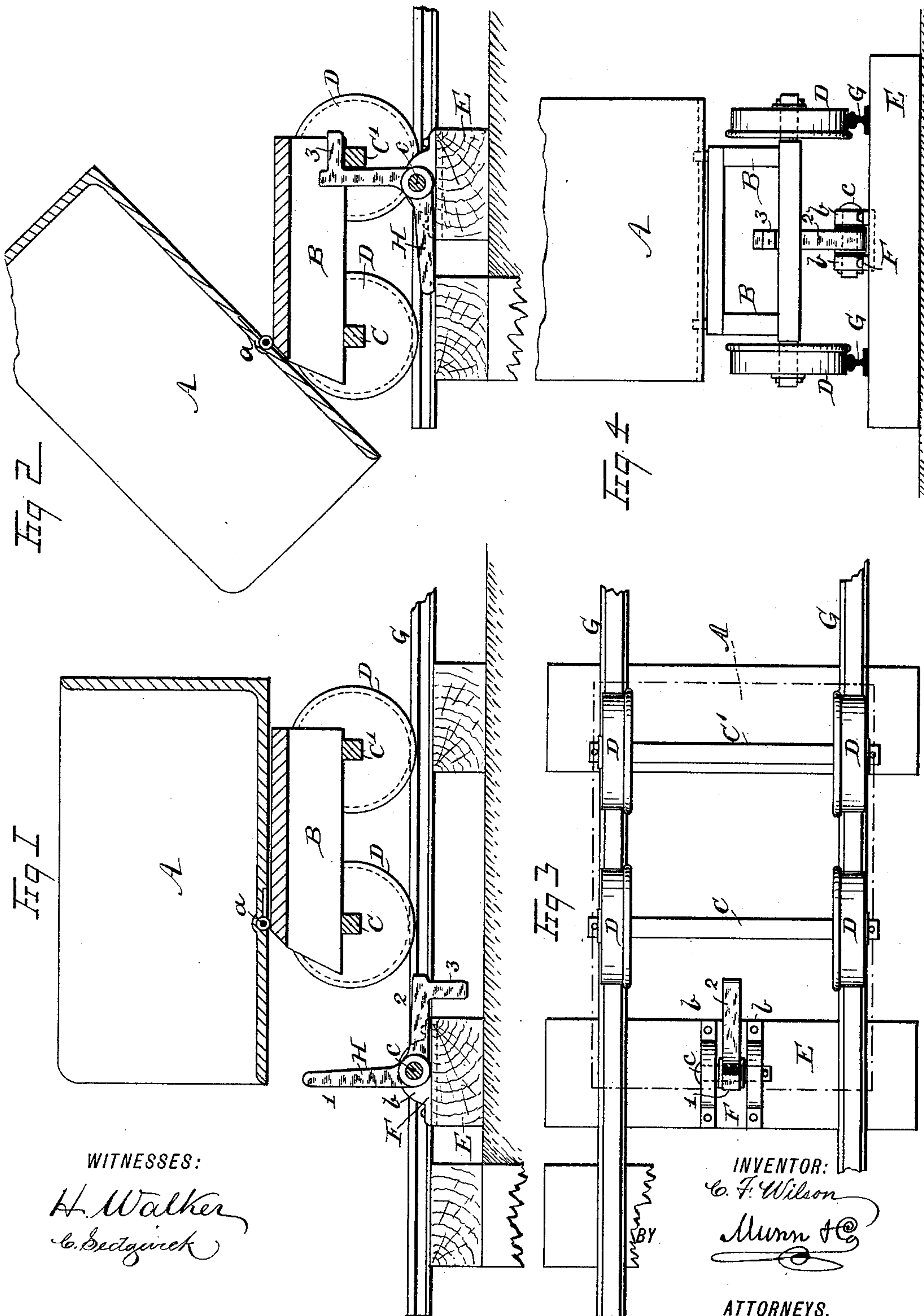


(No Model.)

C. F. WILSON.
DEVICE FOR DUMPING CARS.

No. 415,488.

Patented Nov. 19, 1889.



UNITED STATES PATENT OFFICE.

CHARLES F. WILSON, OF BRECKENRIDGE, COLORADO, ASSIGNOR TO HIMSELF AND RUSSELL C. MACY, OF SAME PLACE.

DEVICE FOR DUMPING CARS.

SPECIFICATION forming part of Letters Patent No. 415,488, dated November 19, 1889.

