

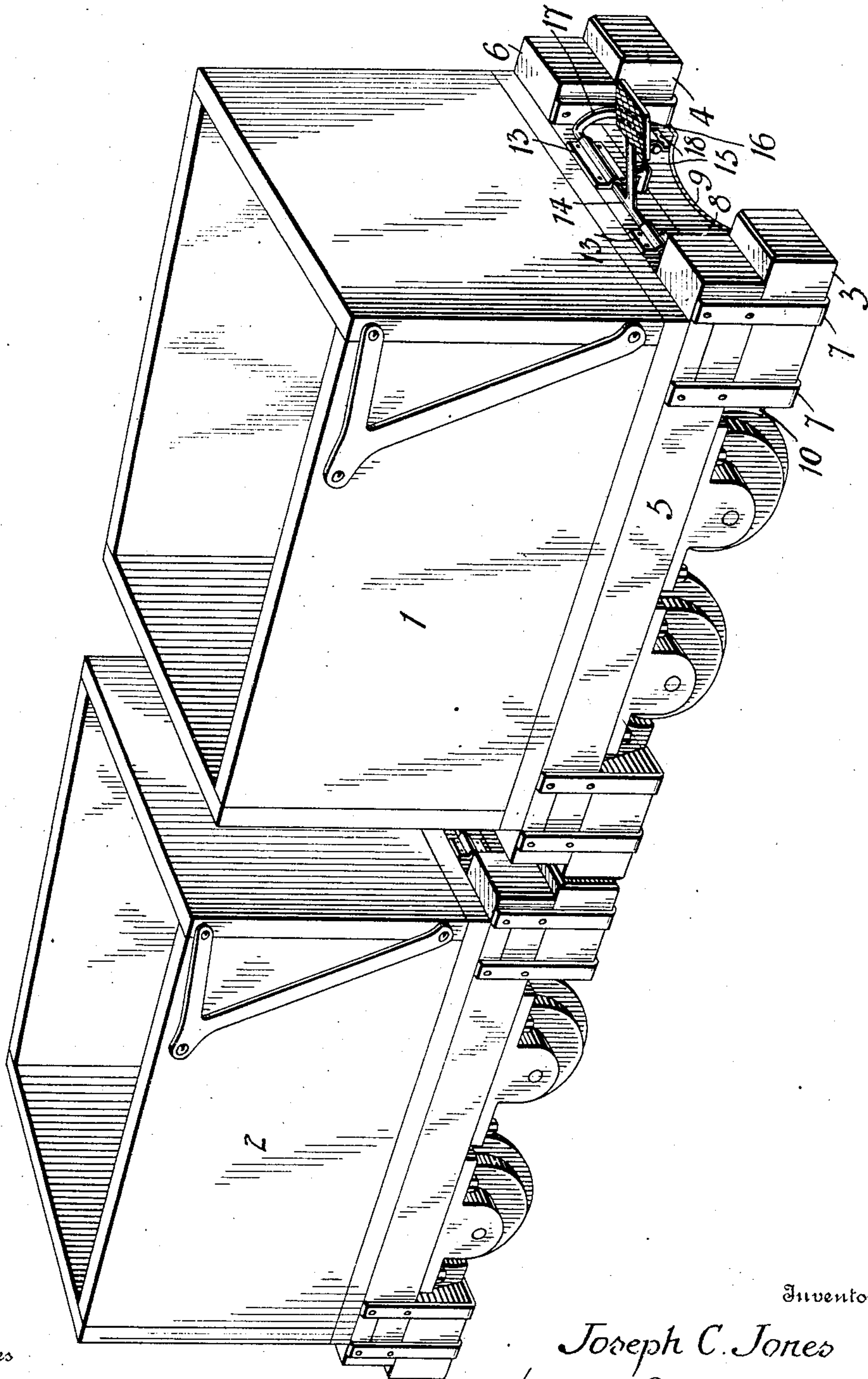
No. 786,361.

PATENTED APR. 4, 1905.

