(No Model.)

W. K. CHRISTIE.

JOURNAL BOX.

No. 385,503. Patented July 3, 1888.

Fig. 1.

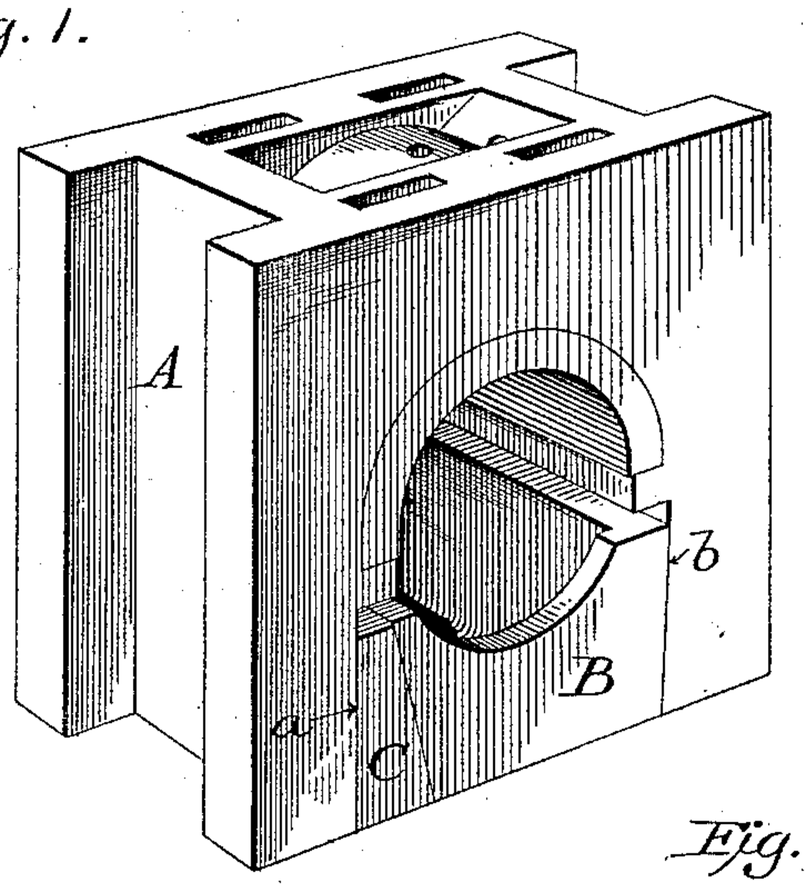


Fig. 2.

Fig. 4.

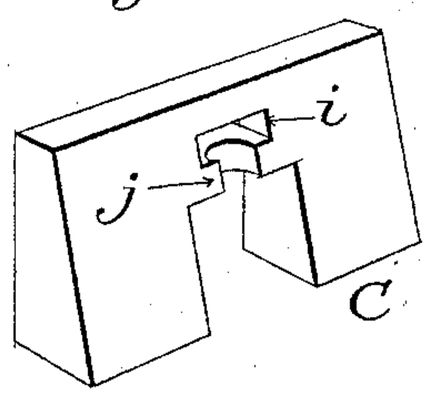


Fig. 3.

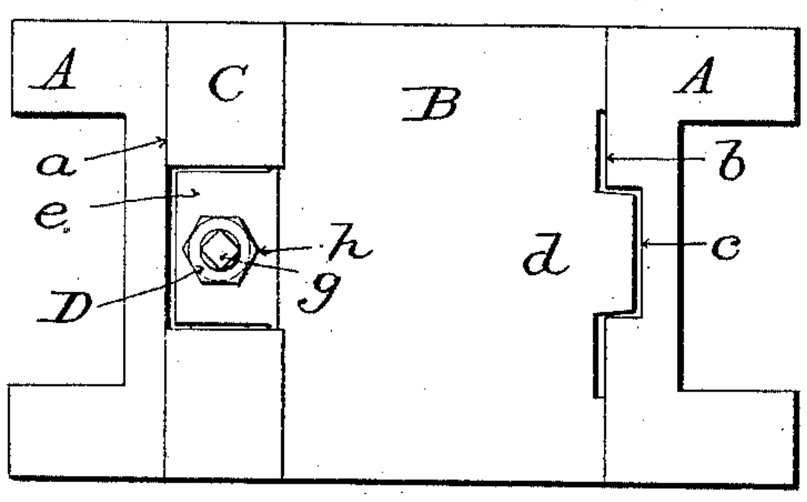


Fig. 5.

