J. N. KAUFHOLZ.
Journal-Bearing.

No. 197,143. Patented Nov. 13, 1877.

Fig. 1.

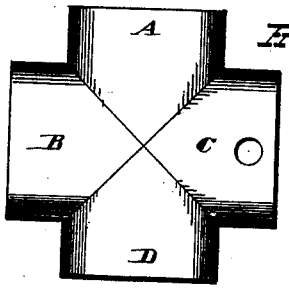


Fig. 2.

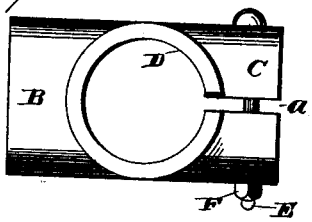


Fig. 3.

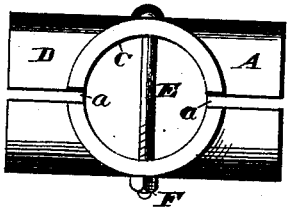


Fig. 4.

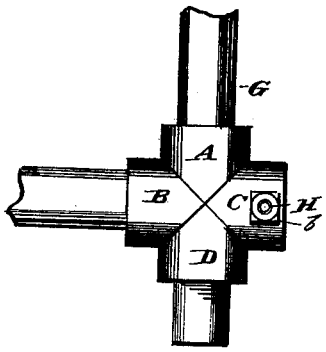
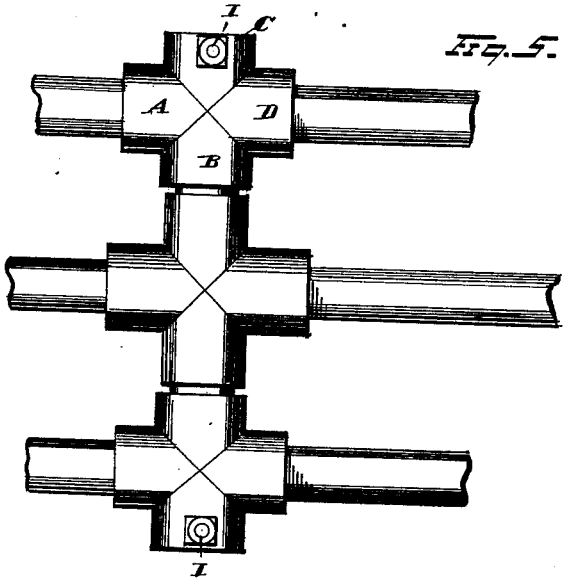


Fig. 5.



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JOHN N. KAUFHOLZ, OF CHATTANOOGA, TENNESSEE.

IMPROVEMENT IN JOURNAL-BEARINGS.

Specification forming part of Letters Patent No. **197,143**, dated November 13, 1877; application filed November 6, 1877.

To all whom it may concern:

Be it known that I, JOHN N. KAUFHOLZ, of Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Journal-Bearings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in journal-bearings, the object being to provide journal-bearings of such construction that the same may be readily adjusted to compensate for the wear of the journal or box; and to that end my invention consists, first, in a Greek-cross bearing, one side of which is divided by a longitudinal slit, and means for contracting the divided portions of said bearing; second a Greek-cross bearing, one side of which is divided by a longitudinal slit, and an adjusting-bolt extending through the divided arm, whereby the divided portion of the bearing may be contracted to take up the wear of the journal or bearing.

In the accompanying drawings, Figure 1 is a plan view of my invention; Fig. 2, an end view, and Fig. 3 a side view, of the same. Fig. 4 shows the bearing supporting the crank-shaft of an engine, and Fig. 5 represents a cross-head provided with my improved journal-bearings.

The letters A B C D represent the four arms of the Greek-cross bearing. The arms A D constitute the bearing proper, while the arm B affords the necessary means for the attachment of the box to some stationary object.

The arm C is divided by a longitudinal slit, *a*, which also divides one side of the box proper A D, and allows the bearing to be contracted to take up the wear of either the journal or bearing. E is a bolt, which passes through the sections of the divided arm C, and F is a nut on said bolt, the same being used to tighten the box or bearing when necessary, owing to the wear of the parts.

In Fig. 4, the arm B is screwed onto the end of the guide-rods, or to any other suitable support. The journal of the crank-shaft G is supported within the arms A D. When the bearing becomes unduly worn, the same is contracted and drawn snugly around the journal by means of a tightening-bolt, H, which latter, in the present instance, passes through the divided arm C and extends down, and is connected to the engine-bed. *b* are tension and set nuts placed on the bolt H, above and below the arm C, to allow the upper and lower sections of said arm to be drawn toward each other. The bearing may be babbitted around the journal, or detachable boxes may be inserted, if desired.

Fig. 5 represents a cross-head, provided with my improved journal-bearings. In such case the inner arms of the bearing serve to support the rock-shaft, to which the piston-rod and connecting-rod are attached.

The arms A D are placed on the guide-rods, and when said bearings are worn they may be readily tightened by means of the adjusting-bolt I extending through the divided arm C.

From the foregoing it will be seen that my improvement is adapted for a variety of uses, and retains the important feature of adjustability under all circumstances. The bearings can be made from ordinary gas-pipe, or other material, as may be found most expedient in actual practice.

I do not confine myself to the exact means shown and described for adjusting the bearings, as it is evident that, instead of using a bolt for such purpose, the divided arm of the bearing may be provided with a tapering screw-threaded end, and a correspondingly-tapered screw-threaded socket might be employed thereon to tighten the bearing when worn; or, instead of bolts or caps, I may use

a band with adjusting-nuts for drawing the sections of the box toward each other.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A Greek-cross bearing, having one of its sides divided by a longitudinal slit and means for contracting such divided portion of the bearing, substantially as set forth.

2. A Greek-cross bearing, having one of its sides divided by a longitudinal slit, and adjusting bolt and nuts, connected with the divided arm, for the purpose of contracting the box when desired, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of November, 1877.

JOHN N. KAUFHOLZ.

Witnesses:
F. O. McCLEARY,
A. W. BRIGHT.