T. FRAME & A. SCOTT.

CAR-AXLE BEARINGS

No. 183,292. Patented Oct. 17, 1876.

Fig. 1.

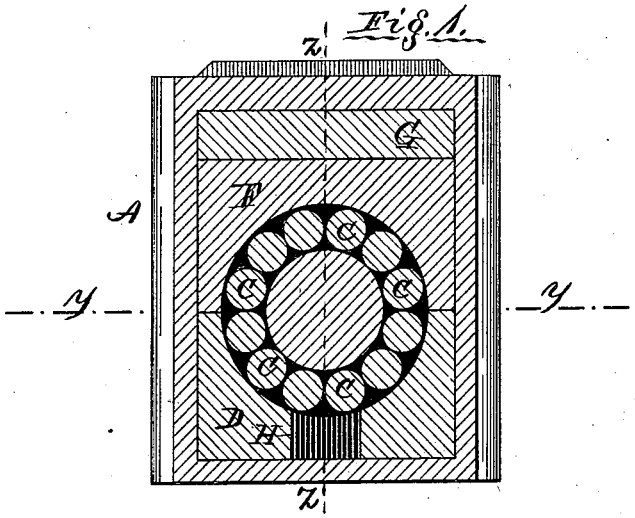


Fig. 2.

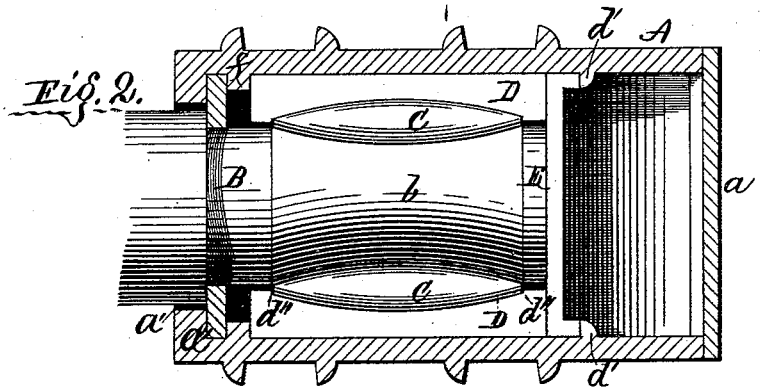
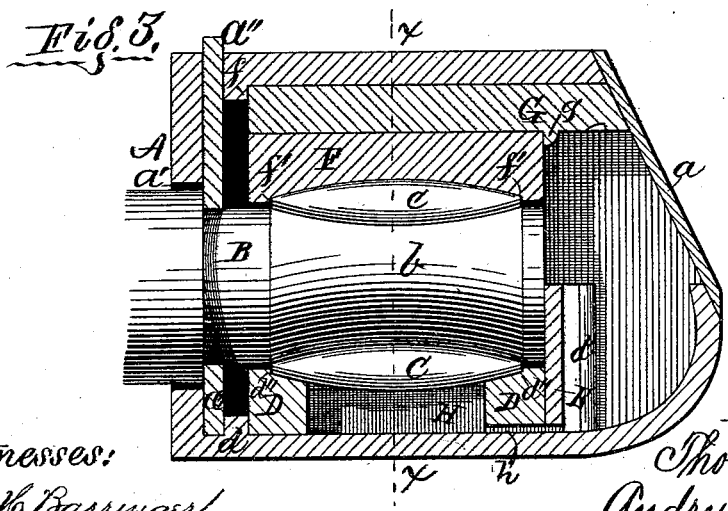


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS FRAME AND ANDREW SCOTT, OF BURLINGTON, IOWA.

IMPROVEMENT IN CAR-AXLE BEARINGS.

Specification forming part of Letters Patent No. **183,292**, dated October 17, 1876; application filed August 29, 1876.

To all whom it may concern:

Be it known that we, THOMAS FRAME and ANDREW SCOTT, of Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Railway-Car Journal-Bearings; 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 which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention relates to improvements in railway-car journal-bearings; and the invention consists in the construction and arrangement of the parts, as hereinafter described and set forth in the claims hereto annexed.

In the accompanying drawings, Figure 1 is a transverse sectional view of a railway-car journal and bearing, embodying our invention, and taken in the line *x x* of Fig. 3. Fig. 2 is a horizontal sectional view of the same, in the line *y y* in Fig. 1. Fig. 3 is a vertical sectional view in the line *z z* in Fig. 1.

Referring to the parts by letters, letter A represents a car-axle box or chamber, provided with the usual cap or cover *a* on its outer end, and an opening, *a'*, through which the journal B on the end of the car-axle is entered, and slide-plates *a''*, to prevent dirt and grit entering the box. The journal B is formed with an annular groove, *b*, to correspond in curve with the curved exterior of the anti-friction rollers C, which rollers C may be frustums or zones of oblate spheroids or of circular spindles, as shown in the drawings, or other similar figures, and are arranged around the journal B, as shown in the drawings.

D is a plate seated in the bottom of the chamber A, where it is retained by a ledge, *d*, at one end and a sliding plate, E, at its other end, which plate E is secured by ledges *d'*, and may be removed by elevating it. The plate D is grooved to seat and to fit the rollers C, being semi-circular in its cross-section, (see Fig. 1,) and curved longitudinally, to fit the exterior of the rollers C, and having shoulders *d''* extending inward and over a portion of the ends of said rollers, as shown at Figs. 2 and 3, and for the purpose of retaining the rollers against longitudinal displacement.

H is a chamber cut through the lower part of the plate D, for retaining any lubricant in contact with the rollers C; and *h* is an opening cut through the plate *d*, for the purpose of admitting oil or lubricant from the chamber outside of the plate E. F is a saddle, occupying the upper portion of the chamber A, where it is held by a key, G, which is entered above it, and held at one end by a ledge, *f*, and at its other by the cap *a*.

The key G has a ledge, *g*, for retaining the saddle F from movement in that direction. The lower side of the saddle F is formed same as the upper side of the plate D, having shoulders *f'* extending over the ends of the rollers C same as the shoulders *d''* of the plate D.

The rollers C should about fill the annular cavity between the journal B and the plates D and F, and will, as is evident, reduce the friction to the minimum quantity.

The ends of the rollers C resting against the shoulders *d''* of the plate D and shoulders *f* of the plate F, and their enlarged central portions in the groove *b* in the journal B, will, as is evident, secure the journal in place longitudinally.

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

1. The rollers C, constructed as described, of frustro-spheroidal or frustro-spindle form, and arranged to operate with the saddle F, having shoulders *f'*, and box A, substantially as described, and for the purpose specified.

2. The plates D and G, constructed as described, and combined with the saddle F, frustro rollers C, and box A, substantially as and for the purpose specified.

3. The plates E G and D F, combined with the rollers C and box A, substantially as described, and for the purpose specified.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

THOMAS FRAME.
ANDREW SCOTT.

Witnesses:
JAMES FRAME,
C. W. H. DELANO.