

No. 634,874.

Patented Oct. 17, 1899.

R. E. BROYLES.

DUMPING CAR.

(Application filed June 7, 1899.)

(No Model.)

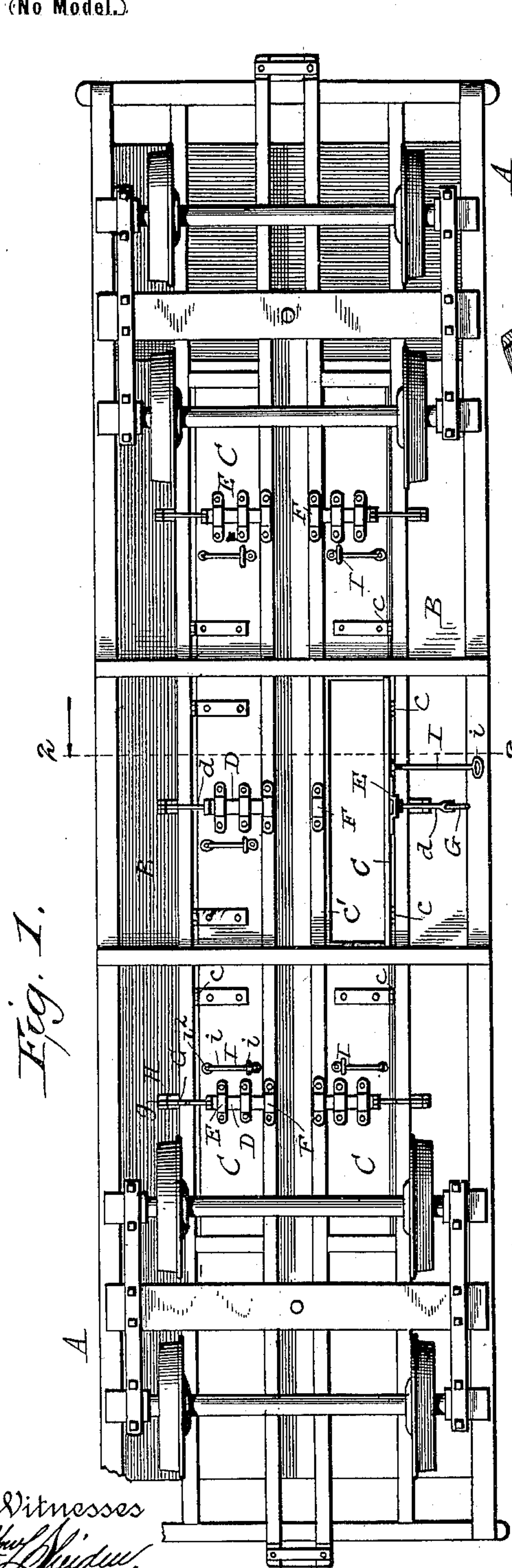


Fig. 1.

Witnesses
J. H. K. K. K.
E. A. Balloch.

