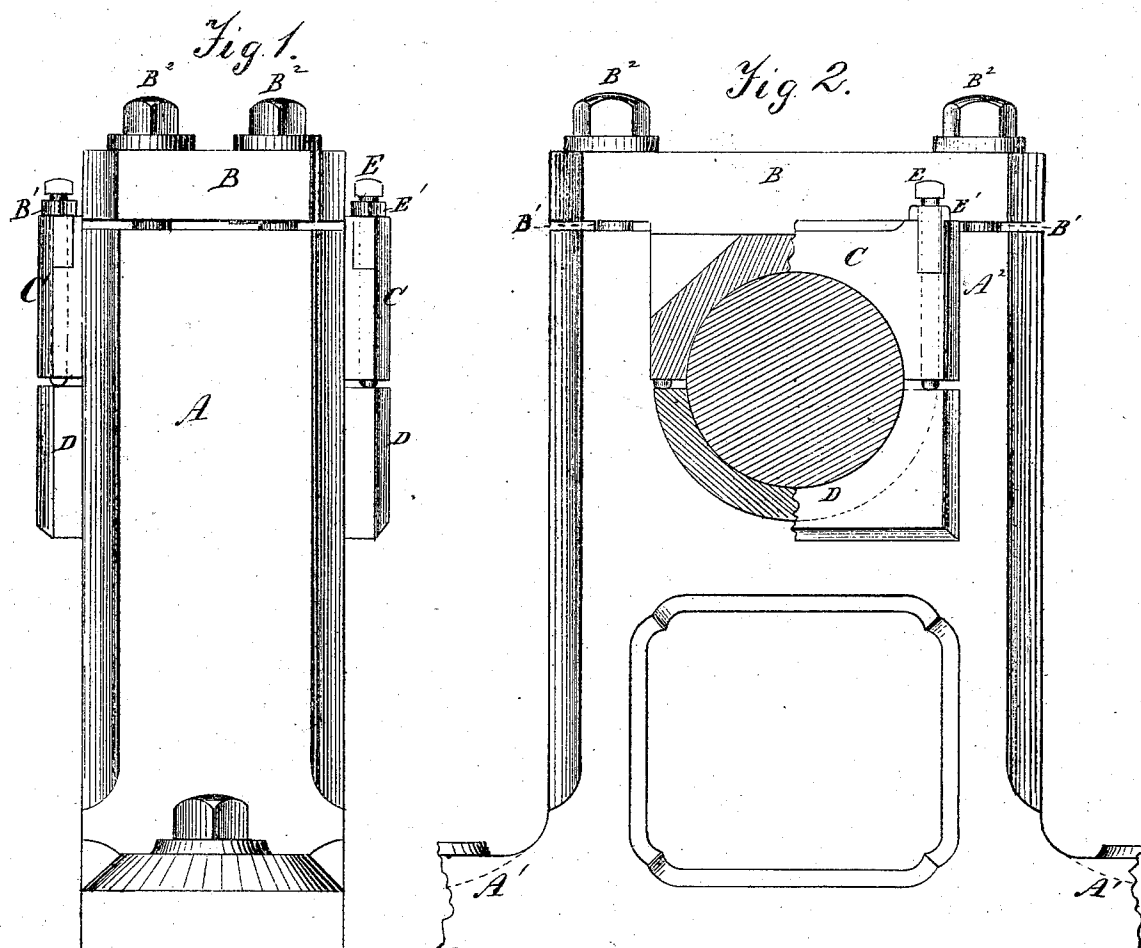


George H. Corliss. Journal Box.

117386

PATENTED JUL 25 1871



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE H. CORLISS, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN JOURNAL-BOXES.

Specification forming part of Letters Patent No. 117,386, dated July 25, 1871.

