WARDROBE, FISKE, CURTIS & FETLEY.

Car-Axle Box.

No. 110,093. Patented Dec. 13, 1870.

Fig. 1

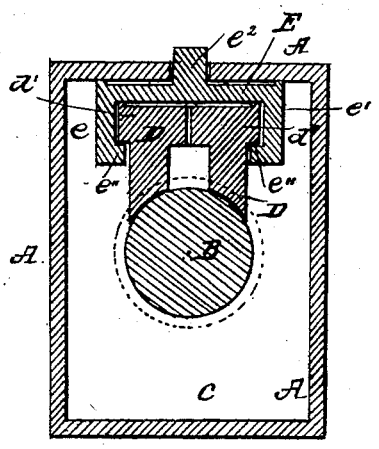
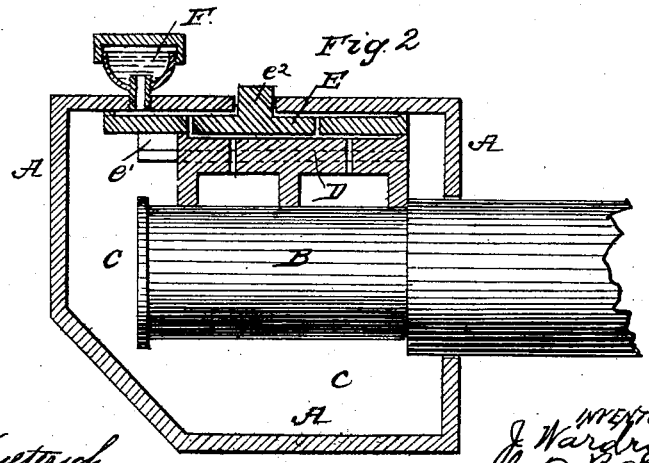


Fig. 2



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES WARDROBE, CHARLES D. B. FISK, JOHN F. CURTIS, AND GEORGE FETLEY, OF CARLIN, NEVADA.

IMPROVEMENT IN RAILWAY AXLE-BOXES.

Specification forming part of Letters Patent No. **110,093**, dated December 13, 1870.

To all whom it may concern:

Be it known that we, JAMES WARDROBE, CHARLES D. B. FISK, JOHN F. CURTIS, and GEORGE FETLEY, of Carlin, in the county of Elko and State of Nevada, have invented a new and useful Improvement in Anti-Friction Journal Box or Bearing; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical cross-section of our improved journal box or bearing as attached to a journal. Fig. 2 is a longitudinal section of the same.

Similar letters of reference indicate corresponding parts.

Our invention has for its object to furnish an improved anti-friction bearing for the journals of steam-cars, horse-cars, and other journals or shafts, which shall be simple in construction and effective in operation, being so constructed as to run for any required length of time without heating; and it consists in the construction of various part of the journal box or bearing, as hereinafter more fully described.

A represents the housing or casing of the journal-box, and B represents the journal, which revolves in the oil-chamber C.

The lower part of the oil-chamber C may contain wool, hair, waste, or other suitable material in the ordinary manner to absorb the oil and lubricate the journal.

D is the bearing, which is made of brass or other suitable anti-friction metal or composition. The bearing D is concaved upon its lower side to fit upon the journal B, and is made of a width equal to about three-fourths the diameter of the journal B.

Upon the upper part of the sides of the bearing D are formed flanges d', which work in grooves in the inner sides of the downwardly-projecting flanges e^1 of the plate E.

Upon the upper side of the plate E is formed a round projection or pivot, e^2, which enters a hole in the top of the housing or box A, as shown in Figs. 1 and 2.

By this construction the bearing D can slide longitudinally with the journal B, and thus prevent the collars of the journal from wearing into the ends of the bearing.

This construction also enables the bearing to accommodate itself to the position of the journal in passing around curves, thus greatly diminishing the friction and the consequent wear, and preventing the heating of the journal.

In cases where the journal-box A is too shallow to allow the plate E to be used, the pivot e' may be formed directly upon the bearing D.

F is an oil-cup, the form and construction of which are immaterial, and which is secured to the top of the box A, so that the oil from said cup may flow gradually through a hole in the said top of the journal-box into a shallow recess upon the top of the plate E, whence it flows through one or more holes in said plate into a shallow recess upon the top of the bearing D, and thence through one or more holes leading from the top of the bearing D to the chambers or recesses upon its lower side, so as to lubricate the upper side of the journal.

The waste oil flows into the oil-chamber C, to be again applied to the journal by the absorbing contents of said oil-chamber.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The oil-chamber casing A, combined, as described, with a bearing, D, shorter than the journal, and flanged at d', and a plate, E, having flanges e^1 and projection e^2, for the purpose of preventing the wear of the journal-collars on the end of bearing, and of allowing the bearing to adjust itself, without much friction, to the journal as it turns on a curve.

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Witnesses:
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