Application filed August 7, 1889. Serial No. 320 006. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WILSON, of Breckenridge, in the county of Summit and State of Colorado, have invented new and useful Improvements in Devices for Dumping Cars, of which the following is a full, clear, and exact description.

My invention relates to an improvement in devices for dumping cars, the object being to produce a simple and efficient device whereby cars of the ordinary form of construction, employed to transport ore, coal, sand, earth, or railroad-ballast, may be automatically dumped at the edge of an embankment or end of the track with safety.

To the end named my invention consists in the construction of parts and their combination, substantially as hereinafter described, and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation, in section, of the car about to be dumped, the dumping device being also shown. Fig. 2 is a side elevation, in section, of a car that has been dumped, the improved dumping device being shown in engagement therewith. Fig. 3 is a top plan view of a car truck or frame in position above the dumping device, and Fig. 4 is a rear end elevation of a car and the dumping device.

In the transportation of ores, coal, and like material four-wheeled cars are usually employed, the body being so hinged to the sills or frame of the car that it may be tipped to dump the load from one end of said car.

The device which is the subject of my present invention will engage the axles of an approaching loaded car of the type above mentioned near the point where the load is to be dumped, and, by sudden arrest of the car thus produced, cause the car-body to tip and discharge its contents, while the car is held from following the load over the breast of the embankment by the locking engagement of the arresting device, a simple reversal of motion applied to the car thus held releas-

ing the arresting device and resetting it to engage another loaded car, as the detailed description which follows will fully explain.

A is the body of the car, and B its frame, mounted upon the axles C C', upon which the wheels D are revolvably secured in the usual manner. As will be noticed the body A is hinged at *a* to the terminal sloped ends of the frame B, the point of connection being such that when loaded the car-body will be retained upon the frame by the gravity of said load. The center of gravity of the latter is sufficiently near to the point of the hinged connection *a* to permit a tipping action of the car-body if it is suddenly jarred by arrest of motion progressively at any desired point.

Upon one of the cross-ties E, near to the edge of the embankment or other point where the load is to be discharged, a bracket-stand F is secured about midway between the rails G of the track.

Between the two vertical parallel ears *b* of the bracket-stand F a bell-crank lever H is supported by the transverse shaft *c*, which is inserted through perforations made in the ears *b*, as shown in Fig. 3, and secured in place by any suitable means. As the bell-crank lever H is free to rock upon the shaft *c*, it is evident that either of its limbs 1 2, which are at right angles to each other, may be made to assume a vertical position if pressed against, as will be more fully explained.

The limbs 1 2 of the bell-crank lever H are of such proportionate length that they will project above the axles C of the car. One of the limbs 1 is straight in its body, the other limb 2 having a short arm 3 projected rearwardly from its free end at right angles to the same. The arm 3 is, from its position with regard to the car-axles, adapted to hook over the one it is adjacent to.

In operation the normal position of the bell-crank tripping-lever H is as represented in Fig. 1, having the limb 1 in vertical position. As a loaded car moves toward the point of discharge the front axle C abuts against this vertical limb. The progressive movement of the car will rock the lever H, so as to elevate the prostrate limb 2 between the

front and rear axles, and cause the arm 3 to hook above the latter-named axle C', thus suddenly arresting the car holding it and dumping the load, as shown in Fig. 2. By
5 reversing the movement of the car the front axle C will impinge against the limb 2 of the tripping-lever H and rock it downwardly, thus elevating the other limb 1 ready to engage the next loaded car in the manner al-
10 ready explained.

In case the dumping device is to be employed to discharge automatically the contents of cars loaded with coal from an elevated position into bins below, if the cars are
15 of the type herein shown, the operation will be similar and equally as effective.

Slight changes might be made in the form of the parts within the scope of my invention; hence I do not desire to limit myself to the
20 exact forms shown.

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

1. The combination, with a railroad-track and a car thereon, of a bell-crank lever piv- 25
oted between the track-rails, one of the arms of said lever being normally upright and the other normally horizontal, whereby when the front axle of the car strikes the first-men-
tioned arm the other arm will be thrown into 30
position to engage the rear axle, substantially as set forth.

2. The combination, with a railroad-track and a dumping-car having its body hinged to the truck-frame transversely, of a bell- 35
crank pivoted to rock vertically between the track-rails, one of its limbs being provided with an arm which is adapted to hook above the rear axle from its front side when the other limb is prostrated by the impingement 40
of the front car-axle, substantially as set forth.

CHARLES F. WILSON.

Witnesses:

T. A. BROWN,
F. C. MILLER.