No. 872,155. PATENTED NOV. 26, 1907.

W. A. SHORT.

MEANS FOR TAKING UP WEAR ON VEHICLE AXLES.

APPLICATION FILED JULY 15, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

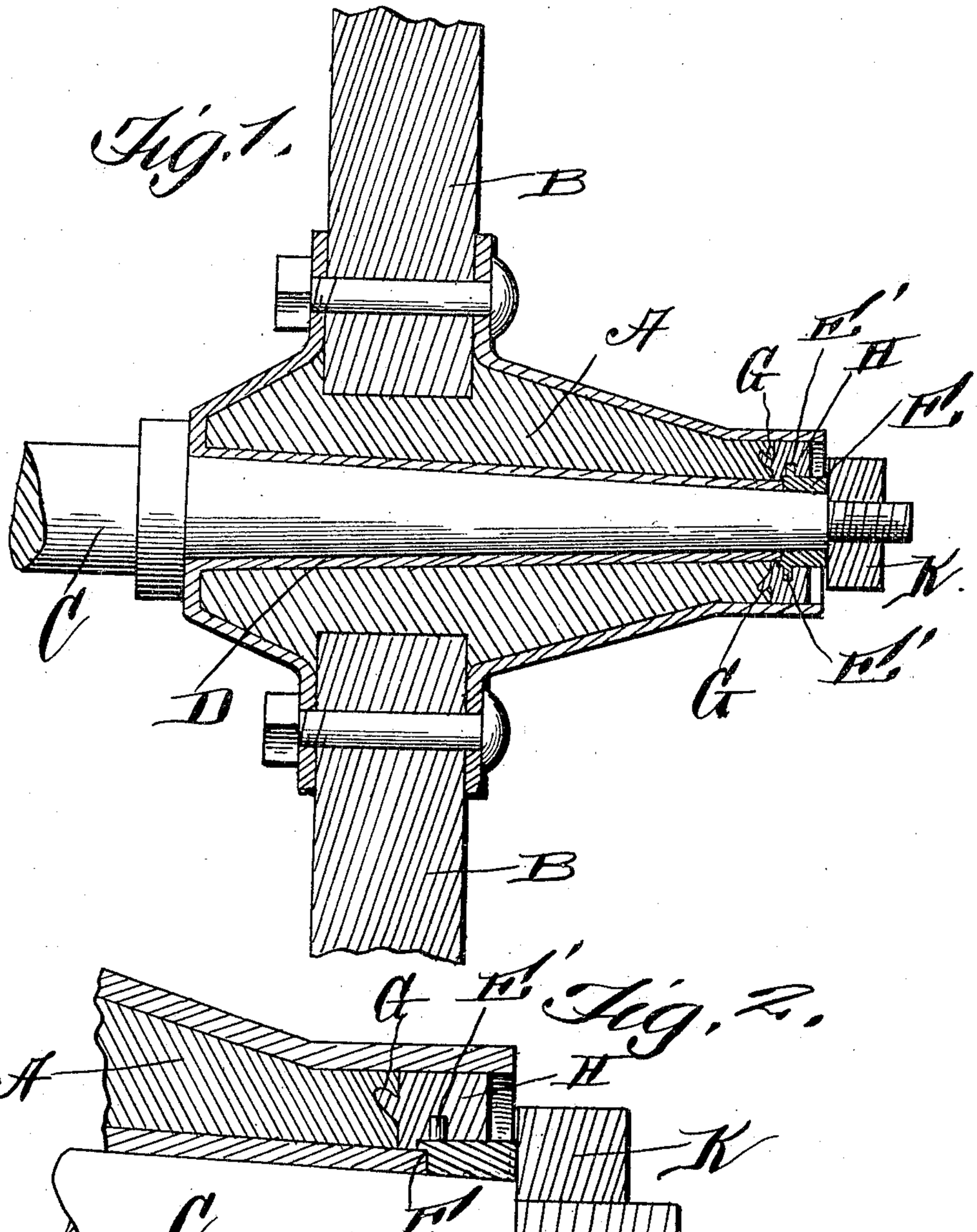
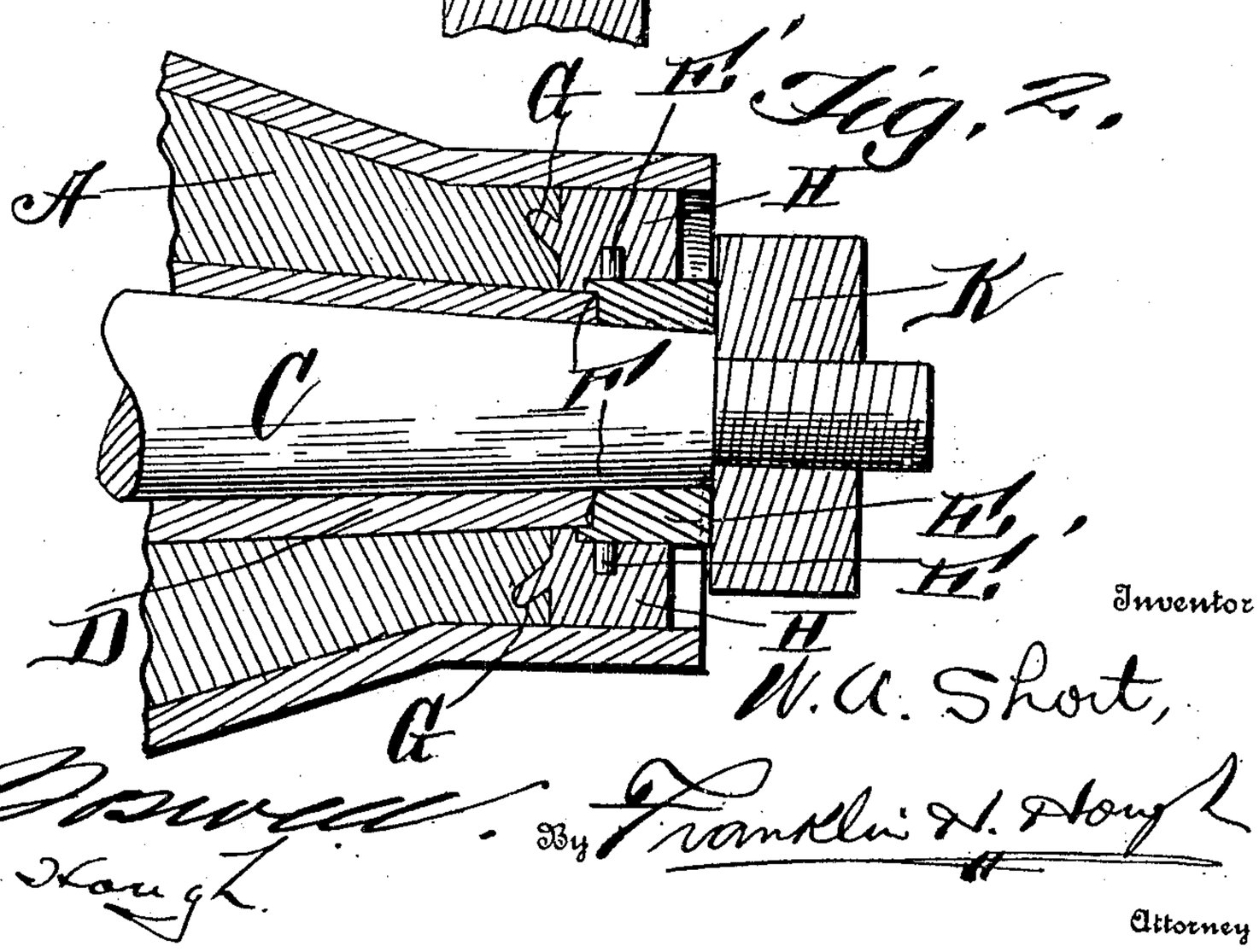