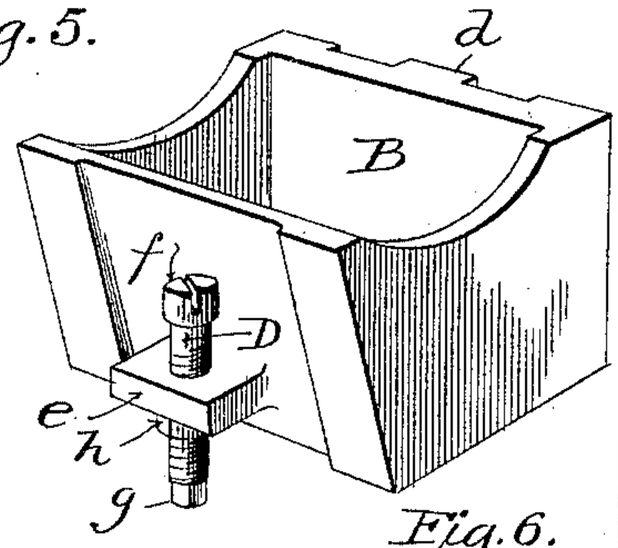
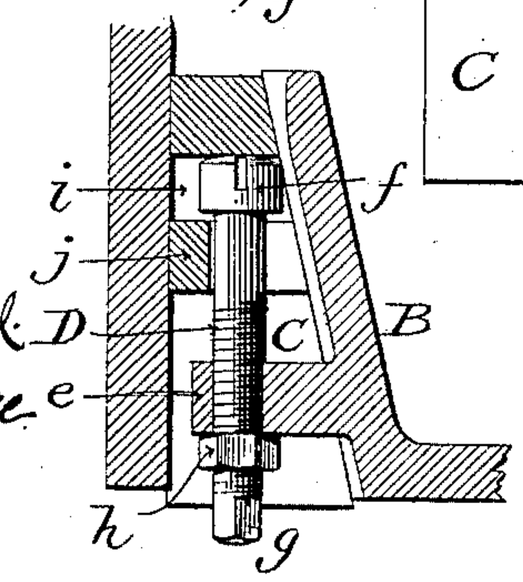


Fig. 6.



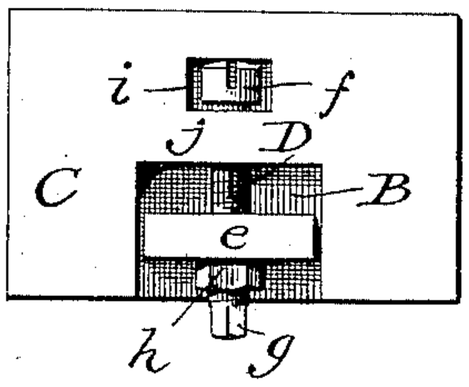


Fig. 7.

