(No Model.)

W. J. WEST.

DUMPING CAR.

No. 305,871. Patented Sept. 30, 1884.

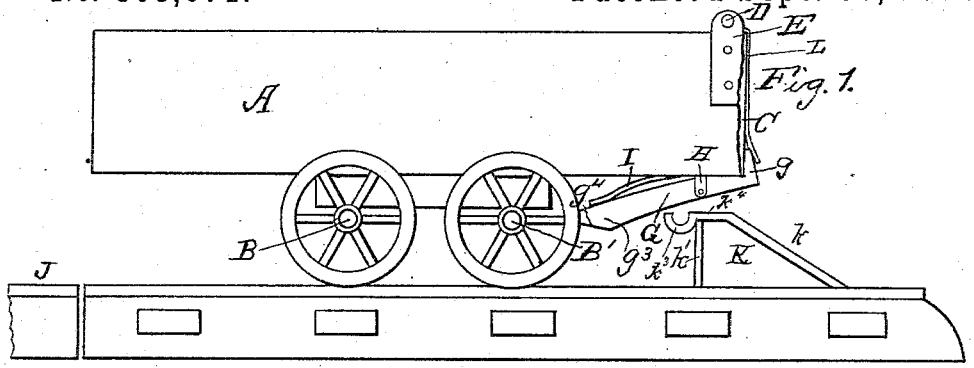

Fig. 1.

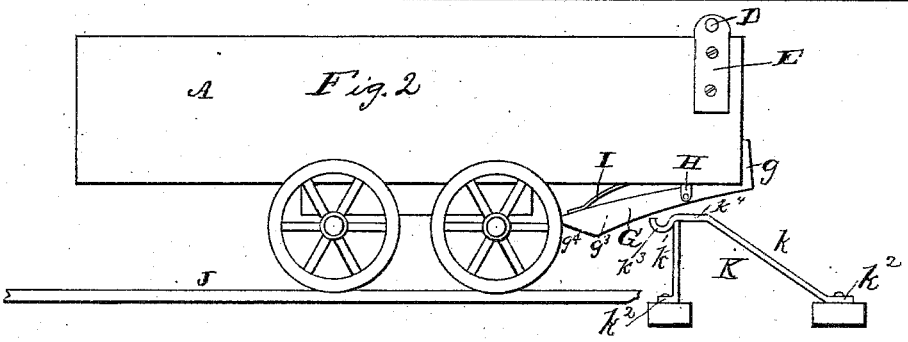

Fig. 2

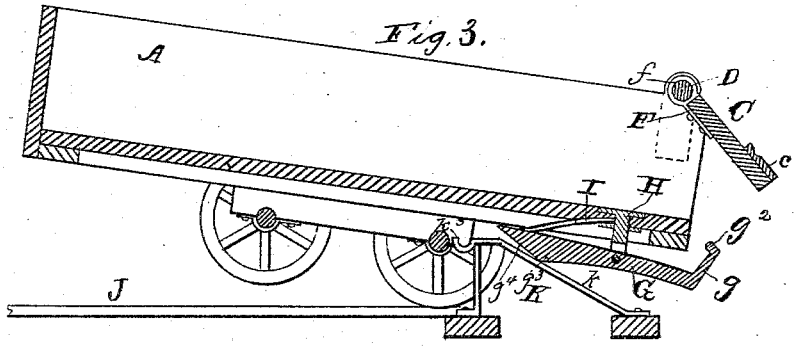

Fig. 3.

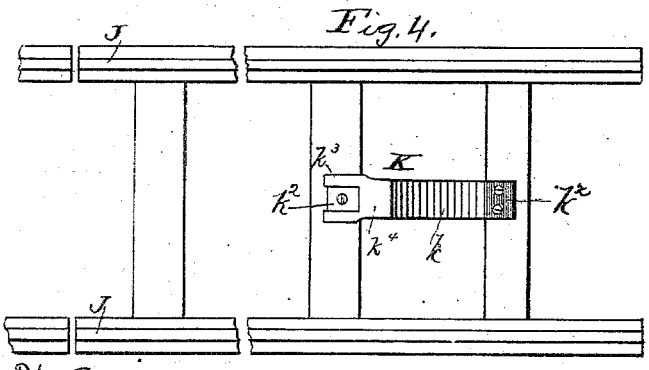

Fig. 4.

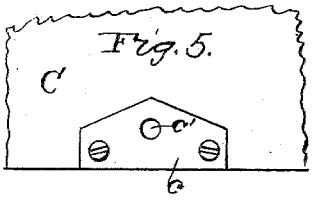

Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM J. WEST, OF JACKSON, MICHIGAN.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 305,871, dated September 30, 1884.

Application filed February 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. WEST, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Automatic Dumping-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a longitudinal section of a car and a portion of its track, these parts being constructed with my improvements. Fig. 2 is an end view of the car. Fig. 3 is a sectional view showing the car in the position for dumping. Fig. 4 is a top view of the abutment. Fig. 5 shows the socketed plate carried by the swinging gate.

In the drawings, A represents the body of the car. It may be mounted in any preferred way, either upon trucks connected with the body by springs, or it may have axles B B′ secured rigidly thereto. The latter is the case when the car is used for mining and other similar purposes.

