(No Model.) 2 Sheets—Sheet 1.

W. H. WOODCOCK.

ROLLER BEARING.

No. 557,042. Patented Mar. 24, 1896.

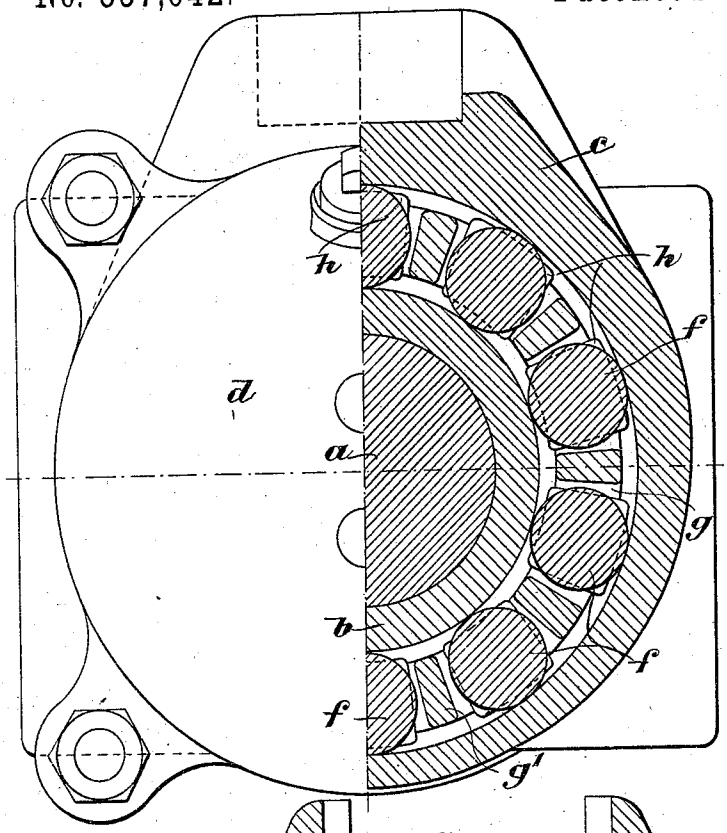
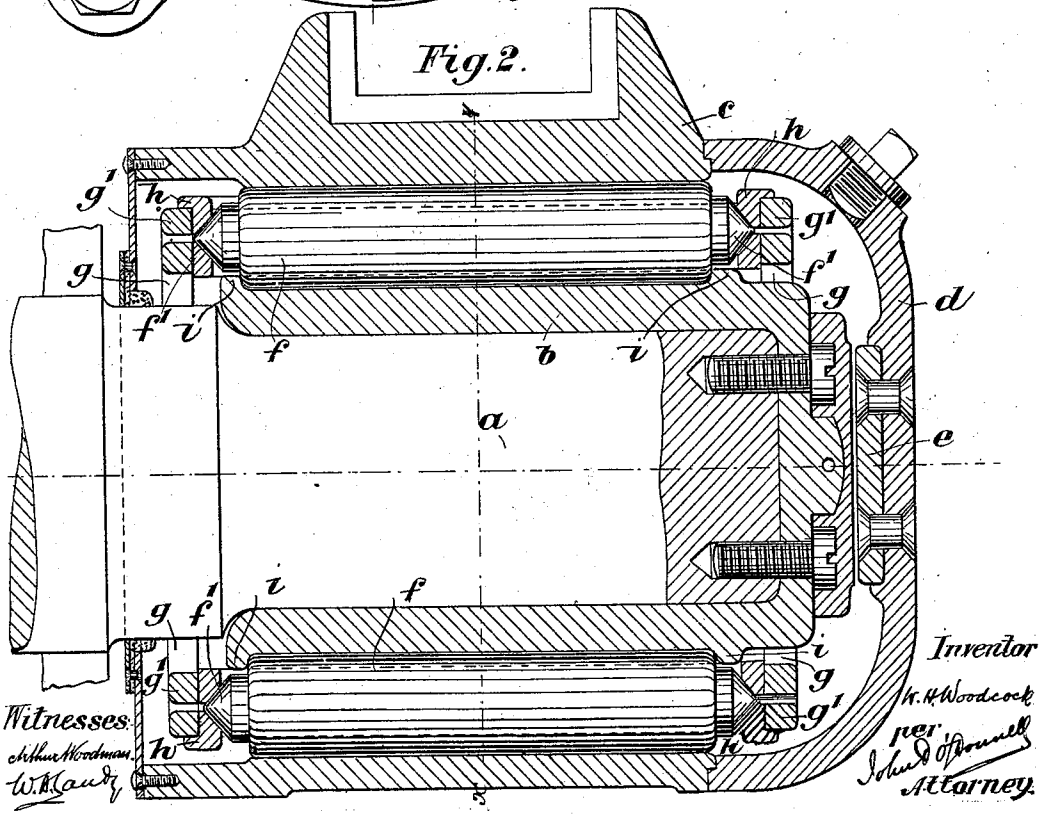


Fig. 1.

Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

W. H. WOODCOCK.

ROLLER BEARING.

No. 557,042. Patented Mar. 24, 1896.

Fig. 3.