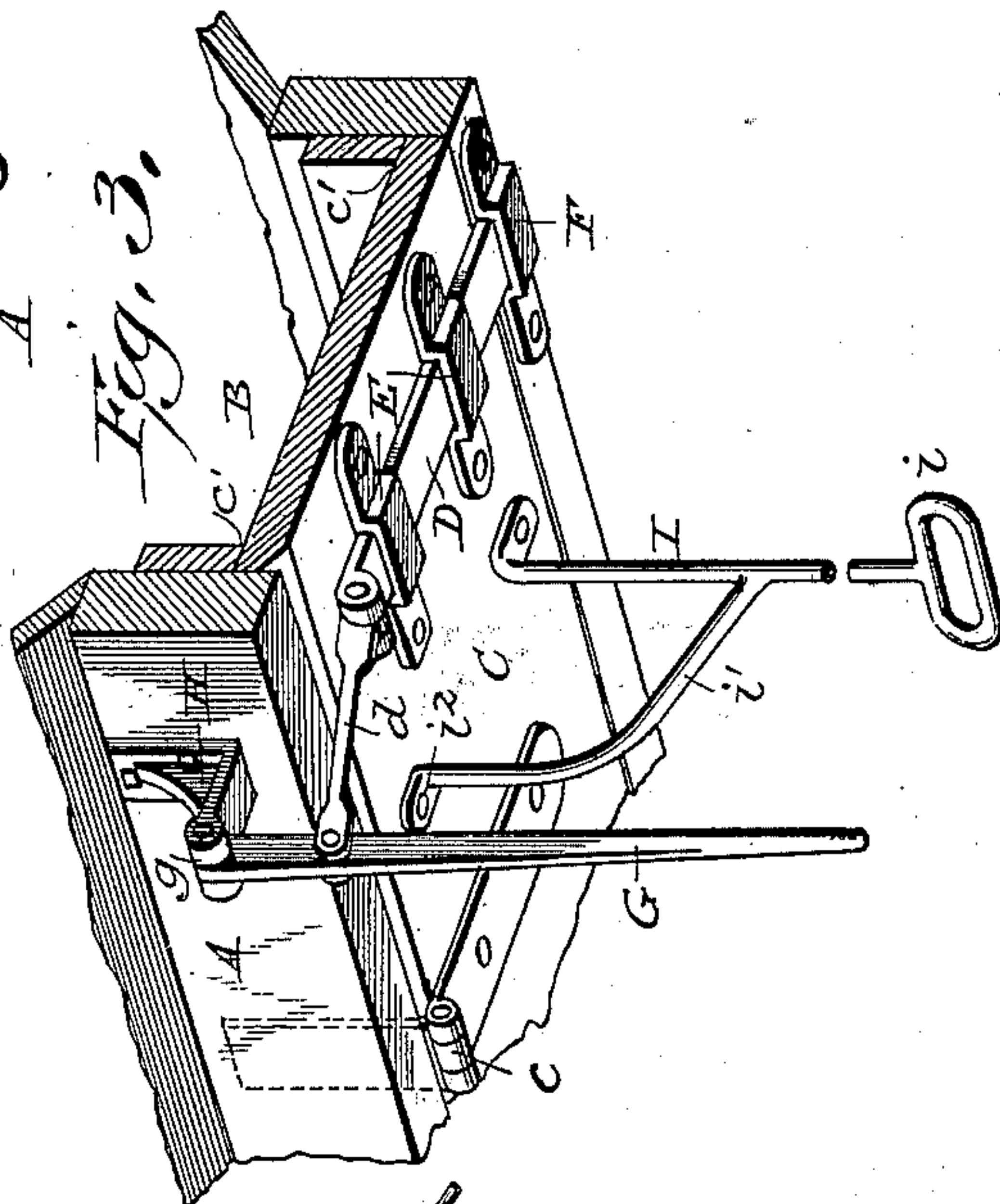


Fig. 3.

