

(Model.)

J. J. RUST.
BOX.

No. 417,684.

Patented Dec. 17, 1889.

Fig. 1.

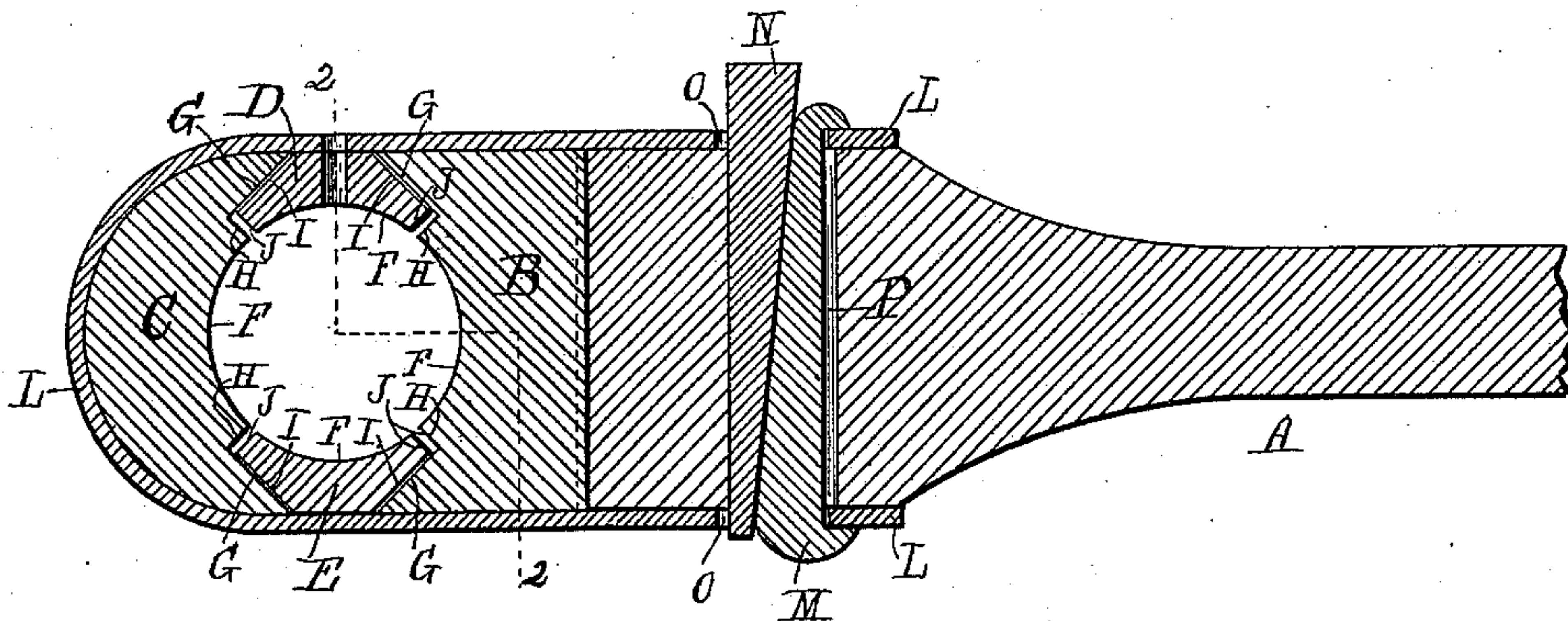
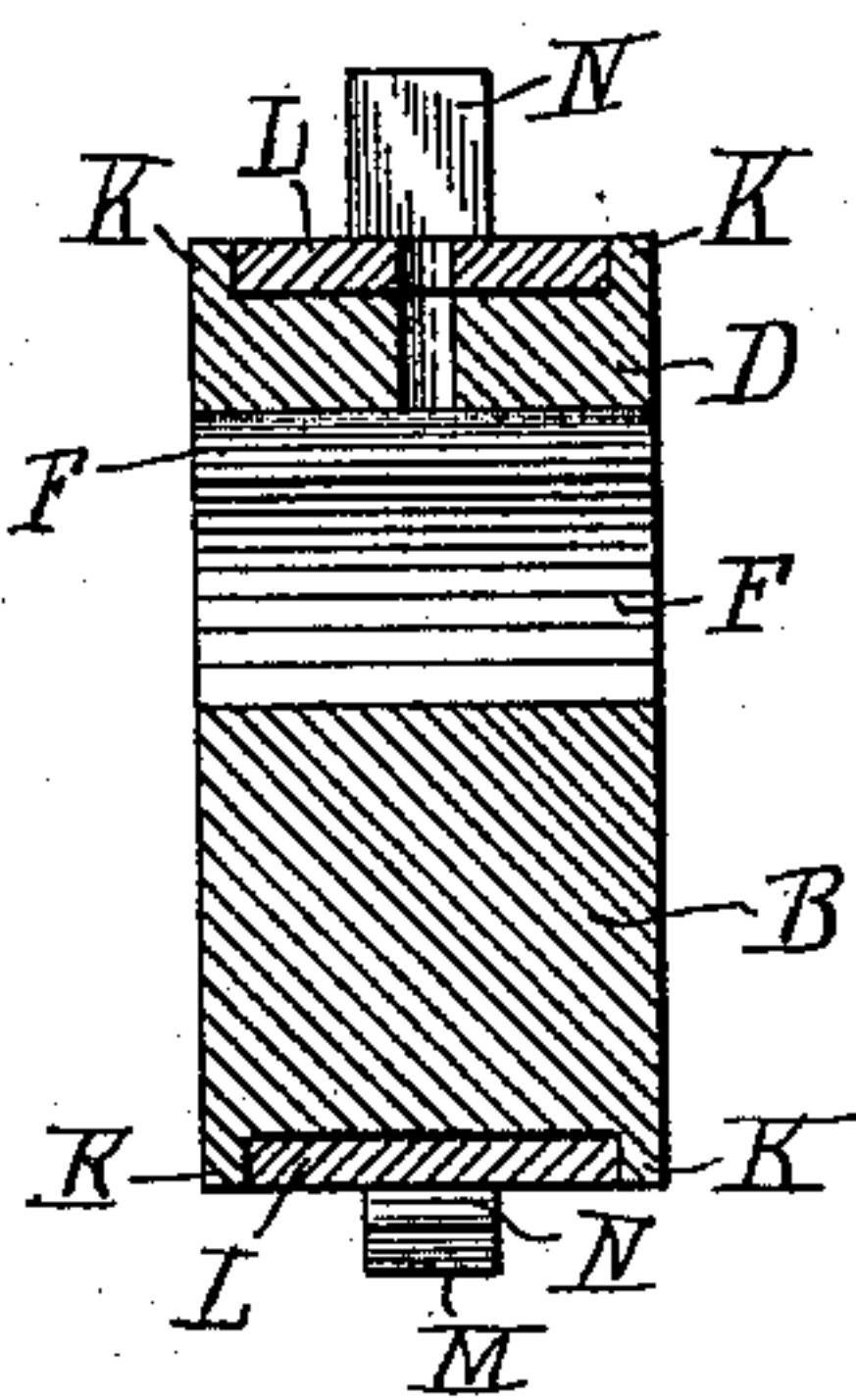


