

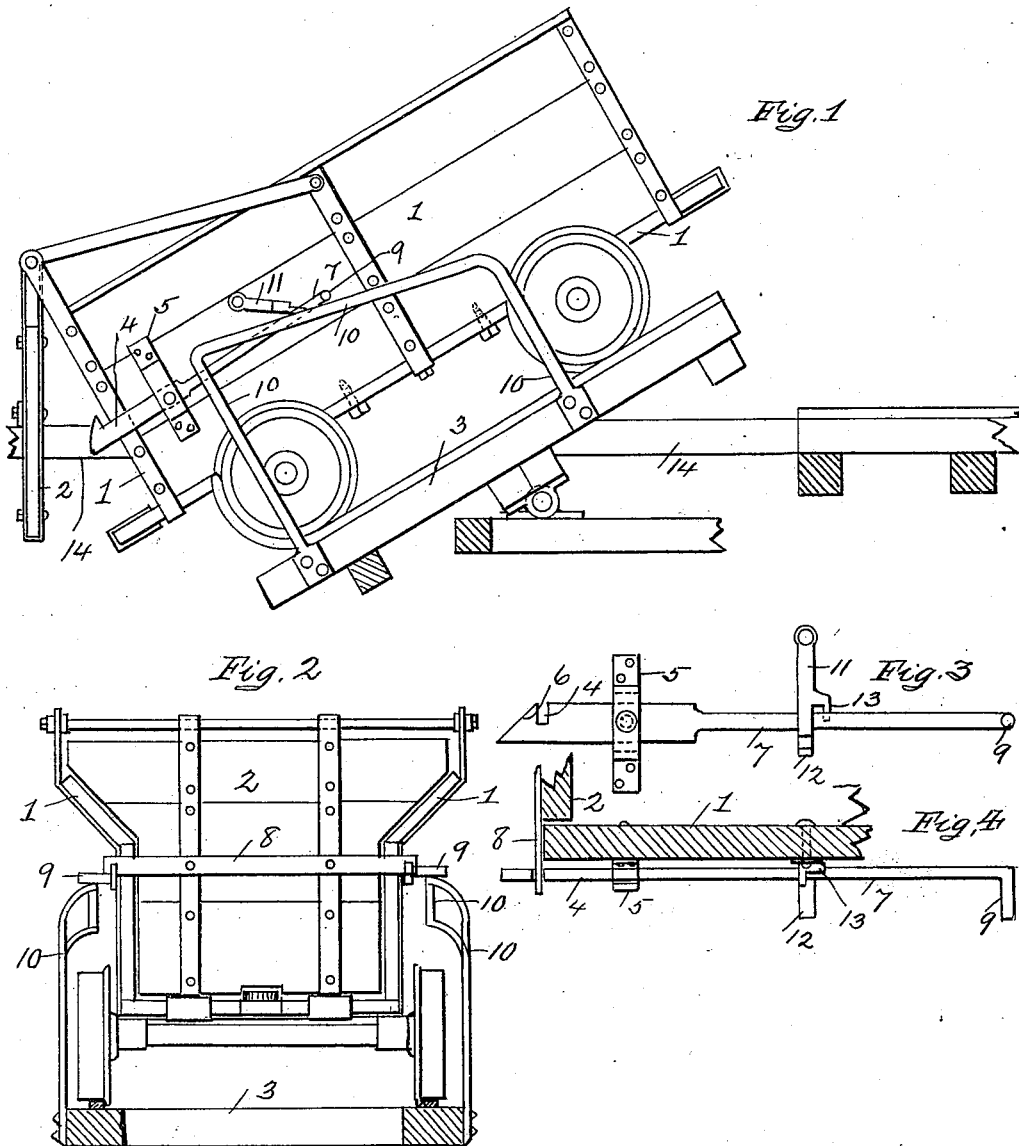
No. 645,620.

Patented Mar. 20, 1900.

J. H. GRAY.
DUMP CAR.

(Application filed Oct. 14, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

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DUMP-CAR.

SPECIFICATION forming part of Letters Patent No. 645,620, dated March 20, 1900.

Application filed October 14, 1899. Serial No. 733,623. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. GRAY, a citizen of the United States of America, residing at McDonald, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Dump-Cars; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved device for automatically opening mining-car latches; and it consists in certain details of construction and combinations of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of an ordinary mining-car located upon the tippie or dump and provided with my improved devices for locking and automatically opening the latches. Fig. 2 is an end elevation of the same. Fig. 3 is an enlarged side elevation of one of the latches and its lock. Fig. 4 is a plan view of the same.

To put my invention into practice with a mine-car such as now in common use, I attach to the frame 3 of the dump, upon either side of the car-rails, a frame 10, inclined from the rear to the front and in line with projecting portions formed upon the car-latches and locks for the same.

Hinged to the forward end of the car 1 is an end-gate 2, adapted to swing outward by gravity when the car is in an inclined position on the dump 3 in order that the contents may be discharged forward. Attached in a horizontal position across this end-gate 2 is a bar 8, the ends of which project slightly beyond the edges of the gate to engage with pivoted latches arranged upon the sides of the car 1. Each of these latches consists of a bar 7, having at its forward end a notch 4 for engagement with the cross-bar 8 and an inclined surface 6 to permit the said cross-bar 8 to ride upon and lower the outer ends of the said bar 7, so as to enter the said notches 4, thereby locking the gate. These latch-bars 7 are pivoted to straps 5 and are each provided at the rear with an outwardly-

projecting integral portion 9 to engage with the inclined rails 10, and thereby move the bars about their pivotal points to release the notches 4 from the cross-bar 8. Pivoted to the body of the car 1 in a suitable position above the latch 7 are locking-pieces 11, (see Figs. 3 and 4,) each of which is formed with angular projecting portions 12 to engage with the inclined rails 10 and also provided with inwardly-bent parts 13, which rest upon and confine the lock-bars 7 to prevent disengagement with the cross-bar 8.

In operation the car 1, moving upon the dump 3, will bring the two portions 12 of the locks 11 in contact with the inclined rails 10 and in the movement upward along the said rails disengage the said locks 11 from the latch-bars 7, as shown at Fig. 1 of the drawings. At the time of the disengagement of the locks, as above described, the projecting ends 9 of the latch-bars 7 are in contact with the inclined rails 10 and in the movement elevate the rear of the said bars, thereby disengaging the notches 4 from the cross-bar 8 of the end-gate. The car 1 when in the proper position upon the dump 3 tips forward and the contents are discharged from the open end. The car is now brought back to a horizontal position, which causes the end-gate to swing back and when off the dump 3 automatically relatch the said gate and also permit the locks 11 to fall into position to prevent the latches from jarring loose.

Having thus described my invention, I claim—

1. An automatically-operated mining-car latch consisting of the pivoted latch-levers 7, located at either side of the car, a horizontal bar 8, attached to the end-gate 2, adapted to engage with the said latch-levers, outwardly-extending portions 9, formed at the rear of the latch-bars 7, and inclined rails 10, located within reach of the same, in a manner that upon a forward movement of the car, the latches will be disengaged from the bar 8, as and for the purpose described.

2. In combination with the latch of a mining-car such as described, the locks 11 pivoted to the car above the latch-levers 7, the

piece 13 resting upon the top of the said le-
vers and the outwardly-extending portions 12,
within reach of suitable inclined rails 10, by
means of which the said locks are disen-
gaged from the latch-levers by the forward
5 movement of the car, as described.

In testimony whereof I have hereunto af-

fixed my signature in the presence of two sub-
scribing witnesses.

JOSEPH H. GRAY.

Witnesses:

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H. J. LEVIS.