

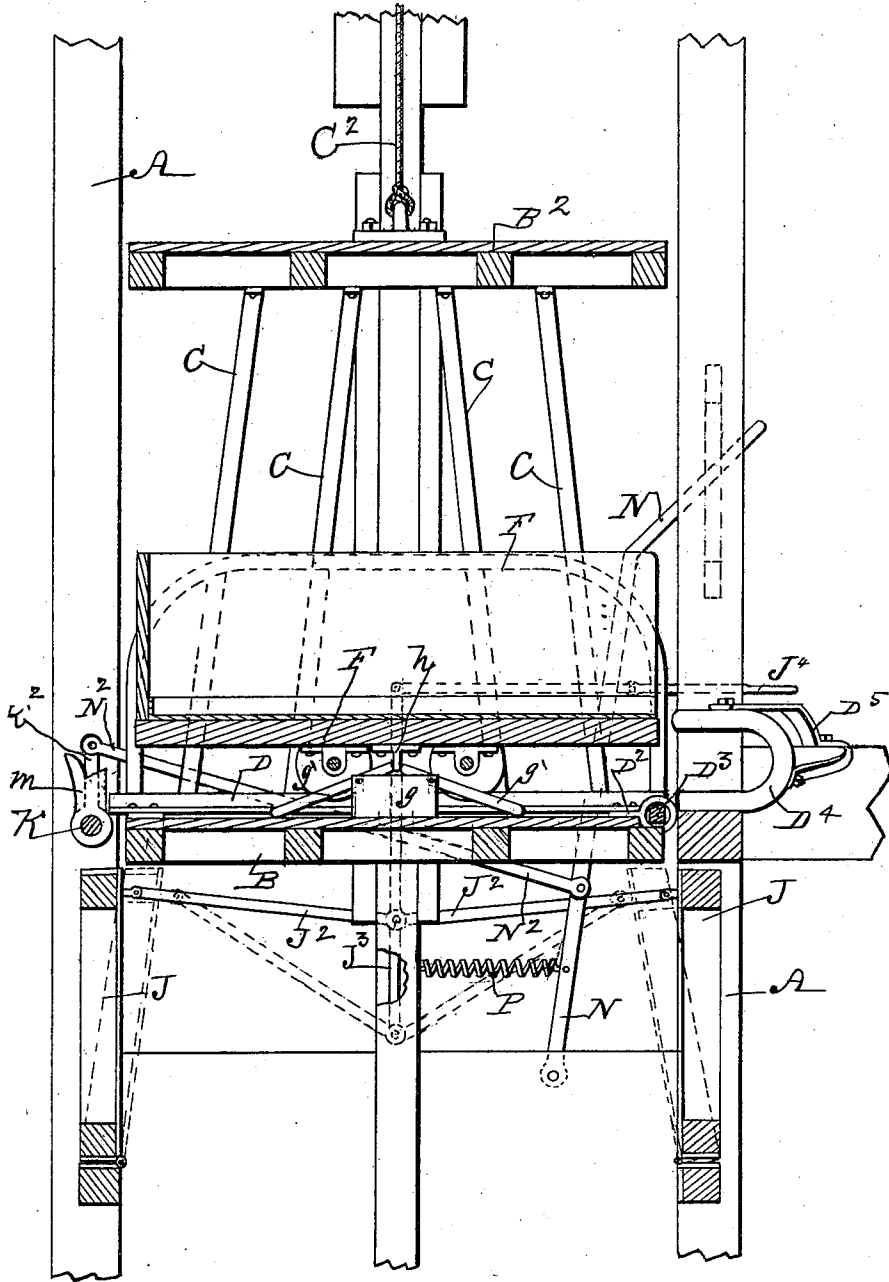
No. 692,888.

Patented Feb. 11, 1902.

J. MOSES.
CAR DUMP FOR ELEVATORS IN MINES.

(Application filed Nov. 22, 1900.)

(No Model.)



Witnesses: { Inventor: John Moses,
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UNITED STATES PATENT OFFICE.

JOHN MOSES, OF YOUNGSTOWN, IOWA.

CAR-DUMP FOR ELEVATORS IN MINES.

SPECIFICATION forming part of Letters Patent No. 692,888, dated February 11, 1902.

Application filed November 22, 1900. Serial No. 37,359. (No model.)

To all whom it may concern:

Be it known that I, JOHN MOSES, a citizen of the United States, residing at Youngstown, in the county of Polk and State of Iowa, have
5 invented a new and useful Car-Dump for Elevators in Mines, of which the following is a specification.

My object is to utilize the cage in an elevator in mines for carrying a car up and down
10 and also for operating car-dumping mechanism at the top of the elevator in such a manner that one pair of car-wheels will remain on track-rails pivotally connected with the cage, while the other pair of wheels will rest upon
15 supports fixed to the tops of corner-posts at the top of the elevator.

A further object is to prevent the dangers and accidents incident to cages and cars not being securely retained at the tops of mining-shafts and to facilitate the labor of unloading cars without disconnecting them from an elevator-cage.

My invention consists in the construction, arrangement, and combination of parts, as
25 hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which—

The letters A designate the uprights fixed in a shaft to support and guide a cage in its
30 up and down movements.

