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J. D. TUSAR.

DEVICE FOR MOVING CARS.

APPLICATION FILED FEB. 6, 1906.

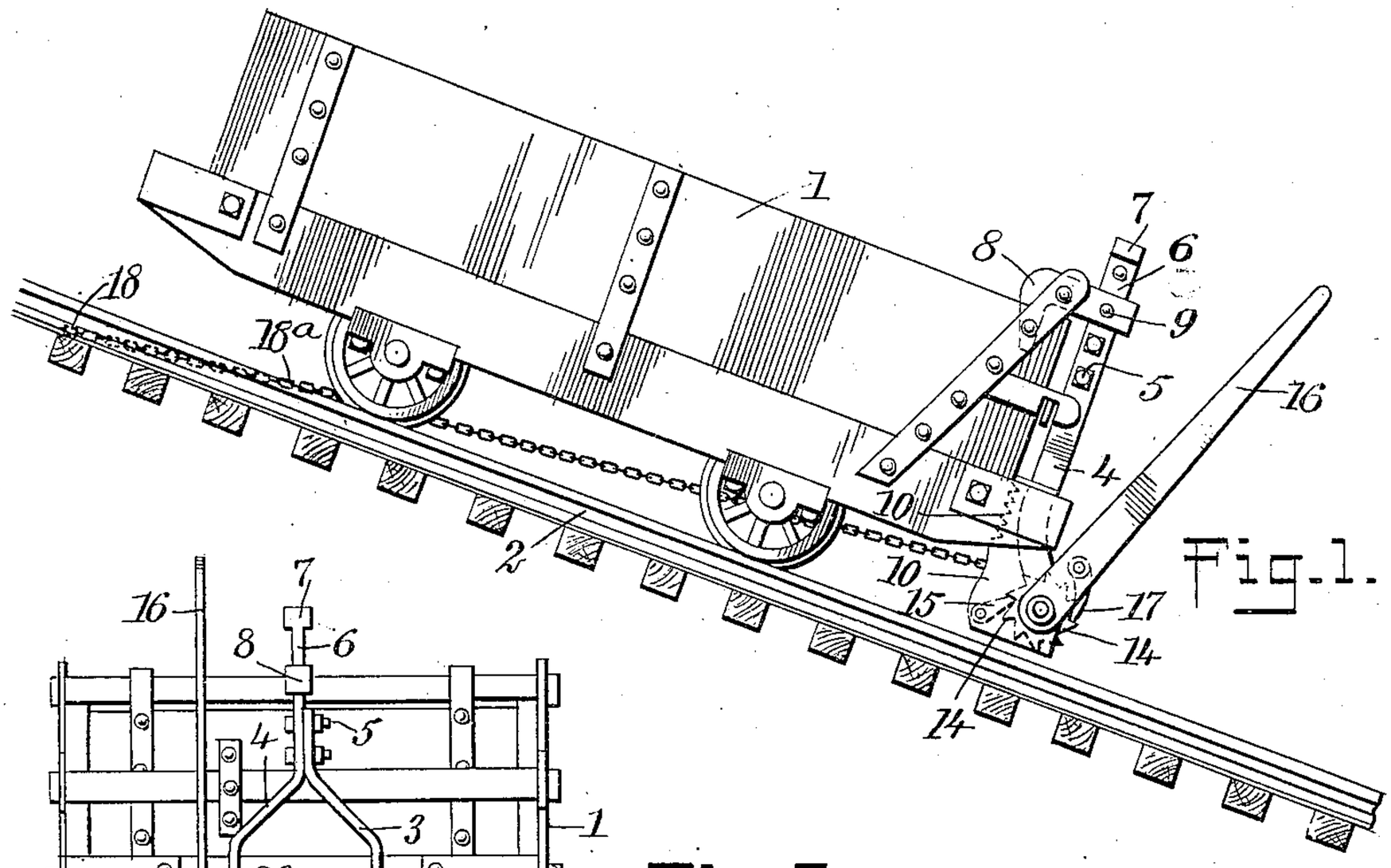

Fig. 1.

Fig. 2.

