No. 610,436. Patented Sept. 6, 1898.

G. W. DICKINSON.

ROLLER BEARING.

(Application filed Oct. 27, 1897.)

(No Model.)

Fig. 1.

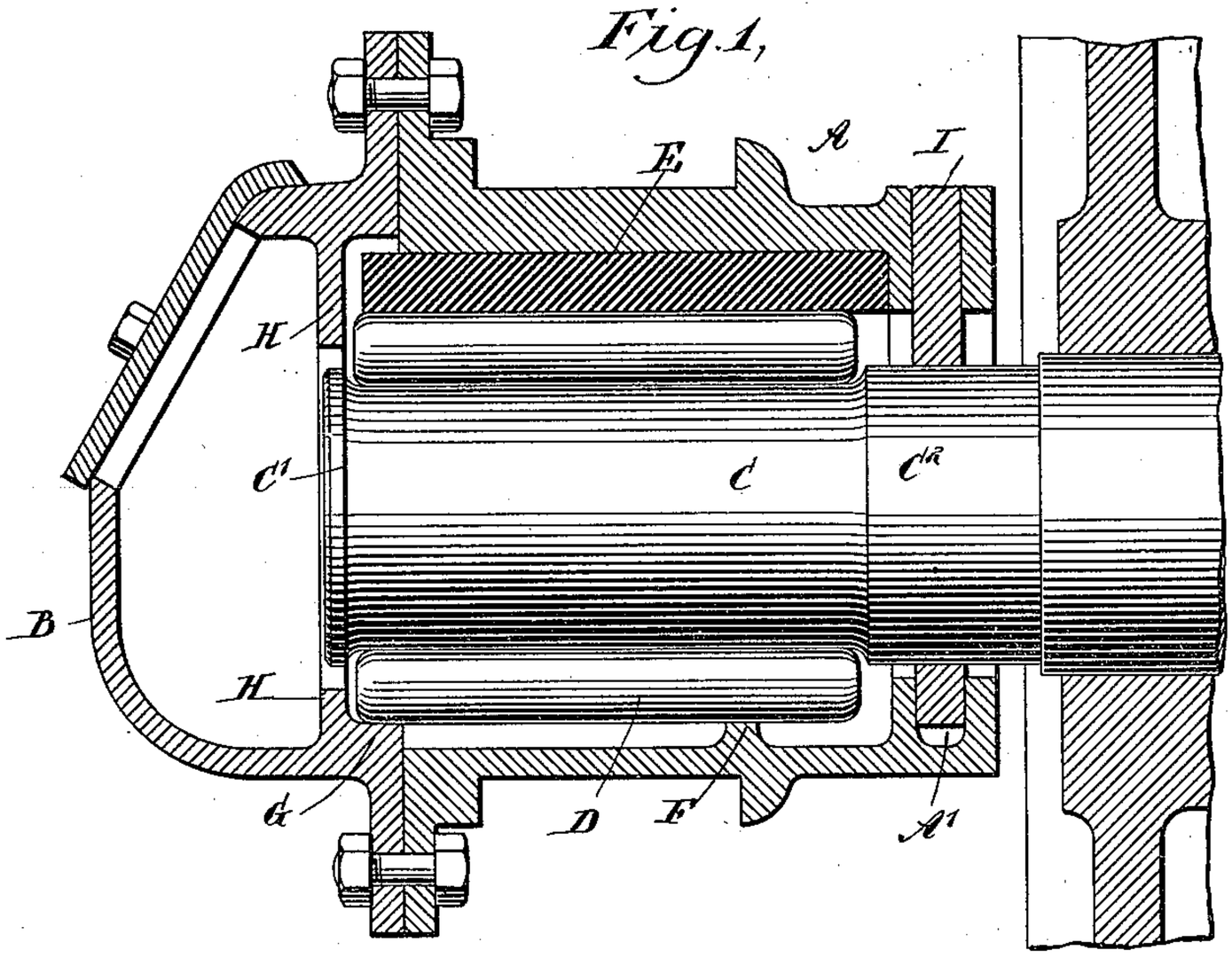


Fig. 2.

