Dec. 31, 1929. J. F. O'CONNOR 1,742,007

CENTER PIN LOCKING ARRANGEMENT FOR RAILWAY CARS

Filed April 14, 1928

Fig. 1

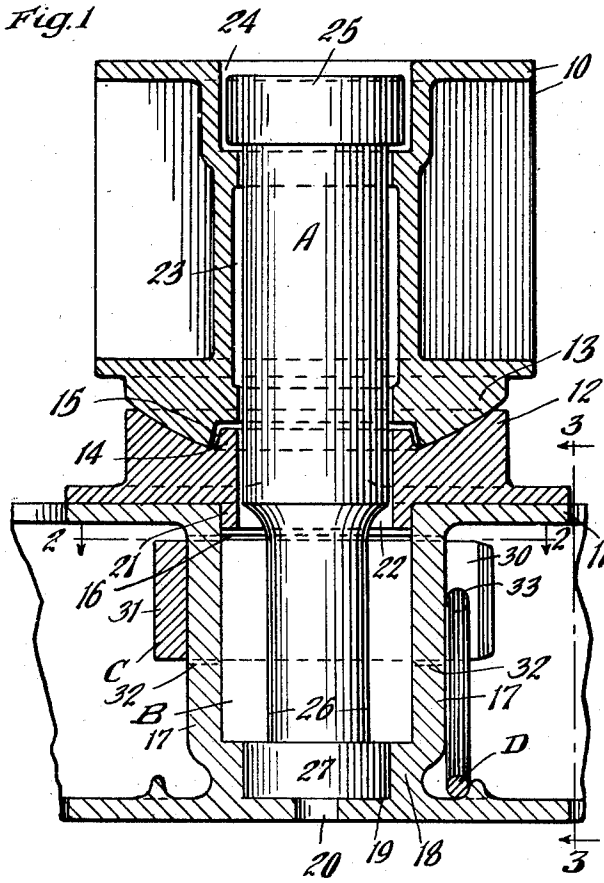


Fig. 3

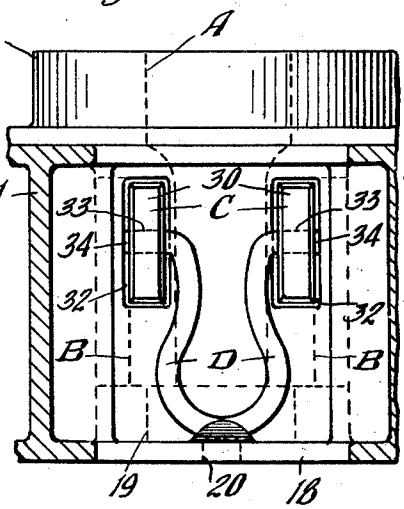


Fig. 2

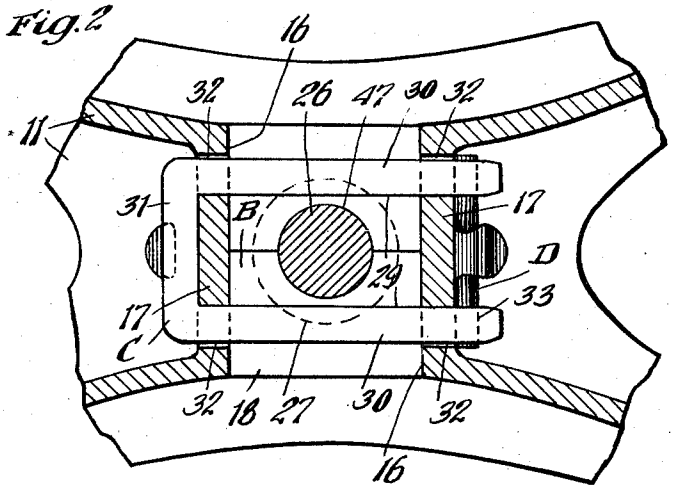
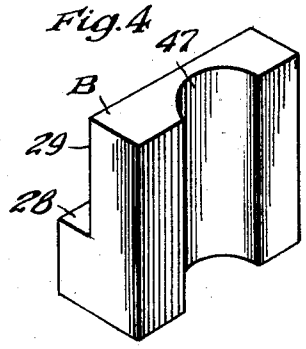


Fig. 4



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UNITED STATES PATENT OFFICE

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CENTER-PIN-LOCKING ARRANGEMENT FOR RAILWAY CARS

Application filed April 14, 1928. Serial No. 269,934.

This invention relates to improvements in center pin locking arrangement for railway cars.

The main object of the invention is to provide means for locking the body and truck bolster members of railway cars together, which is efficient and reliable and prevents accidental separation of the parts, including a center pin element extending through one of the co-operating bolster members and into a pocket or recess provided in the other bolster member, and a sectional locking element comprising laterally separable blocks embracing the portion of the pin disposed in said pocket and interlocked therewith, said locking element being held against vertical displacement by engagement with abutment faces on the bolster member, wherein special detachable locking means is provided for preventing lateral separation of the locking blocks.