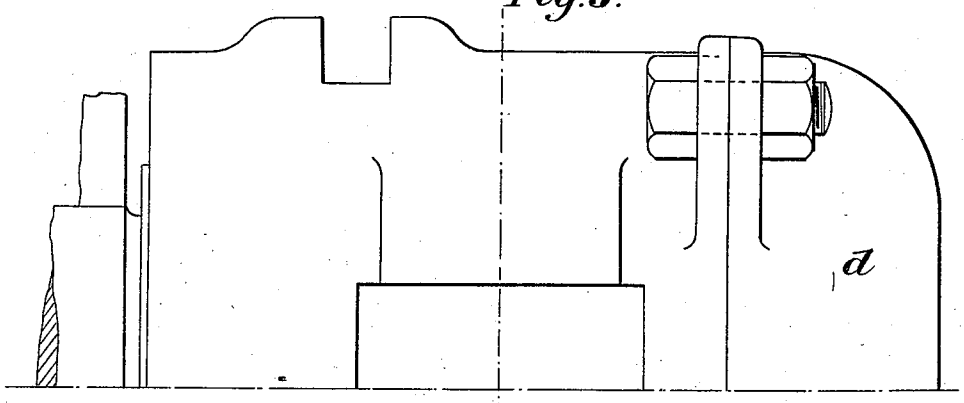


Fig. 4.

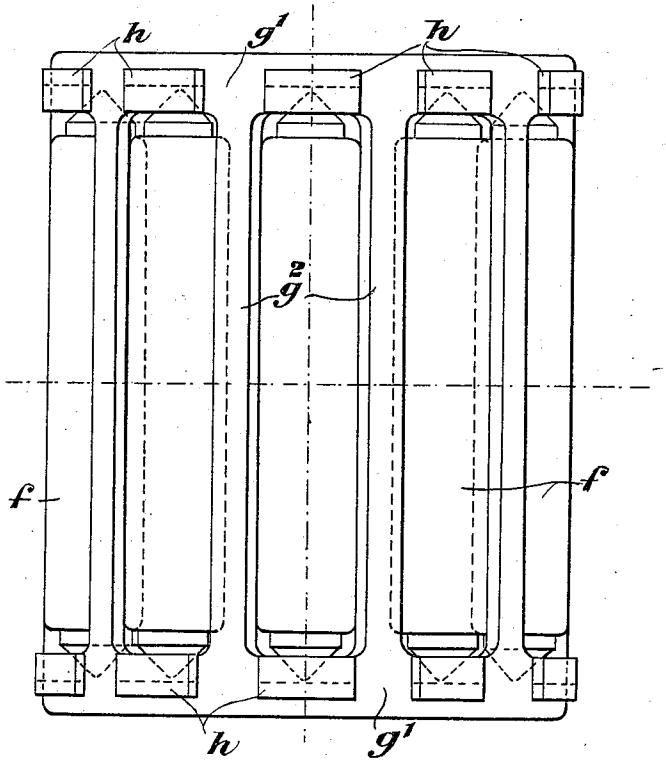


Fig. 5.

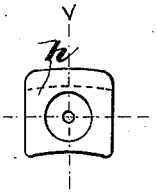
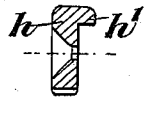


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM HUGH WOODCOCK, OF LONDON, ENGLAND.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 557,042, dated March 24, 1896.

Application filed November 8, 1895. Serial No. 568,370. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HUGH WOODCOCK, a subject of the Queen of Great Britain and Ireland, residing at 25 Auckland Hill, West Norwood, London, in the county of Surrey, England, have invented new and useful Improvements in Roller-Bearings, of which the following is a specification.

This invention relates to roller-bearings; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

Figures 1, 2, 3, 4, 5, and 6 represent an application of my improvements to a railway axle-box, the left half of Fig. 1 being an end elevation, and the right a cross-section on line X Y, Fig. 2, Fig. 2 being a part sectional elevation, Fig. 3 being a half-plan on top of box, Fig. 4 being a plan of cradle formed of one piece of metal, with the rollers and their bearing-pieces in position ready for insertion into the casing, Fig. 5 being an end elevation of roller and bearing-piece, and Fig. 6 a cross-section of same on line V W, Fig. 5.

Referring to the drawings, *a* is the journal at the end of the axle of a railway-vehicle.

b is the sleeve of hardened steel, wrought-iron case-hardened, chilled cast-iron, or other suitable material, which is shrunk on or otherwise fastened to the axle-journal *a*.

c is the casing or axle-box, preferably made of cast-steel.

d is the front cover of axle-box.

e is a disk of gun-metal, phosphor-bronze, or other suitable material, to take the end pressure of the axle.

ff are the rollers placed between the journal-sleeve and the casing.

g is the metal cradle, and *h h* are the bearing-pieces for the roller ends *f'*, Fig. 2, these bearing-pieces being fitted into the ends *g'* and between the arms g^2 of the cradle *g*. The roller end bearing-pieces *h h* are provided with lips or projections *h'* which fit over the ends *g'* of the cradle *g*, and by this means the cradle *g* is maintained in its concentric position with the journal, the lateral movement of the cradle *g* with reference to the rollers *f* being prevented by the body of the bearing-pieces *h h*.

i i are projections on the sleeve to prevent the rollers *f* and cradle *g* from moving laterally.

What I claim is—

The combination with a circular casing, a shaft journaled concentric with the said casing, and projections *i* connected with the said shaft; of a cradle provided with arms extending between its ends and bearing-pieces *h* carried by its ends; and rollers interposed between the said casing and shaft, engaging with the said projections on the shaft, and journaled in the said bearing-pieces of the cradle, substantially as set forth.

WILLIAM HUGH WOODCOCK.

Witnesses:

FREDERICK PURDON,

CHAS. ROCHE.