Fig. 2.



Witnesses

R. B. Bowell.

A. L. Hough.

Inventor

W. A. Short,

By Franklin H. Hough

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

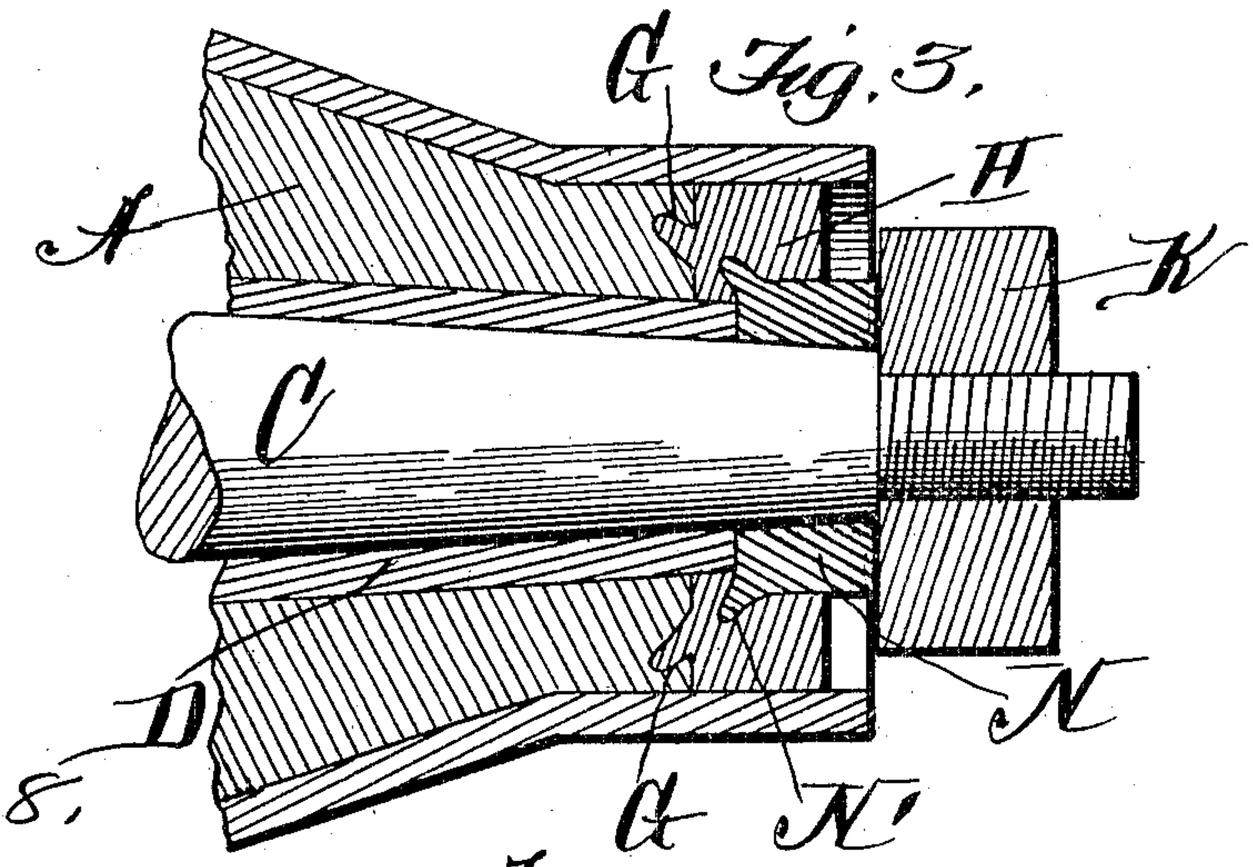


Fig. 8.

Fig. 4.

