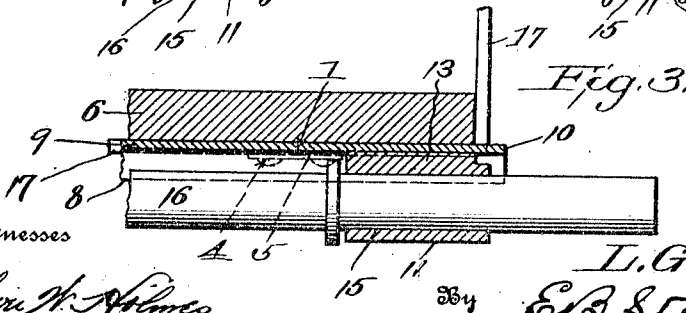
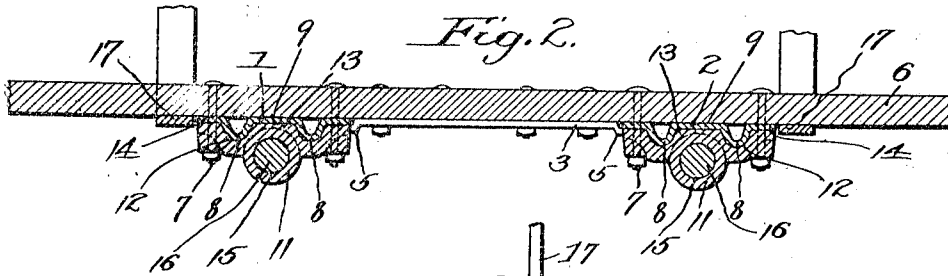
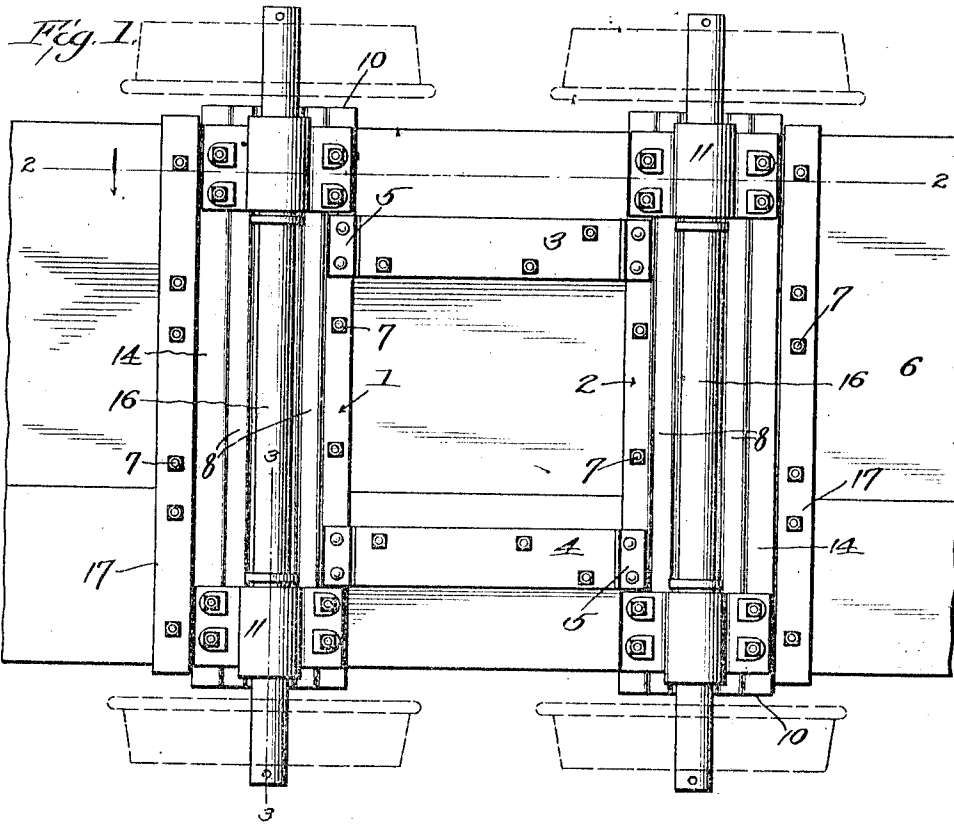


1,048,309.

Patented Dec. 24, 1912



Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

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MINING-CAR.

1,048,309.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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To all whom it may concern:

Be it known that I, LOUIS G. HELMICK, a citizen of the United States of America, residing at Fairmont, in the county of Marion and State of West Virginia, have invented certain new and useful Improvements in Mining-Cars, of which the following is a specification.

