No. 809,392.

PATENTED JAN. 9, 1906.

A. J. O'REILLY.

CRANK SHAFT SUPPORT FOR LOOMS.

APPLICATION FILED JUNE 13, 1904.

FIG. 2.

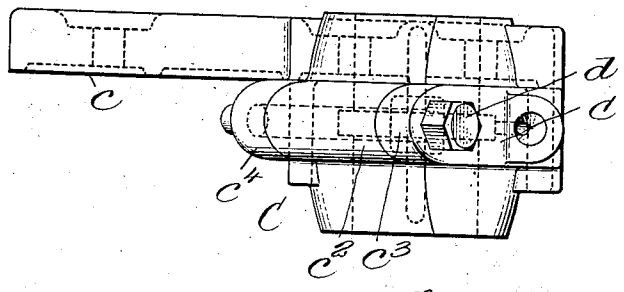
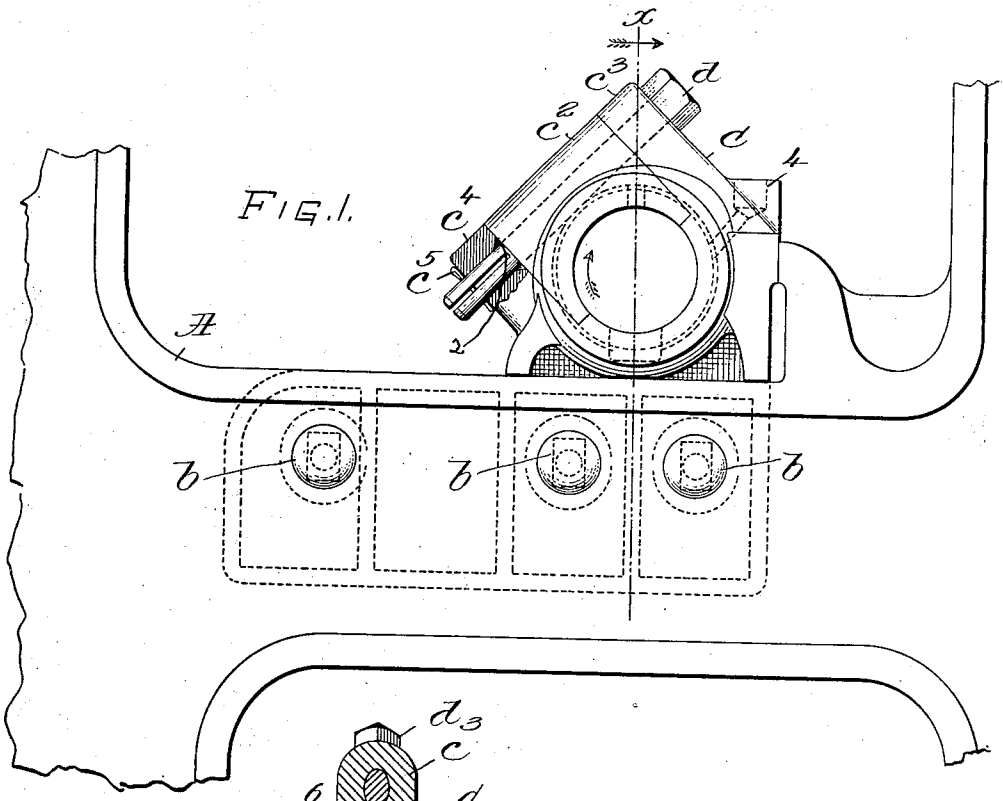



FIG. 1.



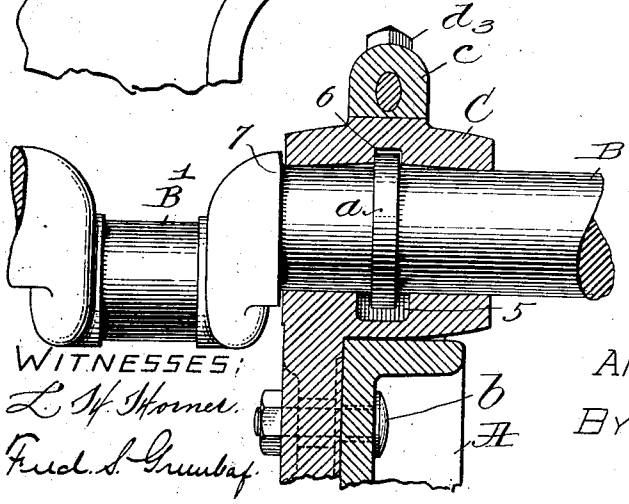




FIG. 3.

WITNESSES;
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# UNITED STATES PATENT OFFICE.

ANTHONY J. O'REILLY, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO CROMPTON-THAYER LOOM COMPANY, OF WORCESTER, MASSACHUSETTS.