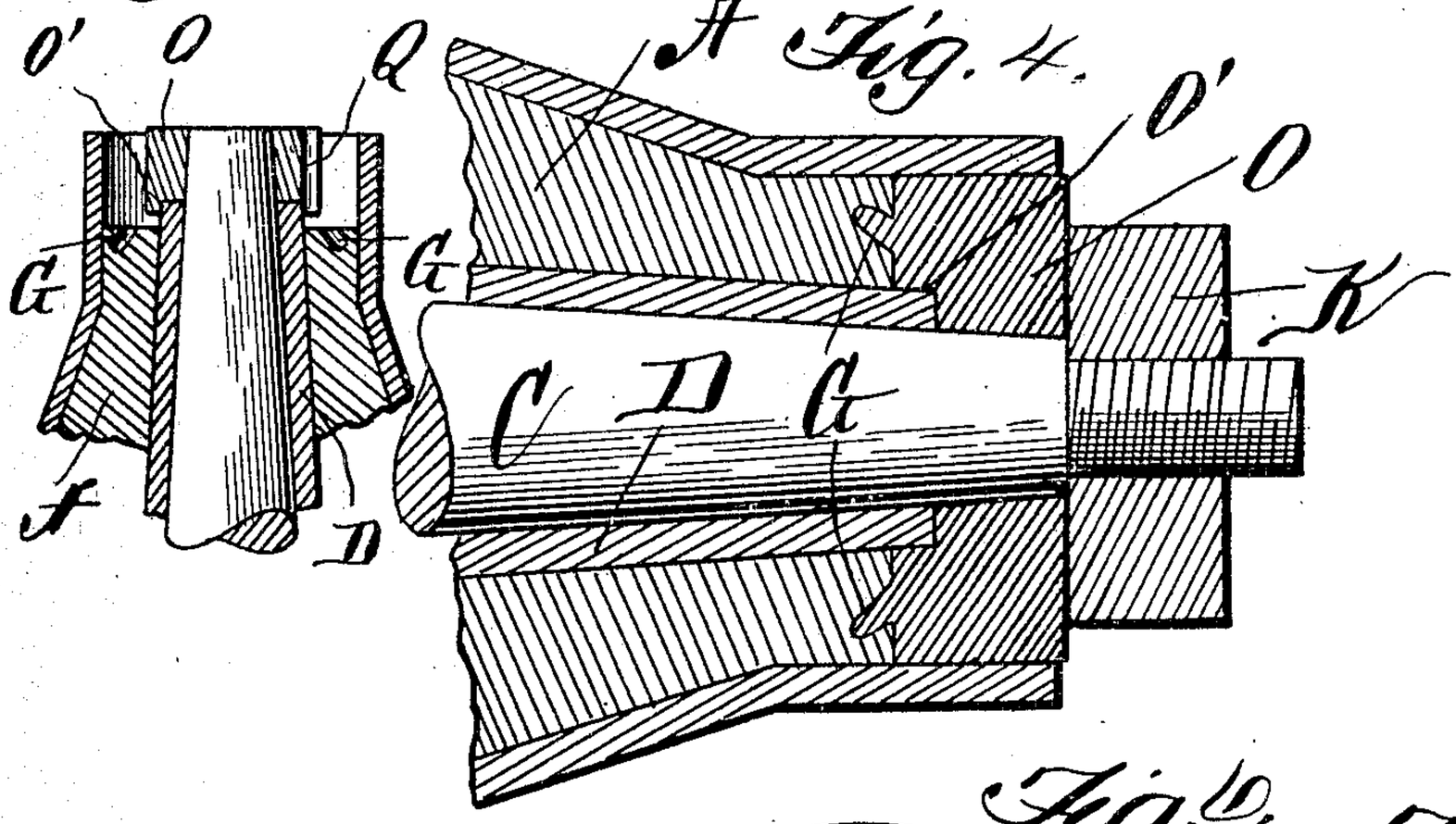


Fig. 5.

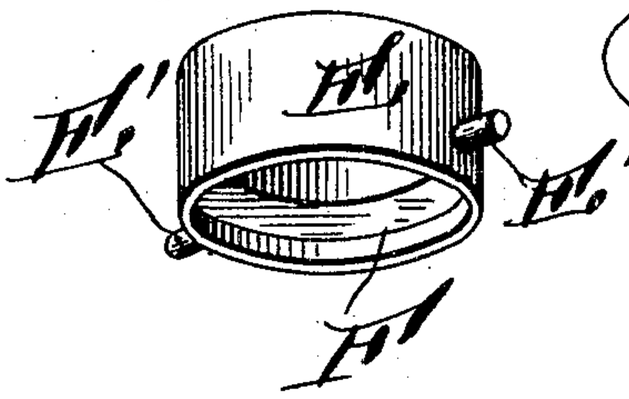


Fig. 6.