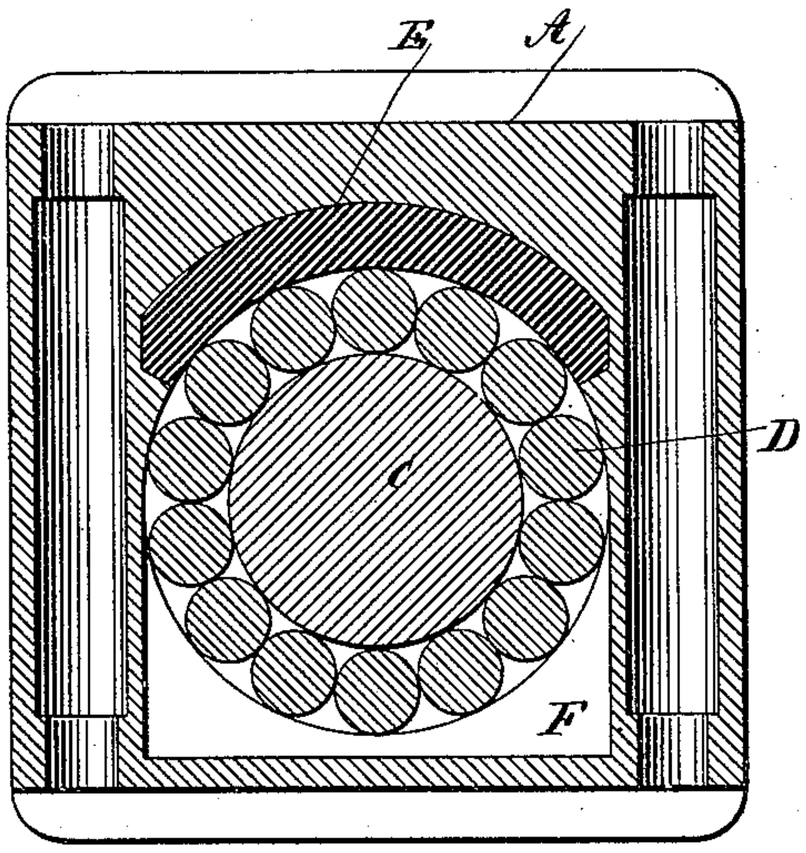
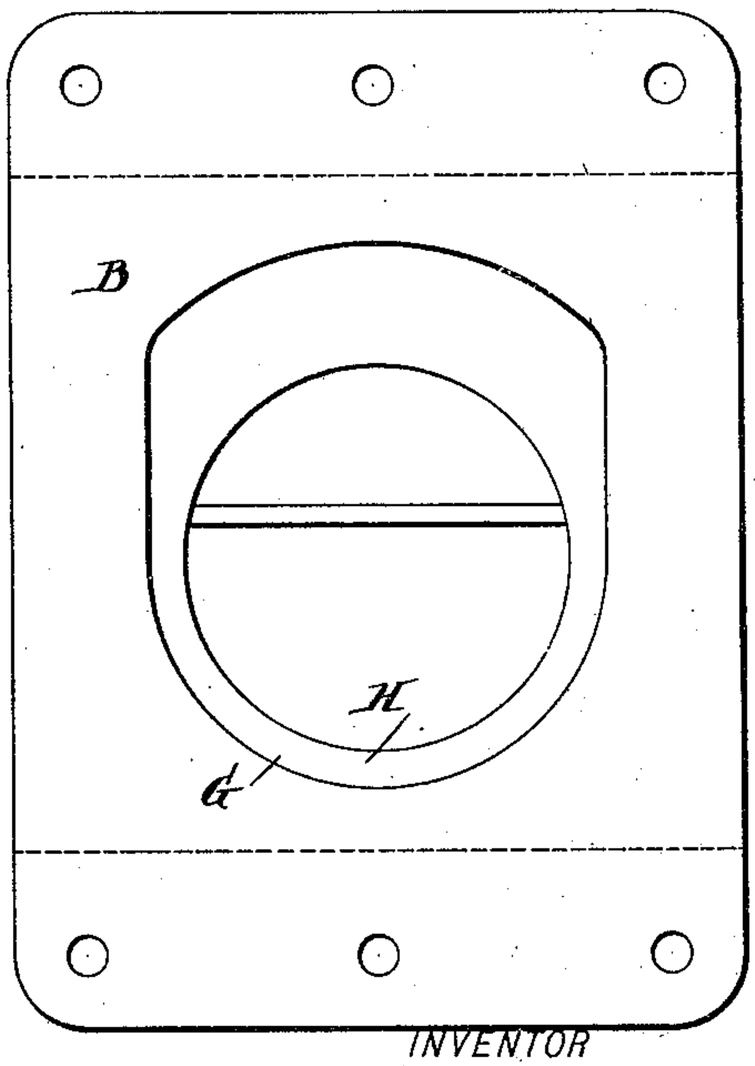