## CRANK-SHAFT SUPPORT FOR LOOMS.

No. 809,392. Specification of Letters Patent. Patented Jan. 9, 1906.

Application filed June 13, 1904. Serial No. 212,300.

*To all whom it may concern:*

Be it known that I, ANTHONY J. O'REILLY, a citizen of the United States, residing at Worcester, county of Worcester, State of Massachusetts, have invented an Improvement in Crank-Shaft Supports for Looms, of which the following description, in connection with the acccompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object to sustain the crank-shaft of a loom in a bearing having such construction that a part of the box of the bearing as well as the cap resists the strain put on the shaft when there is what is called a "smash." Furthermore, I have so constructed the box and cap of the bearing that the cap is held in position by a single bolt occupying a diagonal position with relation to a vertical line intersecting the longitudinal axis of the crank-shaft, said bolt being of a length to cross this vertical line. The bolt referred to next its head is sustained in a part of the box of the bearing, the part that crosses said vertical line. The shaft also is provided with a collar that enters a groove in both the box and cap, said collar traveling in an oil-well in the box and serving to take up oil to oil the bearing, and at the same time the collar coacting with the box and cap prevents end thrust of the shaft.

Figure 1 in side elevation represents one of the improved bearings connected to a part of the loom-frame. Fig. 2 is the top of a plan view of the bearing detached; and Fig. 3 is a section through the bearing in the line X, the shaft being in elevation.

Referring to the drawings, A represents part of the side of a loom or any other machine wherein a crank-shaft is used to move parts.

B represents the crank-shaft, having a wrist B', and near said wrist said shaft has a collar *a*.

The framework A has secured to it by suitable bolts *b* the flanged or webbed part *c* of the bearing C. The bearing consists, essentially, of the box or part C, having two arms $c^3$ $c^4$ and a cap $c^2$, which is retained in its operative position by a bolt *d*. Viewing Fig. 1, it will be noticed that the two arms $c^3$ and $c^4$ of the box have their inner faces parallel and that one of said arms $c^3$ crosses a vertical line intersecting the longitudinal axis of the shaft B. When this bearing and shaft are used in a loom and a smash occurs, the strain on the shaft is exerted upwardly and backwardly in line with the arm, Fig. 1, and it will be noticed, owing to the position of the arm $c^3$ and its extension across the vertical line referred to, that said arm acts to resist the upward strain of the shaft in attempting to get out of the bearing.

The cap $c^2$, entering the space left between the arms $c^3$ and $c^4$, has a hole from one to its opposite edge through which is inserted the bolt *d*. The upper end of this bolt is extended through a hole in the arm $c^3$, and the opposite end of the bolt enters a hole in the arm $c^4$, the bolt near its head end resting in the arm $c^3$. The bolt *d* occupying the position shown with relation to the bearing and cap has no tendency to work loose, and the bolt may have its lower end split and slightly pointed, said pointed end when being inserted through the arm $c^4$ meeting an inclined surface 2, which tends to close the slit in the bolt, so that said bolt will be retained operatively in position by friction. This bolt, however, may have a hole through it to receive a cotter-pin $c^5$. If desired, the lower end of the bolt might be threaded and a nut applied, as usual, with bolts; but by splitting the bolt and holding it by friction it may be removed more readily than when the usual nut is employed.

I believe that I am the first to devise a shaft-bearing in which the box has two arms, one of which is extended across a vertical line intersecting the longitudinal axis of the shaft and in which the cap of the box is held in place between said arms by a bolt extending through both said arms.

The box has parts of an annular groove extended from each end thereof that intersect an annular groove 6 in the cap. The annular grooves referred to receive the collar *a*, and said collar and the shoulder 7 of the wrist prevent objectionable end thrust of the shaft.

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

1. The combination with a crank-shaft, of a box having two arms, one of said arms crossing a vertical plane passing through the

longitudinal axis of said crank-shaft, said arms being provided with holes extending in alinement transversely of the crank-shaft, a cap disposed between the two arms, and a bolt passing through the cap and entering the alined holes in the said arms.

2. A crank-shaft bearing comprising a box having two arms, said arms being extended to one side of a vertical plane passing through the longitudinal axis of said bearing, a cap disposed between the two arms, and a single bolt passing transversely of the bearing through said arms and holding the cap in place between the extended arms.

3. A bearing comprising a box having two arms, the uppermost one of which is extended across a vertical line intersecting the longitudinal axis of said shaft, a cap entering the space between said arms, said cap being bored through from one to its opposite edge and a bolt extended through the hole in said cap and also through the hole in that one of said arms that crosses a vertical line intersecting the longitudinal axis of said shaft, the opposite end of said bolt being extended through the lowermost arm of said box, the bolt retaining the cap in working position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANTHONY J. O'REILLY.

Witnesses:

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