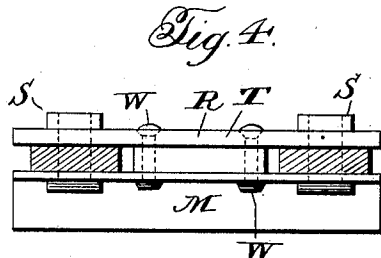
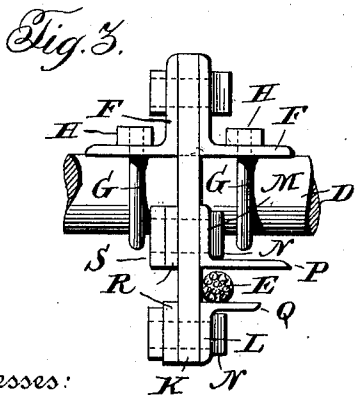
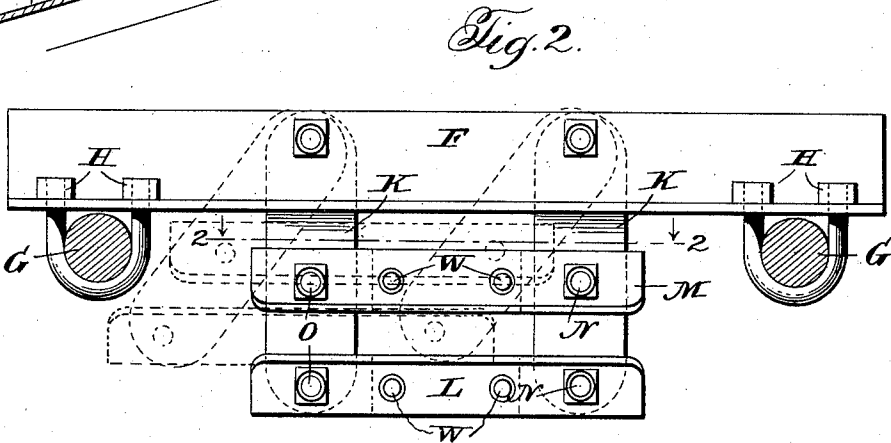
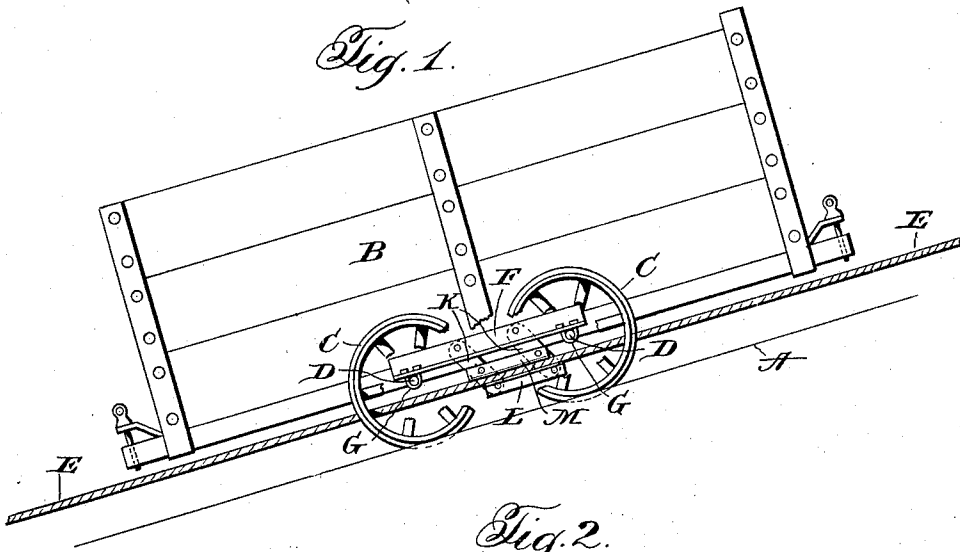


W. B. LLOYD.
 MINE CAR AND THE LIKE.
 APPLICATION FILED MAY 22, 1911.

1,003,477.

Patented Sept. 19, 1911.



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UNITED STATES PATENT OFFICE.

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MINE-CAR AND THE LIKE.

1,003,477.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed May 22, 1911. Serial No. 628,757.

To all whom it may concern:

Be it known that I, WILLIAM B. LLOYD, a citizen of the United States, residing at Yankee, in the county of Colfax and Territory of New Mexico, have invented certain new and useful Improvements in Mine-Cars and the Like, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in mine cars and the like, and more particularly the means for engaging the same with suitable hauling means therefor.

Specifically, the invention contemplates the provision of an improved rope clutch designed for the purpose above stated, but capable of use in various other connections as will be apparent.

A practical embodiment of the invention comprises a clutch of the character stated, having opposing gripping members carried by and movably related to the car adapted to receive a hauling rope therebetween and to grip said rope under the drawing action thereof resisted by the weight of the car and its load, if any.

For the sake of illustration, I have shown in the accompanying drawings forming part hereof a convenient embodiment of the invention, and the details in the construction and arrangement of the several parts thereof will be clear from the specific description hereinafter contained when read in connection with said drawings.

In the drawings:—Figure 1 is a side elevation of an inclined plane having operatively associated therewith a hauling rope or cable, and a car possessing my improved clutch engaging said rope or cable. Fig. 2 is a side elevation of the clutch detached, the inactive position thereof being shown in full lines and the gripping position in dotted lines, Fig. 3 is an end view, and Fig. 4 is a horizontal section on the line 2—2 of Fig. 2.

