

(No Model.)

J. T. GODWIN.

DUMPING CAR.

No. 287,663.

Patented Oct. 30, 1883.

Fig. 1.

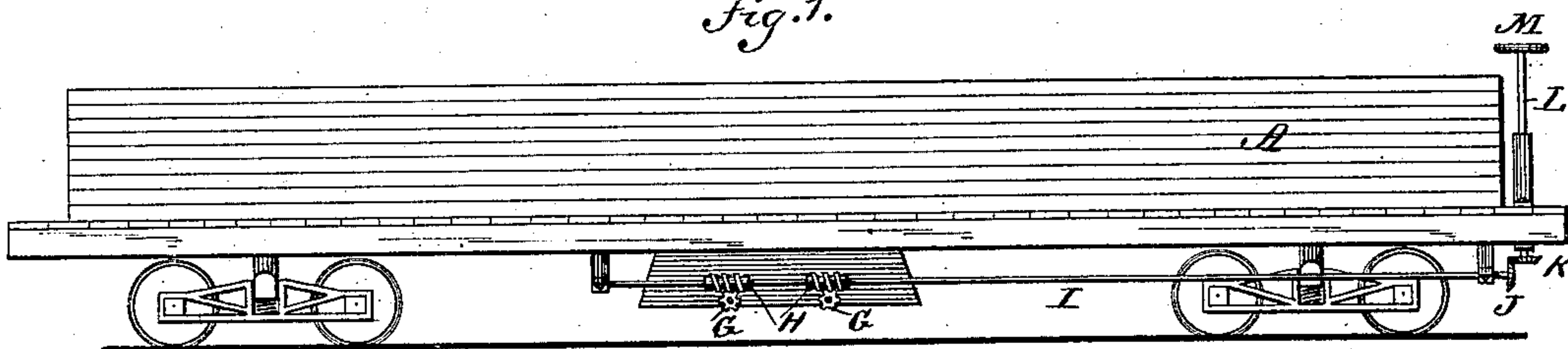


Fig. 2.