To all whom it may concern:

Be it known that I, GEORGE H. CORLISS, of Providence, in the county of Providence and State of Rhode Island, have invented certain Improvements in Journal-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making part of this specification, in which—

Figure 1 is an end view of my improved journal-box, showing the construction and arrangement of the parts with the tightening-screws in position. Fig. 2 is a side elevation, partly in section, showing the form of the under surface of the lower portion of the box and one of the screws which hold it in its seat and prevent its turning therein.

Corresponding letters refer to corresponding parts in both figures.

Great difficulty has heretofore been experienced in removing the boxes of heavy shafts from their seats in the pillow-blocks on account of the fact that, owing to the construction of the lower half of such boxes, the shaft had to be raised entirely out of the pillow-blocks and carried to one side of the same, in order that the lower portion of the box may be slid out of said blocks. This invention is designed to remedy the above-recited difficulties by providing a lower section of box with a semicircular or nearly semicircular outer surface upon that portion which rests upon the pillow-block, so that by raising the shaft sufficiently to take its weight off from said box it may be turned over upon the top of the shaft and thus easily removed. To remove any objection that has heretofore existed, or that may hereafter exist, to boxes, the lower surfaces of which are in the form of a segment of a circle, set-screws are provided which pass down through the upper portion of the box, and press upon the upper surface of the lower portion, and thus all tendency of the lower portion to turn while in use is avoided.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A in the drawing refers to the pillow-block, which may be of any desired form externally, it having its base extended, as shown at $A^1 A^1$, to receive the bolts which secure it to the foundation upon which it rests, its upper portion being

recessed to receive the boxes in which the journal of the shaft rotates. The upper surface of this block, between the two branches $A^2 A^2$, is of a semicircular or nearly semicircular form, as shown at Fig. 2. B refers to a cap, which is bolted to the upper ends of the branches of the pillow-block, so as to be readily removable for the insertion and removal of the boxes and shaft. These caps are held in position by means of bolts $B^1 B^1$, which are either cast or screwed into the branches of the pillow-blocks, their upper ends projecting upward and beyond the surface of such block for a distance sufficient to pass through the cap B and receive upon their outer ends nuts $B^2 B^2$, by means of which the upper section of the box can at any time be pressed down upon the shaft to take up any lost motion which may occur on account of the wearing of the shaft and boxes. C refers to the upper section of the box, the upper surface of which may be flat or of any other form that will prevent its turning in its seat. Upon the outer ends of this section of the box flanges are provided of sufficient thickness to receive the bolts E, holes being drilled and tapped in said flanges for that purpose. D refers to the lower section of the box, the ends of which are provided with flanges to correspond with those upon the upper section, its under surface being of semicircular form, or of such form as to fit the upper curved portion of the pillow-block. It will be seen upon reference to the drawing that as a consequence of the construction of this lower section of the box it can be turned in the block by raising the shaft just sufficient to take its weight off from said box, and that all that is requisite to be done when it becomes necessary to remove this portion of the box for any purpose is to unscrew the nuts $B^2 B^2$, and remove the cap B, when the shaft may be slightly raised, as above described, and said lower section of the box removed and repaired or replaced by a new one, when the other parts may be replaced, the nuts $B^2 B^2$ screwed down upon the cap, and the set-screws E E turned down upon the upper edges of the section D of the box until all the parts are pressed into their proper positions, and just enough room left between the two sections of the box for the shaft to rotate freely without any lost motion and yet without heating. When this has been done the nuts $E' E'$ are turned down upon the screws until they press firmly

upon the flanges of the upper box, which will insure the retention of all the parts in their proper positions until released by turning back the nuts and bolts last alluded to.

The above-described journal-box is particularly adapted to steam-engines, but is also applicable to other kinds of machinery, especially where heavy shafts are employed.

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

A journal-box, the lower surface of lower section of which is semicircular or nearly so, when

combined with an upper section, the upper surface of which is flat or of an equivalent form, and set-screws for preventing the lower section from turning in its seat, the parts being constructed and arranged in a suitable pillow-block, substantially as and for the purpose set forth.

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

GEO. H. CORLISS.

Witnesses:

R. MASON,

B. EDW. J. EILS.