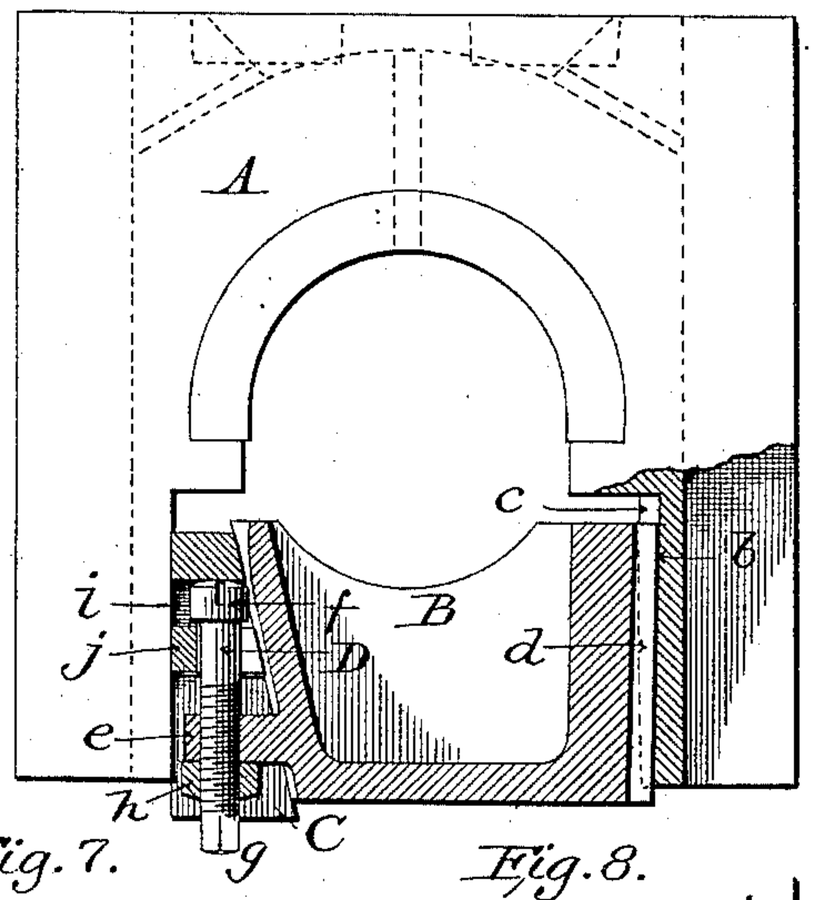
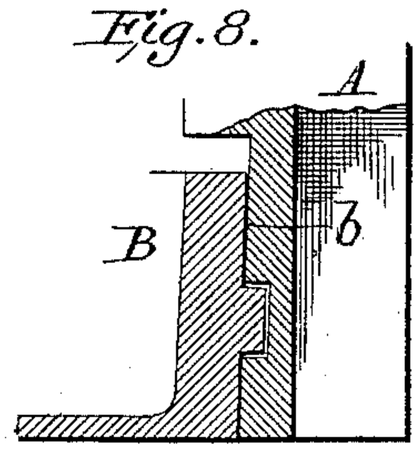


Fig. 8.



Witnesses:

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his Attys.

UNITED STATES PATENT OFFICE.

WILLIAM K. CHRISTIE, OF IONIA, MICHIGAN.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 385,503, dated July 3, 1888.

Application filed March 19, 1888. Serial No. 267,757. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. CHRISTIE, of Ionia, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification.

My invention relates to journal-boxes, and has reference to a novel means for adjusting the parts thereof, all as hereinafter fully set forth and claimed.

In the drawings, Figure 1 is a perspective view of my improved box or bearing; Fig. 2, a bottom plan view; Fig. 3, a face view, partly in section; Fig. 4, a perspective view of the wedge-block; Fig. 5, a perspective view of the cellar or hollow box; Fig. 6, an enlarged sectional view showing the manner in which the wedge and the hollow box or cellar are connected; Fig. 7, a face view of the wedge-block and cellar, and Fig. 8 a view of a slight modification.

The objects of the invention are to provide for the ready removal of the cellar or hollow box to permit it to be refilled with lubricant; to so construct the bearing that should the machinery become deranged the cellar will not be wrenched or jarred out of the box or bearing, and, finally, to permit of a limited movement of the wedge-block or the cellar relatively to each other, so as to prevent the breakage of the parts when subjected to unusual strains.

The invention is designed primarily for use upon locomotives, though of course it is apparent that it can be used upon other machines.

A indicates the box proper, which is recessed on its under side to receive the cellar B and wedge-block C, as shown in Figs. 1, 2, and 3. One wall, *a*, of the recess is practically parallel with the edge of box A and straight and smooth, while the other wall, *b*, is slightly inclined and provided with a groove, *c*, as clearly shown in Figs. 2 and 3, to receive a tongue, *d*, formed upon the side of the cellar or hollow box B.

The cellar or hollow box B is closed at its ends, sides, and bottom, and the end walls are cut away to conform to the shaft and permit the lubricant (waste and grease) to be brought close up to the shaft. Both of the side walls of the box B are inclined, one of them, as before stated, being provided with a tongue, *d*, to fit the groove *c* in the box proper, while upon the other wall is a laterally-projecting lug, *e*, which is tapped to receive a screw or bolt, D, as shown in Figs. 2, 3, 5, 6, and 7.

The screw or bolt D is provided with a head, *f*, and its lower end is squared or made angular, as at *g*, Figs. 2, 3, 5, 6, and 7, to receive a wrench by which it may be turned. A jam-nut, *h*, is employed to hold or lock the screw and prevent it from turning accidentally.