B designates the bottom, and B² the top, of a cage, rigidly connected by means of a plurality of iron bars C or in any suitable way.

C² is a cable fixed to the top of the cage for
35 hoisting and lowering it.

Track-rails D are pivotally connected with one edge of the floor or bottom B of the cage by means of hinge-irons D², fixed to the rails, and a bar D³, fixed to the cage, or in any suitable way so the free ends of the track-rails
40 can be elevated as required to tilt a car F, supported on the rails.

The cage and cars are shown only in sections, and consequently only one of the track-rails appears. In its normal condition the car rests on the track-rails when they are level, as shown. Hook-shaped stops D⁴ are fixed to the cross-piece at the top of the shaft
45 in such a manner that when the track-rail D and the car are elevated and the track-rails raised at their free ends, as required to tilt the car so that it will move outwardly, two

of the mating car-wheels will be engaged by the stops D⁴ and the car retained in an inclined position to discharge its contents. 55

D⁵ represents a brace fixed to the stop D⁴ and a portion of the frame in the shaft.

A block *g* is fixed on the top and center of the floor of the cage, and detents *g'* are pivoted to the block in such a manner that they
60 will engage an angle-iron *h*, that is fixed to the bottom of the car, and prevent the car from moving on the track-rails when they are level. These detents serve as inclined planes relative to the horizontal movement of the
65 angle-iron *h* and are operated by force of gravity to engage said iron when the track-rails and car are level on the floor of the cage.

Frames J are pivotally connected at their lower ends with the uprights A and connected with each other by means of rods J², pivoted to their top ends. J³ is a rod pivotally connected with the ends of the rods J² and a lever J⁴, that is fulcrumed to the frame in the shaft in such a manner that the frames
75 J can be placed in position by means of the lever, as shown and as required to allow the cage to move down in the shaft. In their normal condition the frames J occupy positions as indicated by dotted lines and as required to allow the cage to pass upward and to move outward and under the cage to prevent any downward descent of the cage before they are adjusted by means of the lever J⁴.

K is a rock-shaft journaled to the uprights
85 A, and *m* represents props fixed to the shaft and adapted in form to engage the free ends of the track-rails D, as required to retain the rails in inclined position and as required for tilting and unloading the car. 90

N is a hand-lever fulcrumed to the frame in the shaft and pivotally connected with an arm K² on the rock-shaft K by means of a rod N² in such a manner that the props *m* can be readily drawn under the ends of the track-rails
95 when they are elevated, as required to retain the track-rails inclined while a load on the car is being dumped therefrom.

P is a spring fixed to the frame in the shaft and to the lever N in such a manner that it
100 will normally retain the props *m* in a perpendicular position, as shown.

To tilt and unload a car when it is elevated on the cage and the cage is prevented from

descending by means of the pivoted frames J, I hoist the cage farther, so as to allow the props *m* on the rock-shaft K to be inclined inward by the operation of the hand-lever N, and then allow the cage to descend again, so that the props *m* will engage the free ends of the track-rails D so they will be retained and the rails inclined, while the floor of the cage carrying the block *g* and detents *g'* is lowered and the angle-irons *h* on the bottom of the car released, so as to allow the car to move outward and downward on the inclined track as far as the hook-shaped extensions D⁴ of the rails will allow the front wheels to go and as required to dump the contents of the car therefrom. When a car is thus advantageously unloaded, it can be readily replaced in a level position in the cage by adjusting the props *m* by means of the lever N, as required to level the track-rails D.

Having thus described the purpose of my invention and the construction, function, and operation of each part, the practical utility thereof will be obvious to persons familiar with the art to which it pertains, and

What I claim as new, and desire to secure by Letters Patent, is—

1. A cage in a shaft for elevating minerals, detents pivotally connected with the top and central portion of the floor of the cage, track-rails pivotally connected with one edge portion of the floor, a car on the track-rails, an iron fixed to the bottom and central portion of the car to engage said detents, a rock-shaft journaled to the frame in the shaft, props fixed

to the rock-shaft for supporting the track-rails in an inclined position, an arm on the rock-shaft, a coil-spring fixed to said arm and to a lever, a lever fulcrumed to the frame for operating the rock-shaft and props and means for raising and lowering the cage, arranged and combined to operate in the manner set forth for the purposes stated.

2. A car-dump for elevators in mines, parallel uprights fixed in a shaft, frames pivotally connected at their lower ends to the parallel shafts, rods pivotally connected with the upper portions of said frames, a lever connected with the rods for adjusting the frames, a cage fitted between the parallel uprights, track-rails for a car pivotally connected with one edge portion of the floor of the cage, hook-shaped stops fixed to a cross-piece at the top portions of the uprights for engaging car-wheels, detents pivoted to the top and central portion of the floor of the cage for detachably fastening the car, a car on the track-rails, an iron fixed on the under side of the car to engage said detents, a rock-shaft journaled to the uprights of the frame in the shaft, props fixed to said rock-shaft to support the free ends of track-rails, means for adjusting said rock-shaft and props and means for raising and lowering the cage, all arranged and combined to operate in the manner set forth for the purposes stated.

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Witnesses:

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