN C. McDONALD,
W. F. HALE.