Wedge-block C is adapted to fit snugly between the cellar B and the plane wall of the recess in block A, and, as shown in Figs. 2, 3, 4, 6, and 7, is adapted to straddle the lug *e*, formed upon the cellar, and also to support the head of the screw D. The wedge C is provided with a recess or socket, *i*, to receive the head *f* of the screw D, the width of the socket vertically being in practice about one-sixteenth of an inch greater than the vertical measurement of the head of the screw, so as to permit a little lost motion, which under certain conditions it is desirable to possess. The bottom of this socket *i* is formed by a cross-bar, *j*, connecting the two legs of the wedge, as shown in Figs. 3, 4, 6, and 7, the said bar or support being cut away on its front edge to receive the stem of the screw and to allow the wedge to fit or lie closely against the cellar B.

In order to insert the wedge and cellar into the recess, it is necessary to turn the screw and move the wedge upon or relatively to the cellar until the measurement of the wedge and cellar equals the width of the mouth of the recess, as the mouth of the latter is its narrowest part. After the parts are inserted it is only necessary to turn the screw in the reverse direction, and as its head is journaled in the wedge and its threaded stem passes through the lug on the cellar the wedge will be drawn into the recess.

Owing to the inclination of the wall *b* of the recess and the similar inclination of the corresponding wall of the cellar, the latter is prevented from dropping out of the recess while the screw is being turned and the wedge forced up between the straight wall of the recess and the cellar. After the wedge is drawn into proper position the jam-nut is screwed up

against the under side of the lug and effectually prevents the screw from turning.

When it is desired to remove the wedge, it is only necessary to turn the screw or bolt to the left, the under face of the head bearing upon the upper face of the cross-bar of the wedge and serving to draw the latter downward.

From the foregoing description it will be seen that I possess a bearing that may be readily and quickly adjusted, one that is simple and cheap in construction, and one that will not rock or tip and bind the shaft.

It will also be observed that by reason of the lost motion or play allowed between the head of the screw and the wedge the cellar is permitted to yield slightly in case of abnormal strains, and thereby prevent the breakage of the lug upon the cellar.

Instead of making the wall *b* of the recess sloping or inclined, the said wall may be made straight and provided with a socket to receive a lug formed upon the box or cellar, as shown in Fig. 8.

Having thus described my invention, what I claim is—

1. In combination with a journal box or bearing having a recess, a cellar, and a wedge adapted to fit into the recess, and a screw carried by the cellar and arranged to bear upon the wedge.

2. In combination with a journal box or bearing having a recess, a cellar, and a wedge fitting into said recess, and a screw carried by the cellar and adapted to bear upon the wedge, the screw being so arranged as to permit a slight movement of the cellar independently of the wedge when subjected to abnormal strains.

3. In combination with a box or bearing having a recess and a groove formed in one wall of said recess, a wedge, a cellar provided with a tongue to fit into the groove, and a screw carried by the cellar.

4. In combination with a box or bearing having a recess, one of the walls of which is inclined, a wedge, a cellar, and a screw carried by the cellar.

5. In combination with a box or bearing having a recess, one of the walls of which is inclined and one of which is provided with a groove, a wedge, a cellar provided with a rib or tongue to fit the groove, and a screw carried by the cellar.

6. In combination with a box or bearing having a recess, a cellar provided with a threaded lug, a screw passing through said lug, and a wedge provided with a seat for the head of the screw.

7. In combination with a box or bearing having a recess, a cellar provided with a threaded lug, a screw passing through the lug, and a wedge provided with a seat or socket for the head of the screw, the height of the socket being greater than the vertical measurement of the screw-head.

8. In combination with a box or bearing having a recess, a cellar provided with a threaded lug, a screw passing through said lug, and a wedge provided with a seat for the head of the screw and with a cross-bar cut away to receive the stem of the screw.

9. In combination with a box or bearing having a recess, a cellar provided with a threaded lug, a screw passing through said lug, and a wedge provided with a seat for the head of the screw and adapted to straddle the lug.

10. In combination with a box or bearing having a recess, a cellar provided with a lug, a screw passing through the lug, a wedge, and a jam-nut.

In witness whereof I hereunto set my hand in the presence of two witnesses.

WILLIAM K. CHRISTIE.

Witnesses:

GEORGE A. O'KEEFE,

CHAS. E. HUNTLEY.