Referring more specifically to the drawings wherein like reference characters designate corresponding features in the several views, A represents an inclined plane over which mine cars and the like may travel, the same being provided with suitable track rails, not necessary to be herein illustrated, one of the cars being indicated at B, the body of which may be of any ordinary or preferred construction. The car is pro-

vided with two pairs of wheels C, their axles being shown at D arranged centrally of the car body.

E is a hauling rope or cable of any suitable type, preferably endless, adapted to be gripped at any point throughout its extent.

Resting upon and supported by the axles D a pair of parallel spaced metallic beams F are secured through the medium of stirrup-like bolts or yokes G. The beams are approximately L-shape in cross-section, their base flanges bearing upon the axles and receiving the arms of the bolts just referred to, the latter being fastened through the medium of nuts H.

Pivotaly suspended within the space between the L-beams F is a pair of separated parallel links K carrying at their lower ends a clutch member L, and intermediate of the ends thereof an opposing clutch member M, these clutch members being pivoted to the links by means of pivots N and O respectively. The clutch members are of metal of angular cross-section, their base flanges lying adjacent to the surfaces of the links K and receiving the pivots, while their side flanges extend outwardly in proper relation to receive the rope or cable E therebetween through the open side P, the flange on the upper clutch member F extending outwardly beyond the corresponding flange of the lower clutch member L, as indicated at Q, to constitute a guide when inserting the rope or cable between said members.

R represents a washer plate interposed between the links K and the nuts S securing the pivots M and N in place, and T are suitable filler blocks for the spaces between the links and between the washer plate R and the clutch members, each clutch member and plate R being secured together and the filler block retained in place through the medium of rivets W.

In operation, it will be clear that when it is desired to move a car, it will simply be necessary to shift the clutch members into their frictional engagement with the rope or cable, when the drawing action of the cable resisted by the weight of the car, or the car and its load, will cause the clutch to forcibly grip the cable and thus obtain the desired hauling engagement between the car and cable.

While I have herein disclosed one specific embodiment of the invention, it will be

readily understood that changes and alterations may be made therein without departing from the spirit of the invention.

I claim:

- 5 1. The combination with a car and a hauling rope therefor, of a clutch adapted to grip said rope comprising a pair of approximately parallel gripping jaws, and supporting means therefor comprising separated 10 pivoted members, one member being pivoted to both jaws near one end of the latter and the other member being pivoted to both jaws near the opposite end thereof so that by movement of said supporting means the 15 jaws will be relatively shifted while maintaining their parallel relation, substantially as described.
- 20 2. The combination with a car and a hauling rope therefor, of a clutch adapted to grip said rope, said clutch comprising oppositely disposed movably related clutch members, and means movably supporting 25 the same from the car, said movable supporting members being connected to both clutch members and adapted to shift the clutch members into gripping relation.
- 30 3. The combination with a car and a hauling rope therefor, of a clutch adapted to grip said rope, said clutch comprising oppositely disposed movably related clutch members, and means movably supporting the 35 same from the car, said supporting means including a pivoted link pivotally connected to the clutch members and adapted to shift the clutch members into gripping relation.
- 40 4. The combination with a car and a hauling rope therefor, of a clutch adapted to grip the rope, said clutch comprising oppositely disposed movably related clutch members, and means movably supporting the 45 same from the car, said supporting means comprising a pivoted link pivotally connected to the clutch members and adapted to shift the clutch members into gripping relation, the clutch members being arranged to provide a side opening for the accommodation of the rope.
- 50 5. The combination with a car and a hauling rope therefor, of a clutch adapted to automatically grip the rope under the pulling force thereof resisted by the weight of the car, said clutch comprising oppositely

disposed movably related clutch members, and means movably supporting the same 55 from the car, said supporting means consisting of a pair of pivoted links pivotally connected to the clutch members, the clutch members being arranged to provide a side opening for the accommodation of the rope, 60 and one of said members projecting outwardly beyond the other to constitute a guide.

6. The combination with a car and a hauling cable therefor, of a clutch adapted to 65 engage said cable, and means for supporting the clutch comprising an angle beam, the base flange of which is secured to the car and the side flange of which is connected to a part of the clutch. 70

7. The combination with a car and a hauling cable therefor, of a clutch adapted to 75 engage said cable, and means for supporting the clutch comprising an angle beam, the base flange of which is secured to the car and the side flange of which is connected to a part of the clutch, said clutch part comprising a pair of movable links carrying in 80 movable relation the opposing clutch members.

8. The combination with a car and a hauling rope therefor, of a clutch adapted to 85 grip the rope comprising approximately parallel gripping members, means movably connected to both of said gripping members for supporting and shifting the same into 90 gripping relation, and means for maintaining the gripping members in parallel relation while in their open or closed position.

9. The combination with a car and a hauling rope therefor, of a clutch adapted to 95 grip said rope, said clutch comprising oppositely disposed movably related clutch members, and means supporting the same from the car, the clutch members being arranged to provide a side opening for the accommodation of the rope and one of the side members projecting outwardly beyond the other to constitute a guide.

In testimony whereof I affix my signature in presence of two witnesses. 100

WILLIAM B. LLOYD.

Witnesses:

JOHN CONNER,
HENRY F. DUNKEL.