J. C. JONES,
MINING CAR BRAKE.
APPLICATION FILED DEC. 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1



Witnesses
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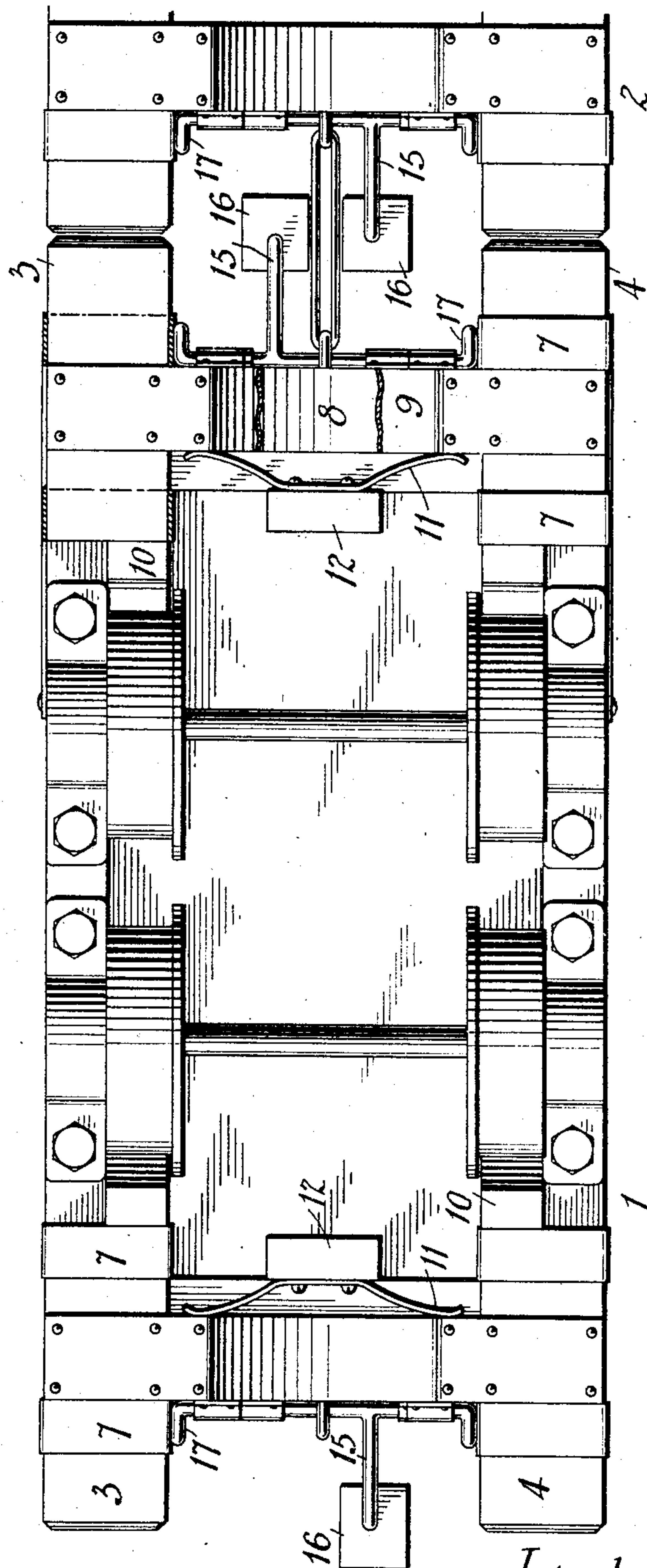
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2 SHEETS—SHEET 2.

FIG. 2



Inventor

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By

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UNITED STATES PATENT OFFICE.

JOSEPH C. JONES, OF COFFEEN, ILLINOIS.

MINING-CAR BRAKE.

SPECIFICATION forming part of Letters Patent No. 786,361, dated April 4, 1905.

Application filed December 13, 1904. Serial No. 236,658.

To all whom it may concern:

Be it known that I, JOSEPH C. JONES, a citizen of the United States, residing at Coffeen, in the county of Montgomery and State of Illinois, have invented certain new and useful Improvements in Mining-Car Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention, which relates to mining-cars, has for its object the production of an improved brake which is capable of ready attachment to existing mining-cars and is adapted for both manual and automatic operation, a feature of the invention being a manual controller by which the brakes are set by the driver, and a further feature being a bumper connected with a brake-shoe and adapted to engage a similar bumper on an adjacent car to effect the automatic setting of the brakes on both cars.

The nature of the invention will be readily comprehended, reference being had to the following detailed description and to the accompanying drawings, illustrating the invention in its preferred form of embodiment, it being understood that various changes and modifications may be made therein without exceeding the scope of the concluding claims.

