Feb. 4, 1930. L. L. ROBINSON, JR 1,746,129

LOCOMOTIVE DRIVING BOX

Filed May 18, 1927

Fig. 2.

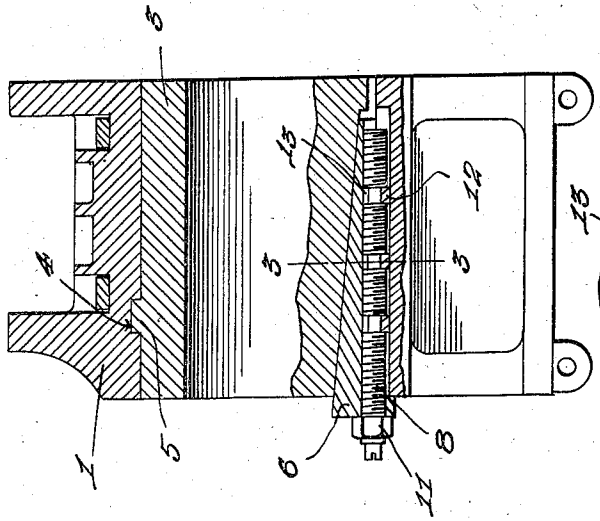


Fig. 5.

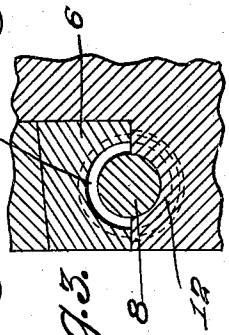


Fig. 1.

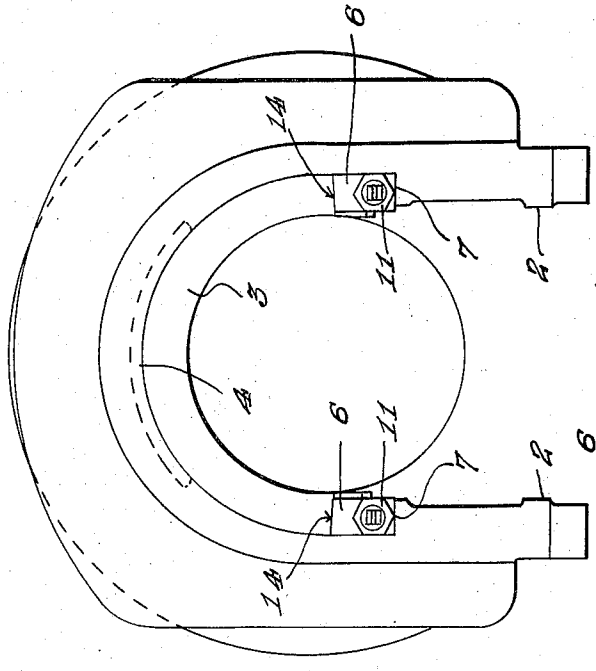
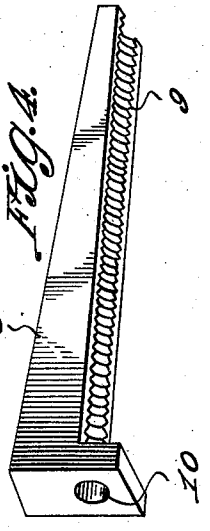


Fig. 4.



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UNITED STATES PATENT OFFICE

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LOCOMOTIVE DRIVING BOX

Application filed May 18, 1927. Serial No. 192,427.

This invention relates to improvements in locomotive drive boxes, the general object of the invention being to provide a removable crown brass for the box which is held in place by the contracting action exerted by the box upon the crown, with wedge means for permitting the crown to be removed after the box has been expanded.

Another object of the invention is to provide interlocking means between the crown and the box for preventing longitudinal movement of the crown in the box.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a front view of the improved box and its crown.

Figure 2 is a vertical sectional view through Figure 1.

Figure 3 is a section on line 3—3 of Figure 2.

Figure 4 is a perspective view of one of the wedges.

In these views 1 indicates the box which is provided with the inwardly extending projections 2 adjacent the lower ends of its limbs, these projections being adapted to receive a jack or other expanding tool so that the limbs can be forced apart to permit the crown brass 3 to be put in place. The top interior wall of the box is formed with a groove 4 and the crown is formed with a rib 5 for engaging the groove so that the crown is held against longitudinal movement in the box. Wedges 6 are placed in the spaces between the side edges of the crown and the shoulders 7 formed on the box and each wedge is adjustable through means of a screw shaft 8 placed in a groove formed in each shoulder and engaging a groove 9 provided with teeth in the wedge, the shaft passing through a hole 10 formed in the outer end of each wedge where it receives a lock nut 11.

Curved lugs 12 are formed at spaced intervals in the groove in each shoulder and these lugs engage annular grooves 13 formed in each shaft. Thus these lugs will prevent longitudinal movement of the shaft so that when the shaft is turned, its threads, engaging the teeth in the bottom of groove 9, will cause the wedge to be moved longitudinally in one direction or the other according to the direction of rotary movement of the shaft. The top of each wedge is tapered and each edge of the crown is correspondingly tapered, as shown at 14, these tapered faces preventing the wedge from moving toward the journal. As will be seen, the grooves do not extend through the rear part of the crown so that this rear part is left intact and acts as a guide in removing the crown.

From the foregoing it will be seen that after the box has been expanded by a jack or other tool and the wedges removed, the old crown brass can be taken from the box and a new one substituted. The wedges are then put in place, after which the jack is removed so that the box will contract and thus exert pressure upon the crown to hold it against movement. The wedges fill the gap that must be provided in order to let the crown lower itself to permit the rib 5 to pass below the groove 4 so that the crown can be removed without interference on the part of the rib. This rib and its groove prevents longitudinal movement of the crown and by this arrangement the crown can drop below the center of the journal which allows more bearing of the brass and also provides a taper by which the screw wedge is applied.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A locomotive drive box capable of being expanded, a crown brass arranged in said

box and received by the box when contracted, a rib formed with the top of the crown brass transversely thereof and received in a groove in the box to prevent longitudinal movement of the crown brass, said crown brass having its lower ends inclined for a portion of their length, shoulders formed in the box in spaced relation to the inclined portions, wedges between the inclined portions and shoulders respectively, and being formed with toothed grooves, curved lugs formed at intervals in grooves formed in the shoulders, the grooves of the shoulders cooperating with the grooves of the wedges, screw shafts arranged in cooperating grooves for longitudinal movement of said wedges with respect to the inclined portions, said screw shafts being formed with annular grooves to receive the wedges to prevent longitudinal movement of the screw shafts, and a lock nut for each screw shaft.

In testimony whereof I affix my signature.

LESTER LOUDIA ROBINSON, JR.