Fig. 3.



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GEORGE W. DICKINSON, OF TACOMA, WASHINGTON.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 610,436, dated September 6, 1898.

Application filed October 27, 1897. Serial No. 656,536. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DICKINSON, of Tacoma, in the county of Pierce and State of Washington, have invented a new and Improved Roller-Bearing for Journals, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved roller-bearing, more especially designed for use on the journals in car-axle boxes and arranged to prevent all cutting and heating of the journal, to reduce the friction to a minimum, and to permit its application on the ordinary journals with or without rims and as now in use.

This invention consists in such features of construction and combinations of elements as will be fully described hereinafter and defined in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement as applied. Fig. 2 is a cross-section of the same, and Fig. 3 is an inner face view of the box-cover.

The journal-box A is provided at its forward end with a cover B, which has an inner wall H and outer wall, through an opening in the inner wall of which extends the journal C of the car-axle, the forward end of the said journal being provided with a rim C′; but the device may be used on journals without such rim. The journal C is surrounded by rollers D in contact with one another, as is plainly indicated in Fig. 2, and with the uppermost rollers in engagement with the under surface of the bearing E, held in the top of the box A in the usual manner. The lower rollers rest with their inner ends on a segmental rib F, secured in the bottom of the box A or formed integral therewith. The outer ends of the said lower rollers rest and travel on a shoulder G parallel with the rib F and formed on the inside of the wall H of the box-cover B. The shoulder G is located slightly below the lower wall of the opening in the wall H, so that the outer ends of the rollers that bear on the shoulder G will abut against the wall H and be restrained from endwise movement by such wall. The remaining rollers (those that do not rest on the shoulder G) also bear against the wall H and are thus restrained from endwise movement. Both rib F and shoulder G extend nearly to the ends of the bearing E, and it is evident that by the arrangement described the lowermost rollers are properly guided, as they are free to travel on the shoulder G and rib F before coming in contact with the under side of the bearing.

The rollers, as shown in Fig. 1, extend the whole length of the journal C between the rim C′ and the enlargement C^2 to further prevent lateral displacement of the said rollers; but in case the rim C′ is omitted then the rollers D are prevented from transverse displacement in an outward direction by the wall H of the cover B.

The rear end of the box A is formed with a suitable chamber or recess A′ for the reception of a block of wood or vulcanite I, engaging the part C^2 of the journal for returning the oil to the box, at the same time rendering the latter dust-proof at the inner end. The chamber A′ is open at the top to permit the convenient insertion of the block I.

Now when assembling the parts of the device the rollers D are placed in position in the box A with the inner ends of the lower rollers resting on the rib F and with the upper rollers engaged by the bearing E. Then the box-cover B is placed in position on the front of the box A and from below in an upward direction, so that the shoulder G supports the outer ends of the lowermost rollers, thus bringing the rollers all into proper place. The cover is then fastened to the box by the usual bolts engaging flanges, as indicated in Fig. 1.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A journal-box, comprising a body having a rib in its bottom adjacent to the inner end thereof, a bearing-block in the upper part of the body, a cover provided with an inwardly-

projecting annular flange near its inner end, and with a shoulder at the inner side of the lower portion of the said flange and below the same, the said shoulder being in the same horizontal plane as the rib of the body, and a series of rollers of a length greater than that of the body of the box, the lower rollers resting upon the rib of the body and the shoulder of the cover, substantially as and for the purpose set forth.

GEORGE W. DICKINSON.

Witnesses:
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