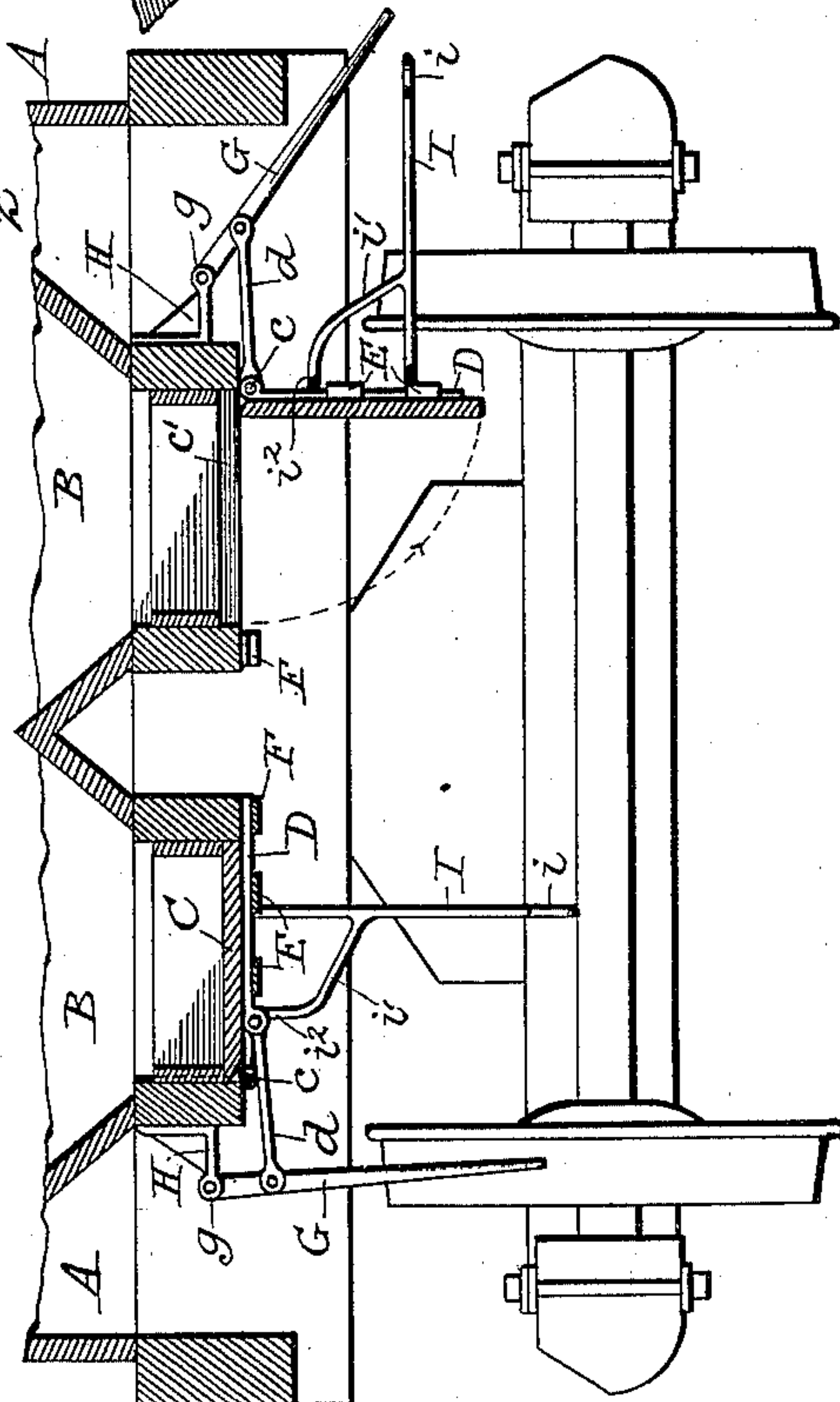


Fig. 2.

Inventor
R. E. Broyles
By his Attorneys,
Baldwin Davidson & Wright

UNITED STATES PATENT OFFICE.

ROBERT E. BROYLES, OF CHATTANOOGA, TENNESSEE, ASSIGNOR OF ONE-HALF TO WILLIAM E. RAPE, OF SAME PLACE.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 634,874, dated October 17, 1899.

Application filed June 7, 1899. Serial No. 719,678. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. BROYLES, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

My invention relates to that class of dumping-cars which are provided with hopper-shaped bottoms or pockets for holding coal, ore, and the like and which are also provided with doors which may be opened to deliver the contents of the car and may be closed and locked when it is desired to fill the car with material to be transported. Heretofore complicated mechanism has been employed for opening and closing the doors.

The object of my invention is to provide simpler mechanism for this purpose. I may construct the body of the car in any well-known way, and I provide each door with a sliding bolt which is operated in an improved way by a hand-lever, and each door is provided with a foot-lever by which it may be closed.