In the drawings, Figure 1 is a perspective view of two mining-cars equipped with brake mechanism embodying my invention. Fig. 2 is a bottom plan view of one of the cars and of one end of an adjacent car.

Referring to the drawings by numerals, 1 2 designate mining-cars, which may be of the usual or of any preferred construction. Inasmuch as the proper operation of the improved brake mechanism depends upon the employment of a plurality of cars, I have in the drawings illustrated two such cars, although in practice a larger number is usually employed. The brake mechanism for the several cars will be substantially identical in construction and operation.

The brake mechanism in its preferred form consists of bumpers 3 4, slidably suspended from the sills 5 6 by straps 7 7, said bumpers normally projecting at their outer ends from the ends of the sills, as shown. The bumpers

3 4 are intermediately joined together to move in unison by a cross-piece 8, which joint or connection is preferably reinforced by a strip 9, screwed or bolted to the bumpers and cross-piece. Secured on the inner end of each bumper is a brake-shoe 10, which may be of the usual form. The brake-shoes are normally in unset position, which position is obtained by the action of a leaf-spring 11, secured at its center to a block 12 on the car-frame, the free ends of the spring bearing against the inner side of the cross-piece 8. Pivoted on the end of the car through the medium of eye-plates 13 13 is a lever 14, one arm 15 of which is provided with a step 16. The lever is equipped at its other end with two arms 17 17, the end of each arm entering eye-plates 18 18 on the cross-piece 8. Each end of the car is equipped with a brake mechanism similar to that above described in detail.

In the operation of the invention a single car is braked by the driver, who by stepping on the lever-arm 15 16 and bringing his weight to bear on said lever moves the bumpers and brake-shoes at his end of the car inwardly to cause said shoes to engage the tread portions of the wheels. In mining operations, however, it is usual to employ a number of cars coupled together, and the operation of the brake mechanism of a train of cars is as follows: The driver is usually at the front end of the foremost car, and when it is desired to reduce or check the speed of the train the driver applies his weight to the lever of the brake mechanism at said front end, whereupon the speed of the foremost car is checked, the result being that the bumpers of the brake mechanisms on the rear end of the foremost car and on the ends of the following cars are brought into forcible contact, with the result that all of the bumpers and brake-shoes are moved to automatically set the brakes. It will be observed that each car is provided at each end with brake mechanisms, including a manually-controlled lever, so that the manual control of any brake is permitted and regardless of the direction of movement of the train. The employment of a foot-operated lever leaves the hands of the driver free to attend to the control of the mules or other animals

employed to draw the train. Moreover, any portion of the weight of the driver may be brought to bear upon a brake mechanism, so that the movement of the train is readily controlled. The ends 15 16 of the levers are in offset relation, thereby avoiding interference and providing adjacent steps to be occupied by a driver or other employee between any two cars in the event that the brakes are to be set.

I claim as my invention—

1. A plurality of mining-cars each having slidable bumpers, brake elements connected with said bumpers to obtain the automatic setting thereof, and means for effecting the manual setting of said elements including a lever moved by the weight of an operator.

2. A plurality of mining-cars each having at each end slidable bumpers projecting at their outer ends beyond the car-frames and carrying brake-shoes at their inner ends, a foot-operated lever operatively connected with the mechanism to effect the manual setting of the brakes, and means for releasing the brakes.

3. A plurality of mining-cars having at each end slidable bumpers normally projecting at

their outer ends beyond the car-frame and carrying brake-shoes at their inner ends, a cross-piece connecting each pair of bumpers, a lever pivoted to the car-frame and having two arms pivoted to the cross-piece and a third arm provided with a step, and a spring for releasing the brakes.

4. A plurality of mining-cars each having at each end slidable bumpers normally projecting at their outer ends beyond the car-frame and carrying brake-shoes at their inner ends, a cross-piece connecting each pair of bumpers, a spring pressing against the cross-piece to release the brakes, a lever pivoted on the car-frame and having two arms pivoted to the cross-piece and a third arm provided with a step, said third arm being in offset relation to the third arm of a lever on the adjacent end of another car.

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

JOSEPH C. JONES.

Witnesses:

JEFF HILL,

his

STEPHEN X WHITE.

mark