Other and further objects of this invention will more clearly appear from the description and claims hereinafter following.

In the drawing, forming a part of this specification, Figure 1 is a longitudinal, vertical sectional view through a portion of a body bolster member and co-operating truck bolster member of a railway car, illustrating my improvements in connection therewith. Figure 2 is a horizontal, longitudinal, sectional view, corresponding substantially to the line 2—2 of Figure 1. Figure 3 is a vertical, transverse sectional view, corresponding substantially to the line 3—3 of Figure 1. And Figure 4 is a detailed perspective view of one of the locking blocks of my improved locking arrangement.

In said drawings, 10 indicates one of the body bolsters of a railway car and 11 the co-operating truck bolster member. The body bolster member 10 is swiveled to the member 11 by the usual center bearing arrangement comprising a bearing block 12 mounted on the body bolster member, and a downwardly extending portion 13 on the body bolster co-operating therewith. The engaging bearing portions of the parts 12 and 13, as shown, are spherical and the block 12 is provided with a central upwardly projecting portion 14 which engages within a recess or pocket 15 of the bearing member 13.

In carrying out my invention, I provide the truck bolster member 11 with a transverse pocket 16, defined by vertical side walls 17—17 which are formed integral with the web portions of the member 11 and a bottom wall 18. The bottom wall 18 is provided with a central opening or seat 19, which is adapted to receive the bottom portion of the center pin. The bottom wall of the seat 19 is preferably provided with a central perforation 20, through which a tool may be inserted to drive out the center pin. The bearing block 12 of the center bearing is provided with a downwardly projecting rectangular section 21 centrally thereof, which fits between the side walls of the pocket 16. The bearing block 12 has a central opening 22, adapted to accommodate the center pin.

The body bolster 10 is provided with a center pin opening 23, which is in substantial alignment with the opening 22 of the block 12 and the opening 19 of the truck bolster member 11. As shown, the pin receiving opening 23 is preferably centrally enlarged and is provided with a center pin head receiving pocket 24 at the upper end thereof, which is of larger diameter than the opening 23.

The center pin locking arrangement of my improved device comprises, broadly, a center pin proper A, a pair of locking blocks B—B, a U-shaped retaining member C, and a retaining clip D.

The center pin A has the main body portion thereof of cylindrical shape and of such a diameter as to fit the center pin receiving opening 23. At the upper end, the pin A is provided with an enlarged head portion 25 which is disposed within the pocket 24. The bottom end portion of the pin substantially fits the pocket 19 of the truck bolster member 11. Inwardly of the lower end, the pin A is cut away, as indicated at 26, thereby providing a head 27 at the lower end of the pin, which is of such a diameter as to pass freely through the pin receiving opening 23 of the body bolster. The cut away section 26 of the pin preferably corresponds to the height of

the pocket 16. As will be clear, upon reference to Figures 1 and 2, the side walls 17 of the pocket are spaced an appreciable distance from the cut away section 26 of the pin.

The retaining blocks B are two in number and are disposed at opposite sides of the cut away section 26 of the pin and, when the parts are assembled, closely embrace the same. As shown in Figure 4, each block B is provided with a semi-cylindrical opening 47 on the inner side thereof, adapted to fit the portion 26 of the pin. On the outer side, the top portion of the block is cut away, thereby providing a horizontal abutment shoulder 28 and a vertically disposed side face 29. Each block B is of such a width as to fit between the side walls 17 of the pocket and is of such a height as to fit snugly between the bottom wall of the pocket 16 and the projecting portion 21 of the bearing block 12. When the blocks B are assembled in clamping relation with the pin A, the outer sides of the two blocks are substantially flush with the opposite side arms of the retaining member C.

As will be evident, when the blocks B are in clamping relation with the pin, the head 27 abuts the bottom sides of the blocks B and is thereby held within the pocket 19.

The retaining member C is of U-shape and has relatively wide spaced side arms 30—30, which embrace the upper portions of the blocks B, and a transverse end connecting section 31. The side walls of the pocket 16 are provided with aligned openings 32—32, adapted to accommodate the arms 30 of the U-shaped retaining member C. The transverse section 31 of the member C is in abutting relation with the outer side of one of the walls 17 of the pocket 16, and the free ends of the arms 30 extend through the other wall 17. The free ends of the arms 30 are provided with transverse openings 33, adapted to receive the opposite ends of the clip D.