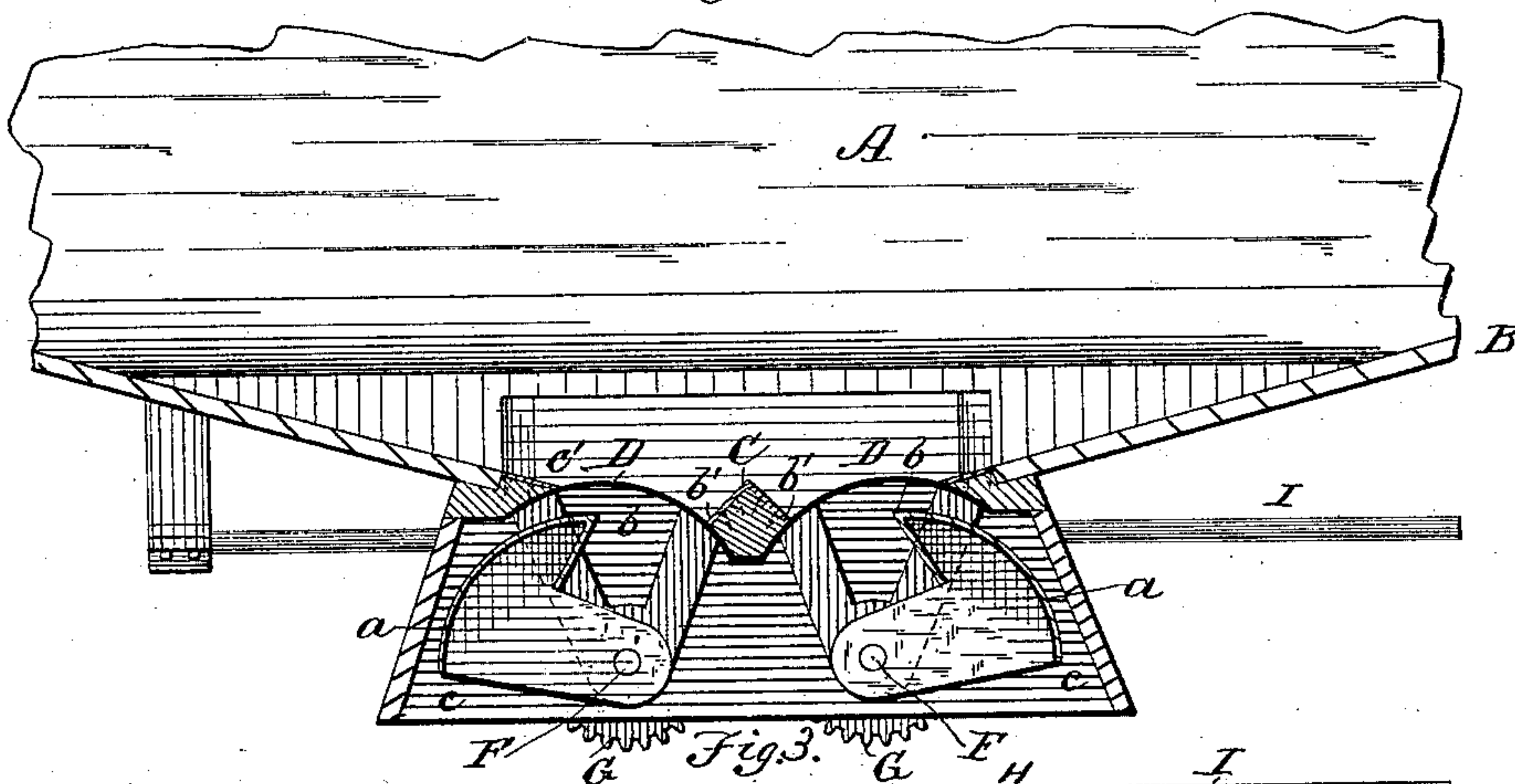
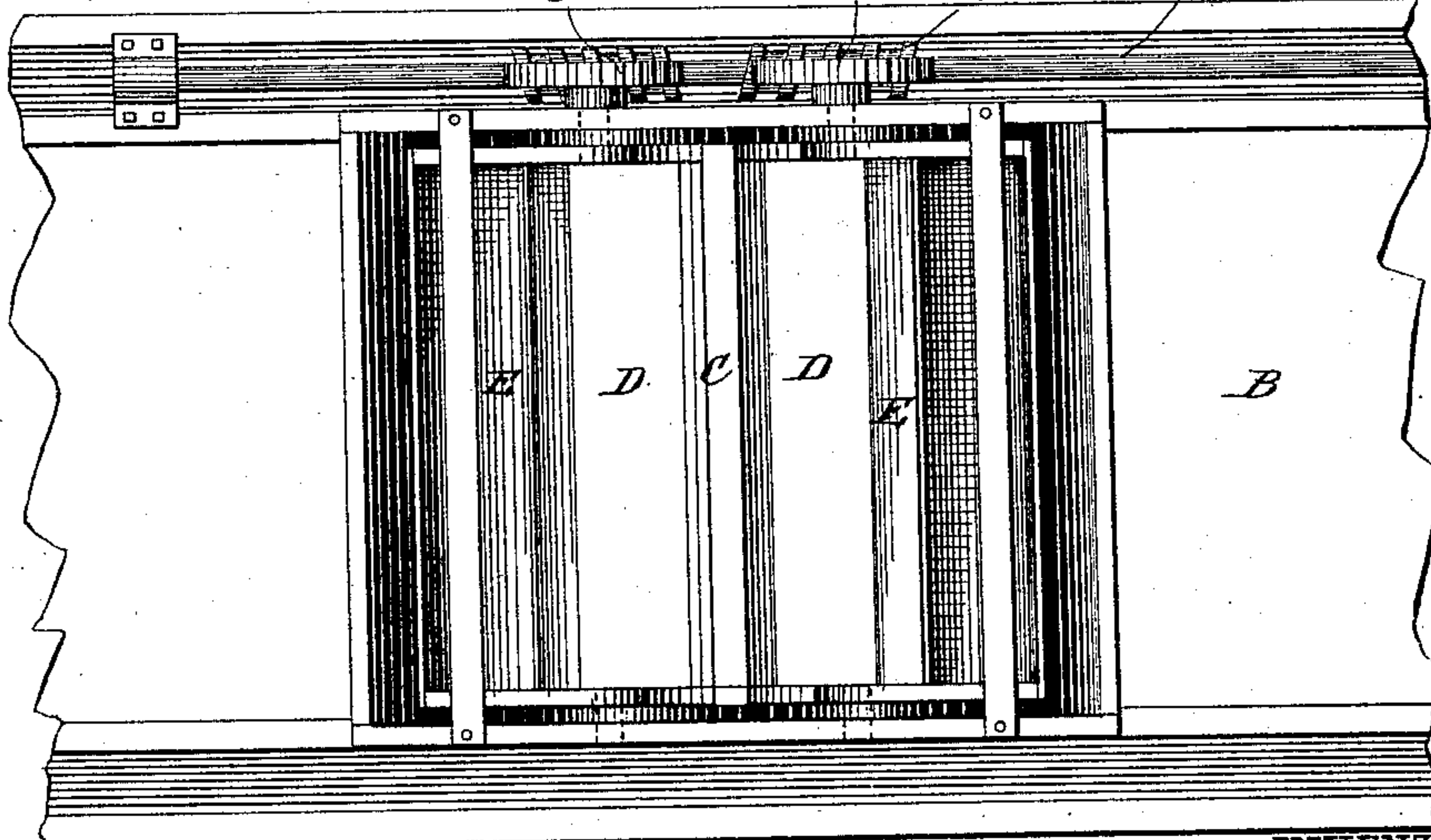