Fig. 2.



Witnesses

John Blackwood
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UNITED STATES PATENT OFFICE.

JAMES J. RUST, OF NEAR GEORGETOWN, DELAWARE.

BOX.

SPECIFICATION forming part of Letters Patent No. 417,684, dated December 17, 1889.

Application filed May 2, 1889. Serial No. 309,409. (Model.)

To all whom it may concern:

Be it known that I, JAMES J. RUST, of near Georgetown, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification.

The present improved journal-box is designed for the purpose of taking up wear as fast as it occurs, in a simple, efficient, and economical manner.

The improved journal-box is applicable to all classes of machinery wherein a rotary shaft or axle has its bearing in either a fixed or movable part. In order, however, to illustrate the invention, I have shown the invention in the accompanying drawings as applied to the end of a connecting-rod.

In the drawings, Figure 1 is a vertical longitudinal section of the improved journal-box, and Fig. 2 is a cross-section thereof in the plane indicated by the line 2 2 in Fig. 1.

A is the end of the connecting-rod. The journal-box proper is made up of four segments B, C, D, and E, each segment having an arc-shaped face F, the several arc-shaped faces of the four segments constituting an entire circle, and the four arc-shaped faces also constituting the bearing-faces for a wrist-pin. The segment B occupies a position next to and across the end of the connecting-rod, and the segment C is diametrically opposite thereto. Each of the segments B and C has at its upper and lower ends a straight inclined face G, the incline of which is at an angle of approximately forty-five degrees to the longitudinal axis of the connecting-rod. Each inclined face G terminates at its inner margin in a projecting shoulder H, the inner edge of which coincides with one of the margins of the arc-shaped face F. The upper segment D is provided with two oppositely-inclined faces I I, terminating in square shoulders J J. When the segment D is in position, its inclined faces I I rest and abut against the upper inclined faces G G on the segments B and C, respectively. The lower segment E is similar to the upper segment D, having inclined faces I I, terminating in square shoulders J J, its inclined faces

I I resting and abutting against the lower inclined faces G G of the segments B and C, respectively. It will now be observed that in case the segments B and C should be moved the one toward the other the segments D and E will also be simultaneously moved toward each other by reason of being forced inwardly by the wedging action of the inclines G G upon the inclines I I, and that the motion of the segments D and E will be limited by their shoulders J J coming in contact with the shoulders H H. Hence the movement of the segments B and C, the one toward the other, will cause all four segments to move simultaneously toward the center of the circular passage between the several arc-shaped faces, and so contract the area in cross-section of said circular aperture. It is evident that this combined movement will enable any wear to be taken up. It only remains, therefore, to be explained how the segments are united to the connecting-rod, and the provision which is made for their simultaneous adjustment. The means shown in the drawings for these purposes are convenient; but the invention is not necessarily limited thereto.

Each of the segments has on each of its outer edges a raised flange K, so that recesses are formed on the outer surfaces of the segments. A metallic strap L, secured at opposite ends to the connecting-rod, passes around the several segments and rests in the recesses formed by the projecting flange. This strap prevents the lateral displacement of the segments, and also secures them to the connecting-rod. The usual key M is shown, connecting the metallic strap to the connecting-rod. Wear is taken up by a wedge N passing through apertures O O in opposite ends of the strap L, and also through an aperture P in the connecting-rod. In case of wear occurring, it is taken up by driving in the wedge, which thus slides the strap inwardly, and so causes the segments B and C to move toward each other.

I claim as my invention—

A journal-box composed of four segments B, C, D, and E, two of said segments, as B and C, being capable of movement one toward

the other, each of said four segments having
an arc-shaped face, the four arc-shaped faces
constituting a circle, and said four segments
having coacting inclined faces G G and I I,
5 whereby the movement of the segments B
and C one toward the other causes the seg-
ments D and E also to approach each other,
substantially as set forth.

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

JAMES J. RUST.

Witnesses:

GEO. A. JONES,
WALTER H. TORBERT.