This invention relates to certain new and useful improvements in mining cars and more particularly to the means for mounting the axle boxes; the object being to provide an axle box mounting in the form of a rectangular frame composed of transverse corrugated bars which are connected together by longitudinal bars, said corrugated bars forming supports for the axle boxes and at the same time strengthening the body of the car when placed in position thereon so as to prevent the sagging of the car when loaded, thereby overcoming the difficulties now existing with mine cars now in use, as when overloaded the body sags to such an extent that the axle is bound, thereby preventing the free turning of the same.

Another object of my invention is to provide axle boxes which conform in shape to the shape of the corrugated bars in cross section, so that when in position thereon, all danger of the same moving is prevented, and at the same time the axle is mounted adjacent the bottom of the car in order to produce a low mine car which will have all of the advantages of the cars now in use.

Another object of my invention is to provide dust guards for the axle boxes by extending the ends of the transverse bars outwardly to each side of the car body.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings—Figure 1, is an inverted plan view of the mining car showing the application of my improved axle box mounting in position thereon; Fig. 2, is a vertical section taken on the line 2—2 of Fig. 1; and Fig. 3, is a section taken on the line 3—3 of Fig. 1.

Like numerals of reference refer to corresponding parts in the several figures of the drawings.

In carrying out my improved invention I employ a pair of transverse bars 1 and 2 which are connected adjacent their ends by

longitudinal bars 3 and 4 forming substantially a rectangular frame which can be formed of any suitable metal but is herein shown formed of flat bars, the longitudinal bars 3 and 4 being offset at their ends as shown at 5 and riveted to the transverse bars by rivets so as to form a strong and rigid frame which can be placed in position upon the bottom of a mine car 6, and secured in that position by bolts 7. By this construction the axle box mounting can be formed and mounted on a car body or the same detached therefrom as desired.

The transverse bars 1 and 2 are corrugated longitudinally to form spaced longitudinal ribs 8 forming a central flat portion 9 as clearly shown in Fig. 2, said ribs strengthening the cross bars in such a manner that when great strain is placed upon the same, the body is prevented from sagging. The cross bars are of a greater width than the width of the car body 6 and project outwardly to each side thereof, as shown at 10 in order to protect the axle boxes as will be hereinafter fully described.

Mounted upon the cross bars adjacent each end thereof are axle boxes 11 which are provided with grooves 12 and a central rib portion 13 adapted to fit within the central groove of the cross bars 1 and 2; said boxes conforming in shape to the shape of the cross bars in cross section, and adapted to be interlocked and fastened together by bolts 14 passing through the bottom of the car as shown in Fig. 2. The axle boxes are provided with journal portions 15 in which are mounted axles 16 which are of the ordinary construction, and from this construction, it will be seen that the axles occupy the space between the longitudinal ribs 8 of the cross bars in order to protect and to bring the same as close as possible to the under surface of the car.

It will be seen that the axle boxes are mounted under the body of the car, and that the transverse bars project beyond the sides thereof so as to form dust guards which are very essential in mine cars as when the car is being loaded the coal when thrown into the same is prevented from dropping onto the axle boxes. The car is formed with the usual transverse bars 17 which extend up along the sides of the car, as clearly shown and in constructing a car in accordance with my invention, these bars are arranged

and abut against the edges of the transverse axle box carrying bars in order to prevent any longitudinal movement.

From the foregoing description, it will be seen that I have provided an axle box mounting for mine cars which comprises a frame having reinforced transverse bars so constructed that they form dust guards and provide novel means for mounting the axle boxes in such a manner that they are maintained in their proper position without any danger of moving.

I claim:

1. A mine car having a frame secured to the body thereof, said frame being provided with transverse bars having spaced longitudinal ribs, said bars being of greater length than the width of the car, and axle boxes provided with spaced grooves and a central rib adapted to fit and be secured upon said cross bar.

2. The combination with a car body, of a pair of transverse bars secured in position upon the bottom thereof and extending out to each side thereof, said bars being provided with spaced longitudinal ribs forming a central groove, longitudinal bars provided with offset ends connecting said transverse bars adjacent the ends thereof, and axle boxes provided with spaced grooves to receive said ribs, and a central rib fitting within the groove of said transverse bars, said axle boxes being secured upon said transverse bars by bolts passing through said boxes, bars and bottom of the car.

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

LOUIS G. HELMICK.

Witnesses:

FRED. HELMICK,
W. B. CROWL.