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES T. GODWIN, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF TO  
ALBERT L. WOODWORTH, OF SAME PLACE.

## DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 287,663, dated October 30, 1883.

Application filed September 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES THOMAS GODWIN, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented a new and useful Improvement in Dump-Cars, of which the following is a specification.

My invention relates to that class of dump-cars in which one or more holes are made in the car-bottom through which to discharge coal, &c., said holes being provided with some kind of a gate to close the same; and the object of my invention is to provide means whereby gates for this purpose may be made so close as to hold grain, fine coal-dust, sand, &c., so strong as to safely support any usual load of coal or ore, and yet to be easily and quickly operated from the usual position of the brakeman at the end of the car.

To this end my invention consists in a dump-car provided with a gate, and means for operating the same, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a car, showing my invention. Fig. 2 is a longitudinal section, and Fig. 3 is a plan view, of a portion of the same.

A represents the body of the car, which may be of the usual length, say about twenty-five feet. The bottom B of the car is hopper-shaped, slanting both from the sides and ends toward the center at an incline steep enough for coal, &c., to run down of its own accord. Across the center of the car is a beam, C, on each side of which is an opening, D, at the foot of the inclines of the bottom, of sufficient size to quickly discharge the load.

E represents two gates closing the openings D. The face *a* of each gate is a convex cylindrical arc seated at each end of said openings against a corresponding concave arc in the side of the car-bottom, and at each side of said openings against a straight-line edge of the bottom. The cylindrical arc or segment is pivoted eccentrically at F, which is nearer to the extremity *b* than to the extremity *c* of said arc, so that, however much the edges *b'* *c'* of the openings may wear, the gate, by swinging farther, will close it. The arc *a* of the gate is

a mere shell, hung by sectoral ears upon pivots F at the two ends for the purpose of leaving all the central space beneath the opening D free for the load to fall through. One of the pivots F is extended through its bearing, and provided with a worm-gear wheel or segment, G, which is engaged by a screw-worm, H. This worm is fixed upon a shaft, I, which extends to one or both ends of the car, where it is provided with a beveled-gear wheel, J, meshing with a similar wheel, K, on an upright shaft, L, which is provided with a hand-wheel, M. By working wheel M shaft I is rotated, and turns worm H, which, by means of segment G, opens or closes the gate E. I prefer to arrange the gates in pairs, as shown, to swing in opposite directions, in order that their strain on the worm and rod will balance. To this end one of the worms H is right hand and the other left.

The openings D and the gates E may be located at any other suitable portion of the car, where the bottom may be slanted toward them—as, for instance, at the center of the side—having the gate-axis longitudinal with the car. Each edge of the openings may be plated with iron, as shown. If desired, the arc *a* may be any other convex curve than cylindrical, and the hand-wheel M may be located at any other suitable point and reached by running shaft I to meet it.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. The combination, with a car having a hopper-shaped bottom and one or more openings through it at the foot of the hopper, of a curved-faced eccentrically-hung gate adapted to close each of said openings, as shown and described.

2. The combination, with a car, A, having an opening, D, through its bottom, and the gate E, having eccentric pivots F, of the worm-gear segment G on one of said pivots, the screw-worm H engaging said segment, the hand-wheel M, and the shafts I and L and gear-wheels J and K, as shown and described.

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