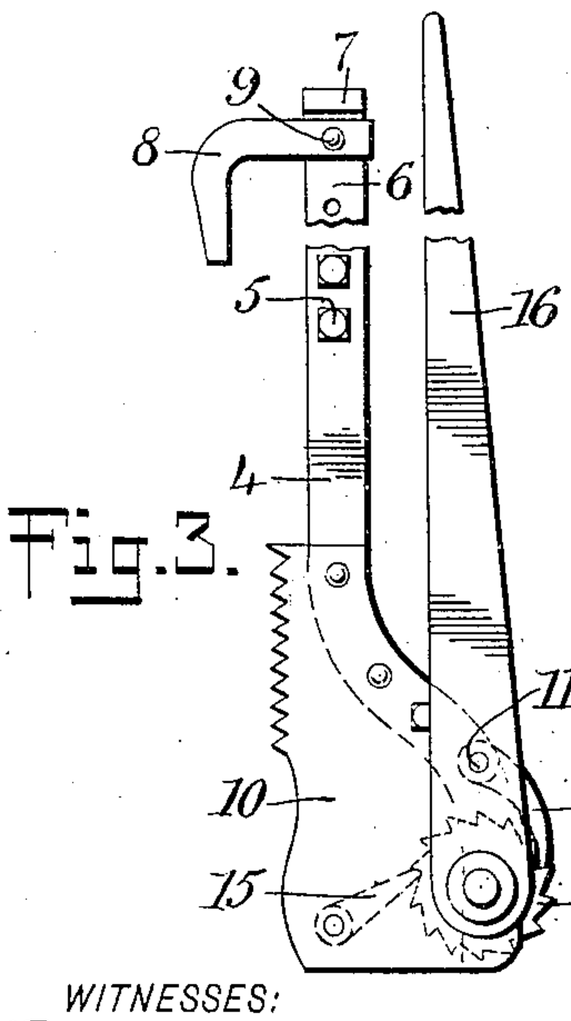

Fig. 3.

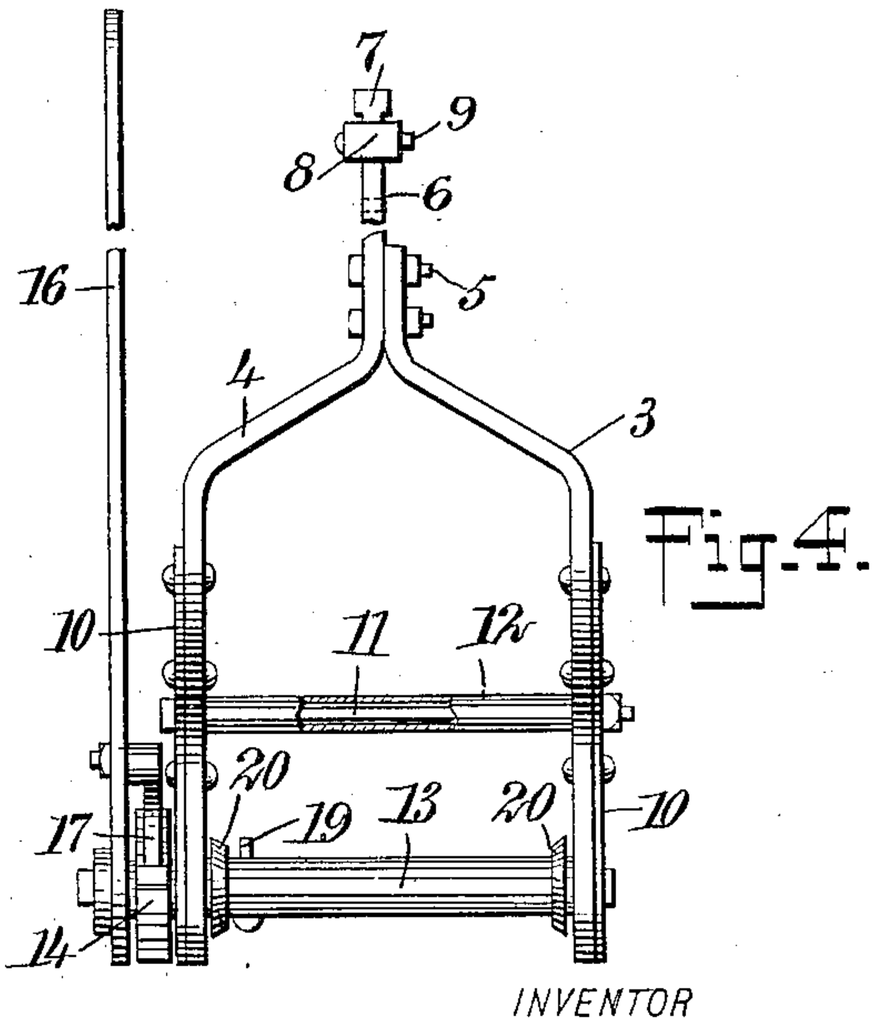

Fig. 4.

WITNESSES:

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DEVICE FOR MOVING CARS.

No. 831,908. Specification of Letters Patent. Patented Sept. 25, 1906.