The clip D is in the form of a substantially U-shaped member, having laterally projecting, outwardly turned portions 34 at the free ends of the arms thereof. The clip D is made of resilient metal, so that the same may be contracted to dispose the free end portions of the arms between the arms 30 of the member C. The lateral projecting portions 34 of the arms are adapted to spring into the openings 33 of the member C and thereby prevent removal of the same. In addition to serving as a means for preventing lateral separation of the blocks B, the U-shaped member C also holds the blocks B against upward movement in the pocket 16 by engagement of the arms 30 with the horizontal shoulders 28 of the blocks B. The arms 30 substantially fit the openings 32 of the side wall 17 of the pocket, so that the same is held against vertical displacement.

In connecting the body and truck bolster members, the center pin A is inserted through the top of the body bolster 10 and passed through the opening 23 thereof, seating the head portion 27 in the pocket 19 of the truck bolster member 11. The two blocks B are then inserted in a lateral direction within the pocket 16 and forced into embracing relation with the reduced or cut away section 26 of the pin. The U-shaped retaining member C is then placed in position by inserting the arms thereof through the openings 32 of the side wall 17 of the pocket and is secured in position by the retaining clip D. It will be evident that when the parts have been thus assembled, the center pin A is held against vertical displacement with respect to the truck bolster member 11 by the blocks B which engage the inner side of the head 27 at the lower end of the pin, downward movement of the pin being prevented by engagement with the bottom wall of the pocket 19. Vertical separation of the body bolster 10, with respect to the truck bolster member 11, is prevented by the head 25 at the upper end of the pin, which has shouldered engagement with the bottom wall of the pocket 24.

While I have herein shown and described what I consider the preferred manner of carrying out my invention, the same is merely illustrative and I contemplate all changes and modifications which come within the scope of the claims appended hereto.

I claim:

1. In a center pin locking arrangement for railway cars, the combination with a body bolster member; of a truck bolster member, one of said bolsters having a pocket having a side wall; a center pin connecting said members, said pin being headed at one end, and having the other end extending into the bolster member provided with the pocket, and extending through said pocket, the portion of the pin extending into said last named bolster member being notched, the head of said pin having shouldered engagement with the other bolster member; removable locking members within said pocket embracing the pin and engaging the notched section thereof to hold the pin to the corresponding bolster member; and detachable holding means extending through the wall of said pocket and embracing said locking members to prevent lateral separation thereof.

2. In a center pin locking arrangement for railway cars, the combination with a body bolster member and a cooperating truck bolster member, said members having aligned center pin receiving openings, one of said bolsters being provided with a transverse pocket intersecting the center pin receiving opening thereof; a center pin disposed in said opening, said pin having a head at one end having shouldered engagement with one of said bolsters, the other end of the pin extending through said pocket; a sectional locking member disposed in the pocket and hav-

ing shouldered engagement with the pin to prevent endwise displacement of the same; and means extending transversely through said pocket and secured to the corresponding bolster for holding said sectional locking member against lateral separation.

3. In a center pin locking arrangement for railway cars, the combination with a body bolster member; of a truck bolster member, said members having aligned pin receiving openings; a center pin for connecting said members, said pin extending through the opening of one of said bolsters and having a head member at one end having shouldered engagement with said last-named bolster member, said pin extending into the opening of the other bolster member and having a head on the end extending into said bolster member, said head being of such a size as to pass freely through the pin receiving openings of the bolster members; a sectional locking element having shouldered engagement with said last-named head; and a detachable U-shaped locking element embracing said sections to prevent lateral separation thereof and displacement in an upward direction with respect to said bolster member.

4. In a center pin locking arrangement for railway cars, the combination with a body bolster member and a truck bolster member provided with aligned center pin receiving openings; of a center pin connecting said members, said center pin being headed at opposite ends, one of said heads being of greater width than the pin receiving openings, and the other head being of a size to pass freely through said openings; locking means comprising a pair of detachable members embracing the pin inwardly of said last-named head and fixed against vertical displacement with respect to the corresponding bolster member; and a removable retaining element having spaced arms embracing said detachable members to prevent lateral separation thereof.

5. In a center pin locking arrangement for railway cars, the combination with a body bolster provided with a center pin receiving opening; of a truck bolster member, said truck bolster member being provided with a transverse pocket open at opposite ends and having spaced side walls, said pocket having a pin receiving seat at the bottom thereof; a center pin having a head at one end having shouldered engagement with the body bolster member, the other end of said pin extending through said pocket and having the extremity thereof disposed in said seat at the bottom of the pocket, said pin being cut away inwardly of said end to provide an annular shoulder; a pair of retaining blocks seated in said pocket and embracing the cut away section of the pin and engaging said annular shoulder to hold said pin against endwise movement; a U-shaped retaining element having the arms thereof extending through the side walls of the pocket and embracing said blocks to prevent removal thereof from said pocket; and a retaining clip secured to the free end of said arms of the U-shaped member outwardly of the corresponding side wall of the car.

In witness that I claim the foregoing I have hereunto subscribed my name this 12th day of April, 1928.

JOHN F. O'CONNOR.