In the construction shown one of the ends (the one at C) is shown as being hinged, the hinging being effected by means of a cross bar or rod, D, secured to standards or bars E, fastened to the sides of car.

F are hangers, which are suspended loosely from the bar D by means of eyes *f*, these hangers being rigidly fastened to the swinging end piece or gate C.

G represents a lever pivoted below the car at one end, it being bent or turned upwardly, as shown at *g*, this end extending upward sufficiently far to prevent the door or gate C from swinging outward. It is pivoted in a hanger, H, which is bolted or otherwise fastened firmly to the bottom of the car.

I is a spring, which bears against the inner end of the lever G, and tends to force said end downwardly, and therefore holds the other end, *g*, of the lever in such position as to lock the door or gate C. At the upper end of the arm *g* there is an inwardly-turned stud or projection, g^2, which engages with a socketed plate, *c*, the socket *c′* of which, together with the stud or projection g^2, insures that the door shall so firmly engage with the lever G that any ordinary pressure outward of the door will not open it.

J J represent the rails of the track upon which the car moves. Between these there is situated a device, K, which operates as an abutment or stop for the car, and which upon the forward face is inclined, as shown at *k*. This may be made by bending or casting a properly-shaped piece of metal having the upright leg or supporting portion *k′*, the aforesaid incline *k*, feet, as at k^2 k^2, for securing it rigidly in position to ties or other supports, the parts k^3, against which the axle of the car strikes, and the horizontal part k^4, between the parts k^3 and *k*. The lever G, at the inner end, has an expanded portion, as at g^3, with an inclined rear edge, as shown at g^4, the angle of this latter incline being approximately that of the incline *k*.

When a loaded car moves forward toward the stop or abutment, the part g^3 of the lever strikes against the part k^4 of the abutment, whereupon the lever is raised somewhat. The final opening, however, of the door is not effected until the axle B′ strikes against the parts k^3 of the abutment K, whereupon the momentum of the car tends to elevate the rear end and depress the front end, which, as it moves forward, brings the end g^3 of the lever G against the incline *k*, and as a result the arm *g* is drawn away from the door C, releasing the latter and permitting it to yield to the material within the car, which will move onward and downward and be dumped.

After the weight is removed the car falls back into position upon the track. As it moves backward the stop or abutment offers no serious impediment to the lever G, as the incline at g^4 easily rises up the incline *k*, and after the lever has escaped from said abutment the spring insures that the arm *g* shall lock the gate in position until it is desired to again dump the load. After the car has fallen back into position upon the track and commenced to move, the expanded portion g^3 of the lever engages with the part k^4 of the abutment, which is higher than part *k*, again depressing the end *g* of the lever, so that should the gate fail to close as the car is falling it will do so at this second depressing of the arm *g* of lever G.

If desired, a spring, such as shown at L, may

be combined with the devices above described, which will tend to force the door inward. It may be fastened at one end to any of the stationary parts, as, for instance, to the cross-bar D.

In Fig. 1 I have shown a movable track adapted to be placed at the end of the permanent track. It carries the abutment K, the latter being fastened to the cross-ties of the movable track. This section of track is in no way permanently fastened either to the main track or to the ground, and is adapted to be removed from one place to another, it being my purpose to use this section wherever it is desired the dump should be made.

I am aware that it is old to pivot platforms at the end of a railway-track, upon which platform a car may be run and then dumped by rocking the platform upon its pivotal supports; and I do not claim such a device for dumping a car, but such permanently-secured devices are very different from my removable section of track, and are not adapted to the uses for which I employ mine. Such tilting platforms are necessarily permanently secured in place, while it is one of the purposes of my invention to have the short section of track and the stop carried thereby light and easily movable, so they may be conveniently placed upon a car when it is desired to use the section at another point.

What I claim is—

1. In an automatic dump-car, the combination of the car-body, the vertically-swinging door provided with the socket c', the vertically-swinging lever G, having the arm g, and stud or projection g^3, to engage with the socket c', and the stop or abutment K, projecting upwardly into the plane of the axle B′, and adapted, substantially as set forth, to throw the inner end of the lever up and down, as described.

2. In a dumping-car, the combination, with the car-body, the swinging door or gate at one end thereof, and the lever pivoted below the car-body, and having the arm which locks the swinging door, and the expanded part g^3 in front of the axle, the stationary abutment or stop K, projecting into the path of the car-axle and against which it strikes, it having the portion k^4, which trips the lever G, and the part k, extending forward and downward from the portion k^4, said parts being arranged substantially as set forth, whereby the part g^3 of the lever G rests upon the part k of the stop to hold the arm g depressed while the car is being tilted and dumped, and is also again depressed after the car has regained the track, and has commenced its backward movement, as and for the purposes set forth.

3. In combination with a dumping-car, a short removable section of track adapted to form a continuation of the main track, and carrying a stop or abutment, which projects into the path of the car to stop it and cause it to dump by reason of its momentum, said section being light and easily movable from place to place, substantially as set forth.

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

WILLIAM JACOB WEST.

Witnesses:

D. G. PALMER,

JOHN HOLTON.