Application filed February 6, 1906. Serial No. 299,711.

To all whom it may concern:

Be it known that I, JOSEPH DAVID TUSAR, a citizen of the United States, and a resident of Forest City, in the county of Susquehanna and State of Pennsylvania, have invented a new and Improved Device for Moving Cars, of which the following is a full, clear, and exact description.

My invention relates to a device adapted to be attached to heavy cars in order to move them a short distance, and in particular to a device adapted to move a mining-car up a steep grade; but obviously it may also be applied to move them on a level road, if desired.

The object of my invention is to provide a device of this character at a reasonable cost, which may be quickly and easily attached to the common type of mining-cars, and which will be simple and thoroughly reliable in operation.

A further object of my invention is to provide a device of this character which may be operated by one man to move a heavy car up a steep grade, if desired, without any danger to the operator.

With the above-mentioned and other objects in view I have shown in the accompanying drawings the construction of a device embodying the principles of my invention and in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a mining-car on a steep grade and having my invention applied thereto. Fig. 2 is an end elevation of the same. Fig. 3 is a side elevation, on an enlarged scale, of the actuating means, parts being broken away to economize in space; and Fig. 4 is an elevation of the same, taken at a right angle to the view shown in Fig. 3.

Referring now to the drawings in detail, 1 represents a small car, such as is commonly employed in mining, on a steep track 2. In Figs. 1 and 2 this car is equipped with my invention, which in the present instance is a substantially Y-shaped frame comprising two metallic arms 3 and 4, bolted together at 5. One branch of this Y-frame extends upwardly a suitable distance, as shown at 6, and terminates in an enlarged head 7. Between the bolts 5 and the head 7 is mounted an adjustable hook 8, which is movable to adapt it for use in various sized cars and may be clamped in the desired position by a bolt 9, passing through suitable holes in the extension 6. Each lower arm of the Y-frame is preferably provided with a tooth-bearing plate 10, riveted thereon, which is adapted to bite into the end of the car when the hook 8 is placed over the end thereof, as shown in Fig. 1. The arms of the Y-frame are preferably braced by a cross-bolt 11, which tends to draw the two arms together, and a sleeve 12 on the bolt which spaces the arms firmly in the proper position.

Journaled in the lower ends of the Y-frame is a drum 13, and rigid with this drum is a ratchet-wheel 14. One of the frame-arms is provided with a pawl 15, which coacts with the ratchet and allows it to turn in one direction, but prevents a rotation in the opposite direction in the well-known manner. Pivoted concentrically with the ratchet 14 is a hand-lever 16, provided with a pawl 17, by which the drum is rotated step by step as the hand-lever is oscillated, the lever moving through forty-five degrees or less, as desired.

A suitable chain or cable is secured at a convenient point ahead of the car—as, for instance, to a tie or rail 18, and the other end of this chain or cable is removably secured to the drum 13 by means of a suitable pin 19 thereon; and I prefer to provide the drum with two beveled end guards 20 to prevent the chain or cable from coming in contact with the frame as the drum winds up the chain or cable.

From the foregoing description the operation of my invention will be readily understood, and a recital of a practical employment of the same will be sufficient to describe the use thereof; but it is to be understood that my invention may be utilized in other premises than the one recited.

In certain mines where it is desired to move a heavy car up a steep grade the chain or cable 18[a] may be secured to the track, as shown at 18 in Fig. 1, and the other end thereof fastened to the pin 19 on the drum 13, the hook 8 being adjusted to fit over the end of the car, as clearly shown in Fig. 1. The operator now oscillates the handle 16, and the drum is rotated to wind up the chain by virtue of the coacting ratchet 14 and its pawls 15 and 17, as is easily understood. The teeth 10 bite into the car-frame and hold the device securely while the car is advanced to the desired position.

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

1. In an apparatus of the class described, the combination with the car, of a Y-frame having its body portion provided with a hook for engaging the edge of the car and having a drum provided with a ratchet-wheel journaled in the arms thereof, said arms having toothed portions for engaging the end of the car, a lever mounted for oscillation on the shaft and having a pawl for engaging the ratchet-wheel, a pawl on one of the arms, and a chain adapted to be attached to the track in advance of the car and winding upon the drum.

2. In an apparatus of the class described, the combination with a car, of a moving device comprising a drum, means for rotating the drum, means for detachably connecting the drum with the car, and a chain having one end winding upon the drum and adapted to have its free end attached to the track in advance of the car.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH DAVID TUSAR.

Witnesses:

ALEX SHERASICK,

MARTIN his × mark GERCHMAN.