In the accompanying drawings, Figure 1 is a bottom plan view of a dumping-car embodying my improvements. Fig. 2 shows a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view showing details of my improved devices for opening and closing the doors. Figs. 2 and 3 are on a larger scale than Fig. 1.

The body A of the car may be of any usual construction and may be mounted in any approved way. The car shown is provided with a series of hoppers or pockets B. These may be of any desired shape, width, and length, and each one of the pockets is provided with a hinged door C, which opens and closes the bottom thereof. Each door is hinged at one of its edges c. When closed, the door is preferably arranged to enter a recess c' in the bottom or mouth of the hopper, so as to fit snugly therein, as indicated at the left-hand side of Fig. 2.

Each door is provided with a sliding bolt D. This bolt is arranged to slide in the guide-straps E, secured to the bottom of the door, and also to slide into and out of a locking-strap F, secured to the frame of the hopper.

By sliding the bolt properly the door may be locked or unlocked in the manner illustrated in Fig. 2. The outer end of each bolt—that is, the end next to the side of the car—is connected by means of a link d with a hand-lever G, which is pivoted at its inner end g to a bracket H, secured to the frame surrounding the mouth of the hopper. The link d is jointed to the hand-lever G between the point g and the outer or handle end of the lever. Each door may be provided with one or more bolts of this character. One is sufficient when the doors are comparatively small, but where very long doors are used an additional number of bolts and operating mechanisms may be employed.

Each door is provided with a foot-lever I, which is secured to the door near its inner end—that is, the end opposite the hinge—and it is of sufficient length to afford the requisite leverage and also to project to the side of the car when the door is opened, as illustrated at the right-hand side of Fig. 2. When the door is opened, the attendant may by putting his foot on the outer end i of the lever cause the door to be moved inward and upward, and when the door has been moved fully inward the lever G may then be operated to shoot the bolt. The foot-lever is not only secured to the inner end of the door, as before stated, but it is also connected therewith by means of a branching brace i', which is connected to the lever I, preferably at about one-third the distance from the inner end of the lever to the outer end thereof, and this bracing-arm is also connected at i² to the door between its central portion and its outer or hinged edge. By this means the lever is made sufficiently rigid so that when pressure is placed upon the lever the bracing-arm i' will take part of the strain and prevent the lever from being bent. This mechanism has been successfully used. It is much simpler than the complicated mechanisms before employed and operates with entire satisfaction.

I claim as my invention—

1. A dumping-car provided with a hinged door, a sliding bolt carried by the door, a hand-lever pivoted to the car-body, and movable about a pivot parallel with the axis of the hinge of the door, and a link jointed to

the bolt and jointed to the hand-lever between its pivot and its outer end.

2. The combination of a car-body provided with a hopper, a door hinged at the mouth of
5 the hopper, a sliding bolt, guide-straps on the door in which the bolt moves, a locking-strap into which the bolt moves, a hand-lever hinged to the car-body and movable about a
10 pivot parallel with the axis of the hinge of the door, a link jointed to the end of the bolt next to the hinge and jointed to the operating-lever between its hinge and its outer end.

3. The combination of a car-body provided with a hopper or pocket, a door hinged there-
15 to, a bolt for locking the door, a lever for moving the bolt, and a foot-lever attached to the door near its inner end and projecting at right angles therefrom to an extent sufficient
20 to enable the attendant to close the door by his foot.

4. The combination of a car-body provided with a hopper or pocket, having a hinged door, a sliding bolt carried by the door, straps on the door in which the bolt moves, a locking-strap secured to the frame surrounding
25 the mouth of the hopper into which the bolt is shot to lock the door, a hand-lever hinged to the car-body, a link connecting the end of the bolt next to the hinge with the lever, a
30 foot-lever secured to the door near its inner end and a branching arm extending from the foot-lever to the door, and secured thereto near the hinged end thereof.

In testimony whereof I have hereunto subscribed my name.

ROBT. E. BROYLES.

Witnesses:

J. A. DOWD,
L. M. STONG.