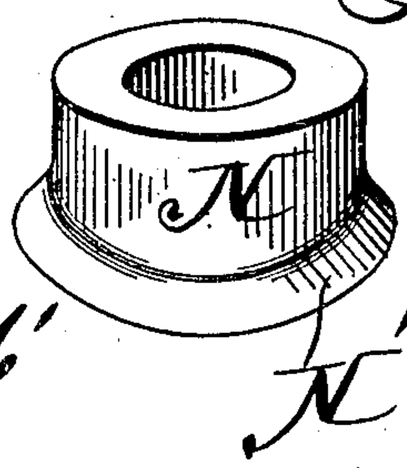
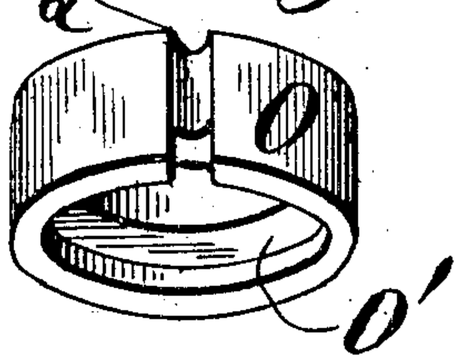


Fig. 7.



Inventor

W. A. Short,

Witnesses

R. H. Boswell.

A. L. Hough.

By Franklin & Hough

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM A. SHORT, OF BEEVILLE, TEXAS, ASSIGNOR OF ONE-HALF TO G. T. WARD, OF BEEVILLE, TEXAS.

MEANS FOR TAKING UP WEAR ON VEHICLE-AXLES.

No. 872,155. Specification of Letters Patent. Patented Nov. 26, 1907.

Application filed July 15, 1907. Serial No. 383,854.

To all whom it may concern:

Be it known that I, WILLIAM A. SHORT, a citizen of the United States, residing at Beeville, in the county of Bee and State of Texas, have invented certain new and useful Improvements in Means for Taking Up Wear on Vehicle-Axles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use same, reference being had to the accompanying drawings and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in apparatus for taking up wear upon vehicle axles and consists in the provision of means for extending the boxing by the use of members which are held in place by means of Babbitt metal.

The invention comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a vertical sectional view through the hub of a vehicle wheel, showing the boxing and extension thereof. Fig. 2 is an enlarged detail sectional view of the form shown in Fig. 1. Fig. 3 is a sectional view showing a slight modification of the invention. Fig. 4 is a similar view showing a different construction involving the principle. Fig. 5 is an enlarged perspective view of one form of metallic extension. Figs. 6 and 7 are modified forms of the extension in the boxing, and Fig. 8 is a detail showing the manner of holding the extension when being anchored by fusible metal.

Reference now being had to the details of the drawings by letter, A designates the hub of a wheel, B the spokes, C the axle and D the axle box, which latter, when it becomes worn, it is desired to extend in order to dispense with the use of the ordinary washers. Carrying out my invention, I propose to utilize either a metal of a fusible nature, such as Babbit metal, which may be molded about a core extending through the box or insert a washer already formed of any suitable metal over the end of a core passed through the axle box and afterwards anchored in place by pouring a fusible metal about the extension and causing the same to be securely anchored to the hub.

In Fig. 1 of the drawings, I have shown a washer, designated by letter E, which is held in place by means of a fusible metal H, which is poured in a melted state about the extension, undercut holes being formed in the end of the hub to receive a portion of the molten metal, whereby the latter may be securely anchored to the hub. In Fig. 1 of the drawings, the extension E is shown as having lugs E′ projecting therefrom and which are embedded in the metal H which has been poured in a molten state about the extension and when set forms secure means for anchoring said extension. It will be noted that the outer end of the extension E is flush with the shoulder upon the axle and a nut K is mounted upon the threaded end of the axle and adapted to bear jointly against said shoulder and outer end of the extension to securely hold the wheel against a longitudinal movement upon the axle.

In Fig. 2 of the drawings, the extension E is shown with an annular shoulder F upon its inner surface, as illustrated in Fig. 5 of the drawings, said shoulder portion being adapted to fit over the end of the axle box and anchored in place in the same manner as above described by pouring the molten metal about the extension.

In Fig. 3 of the drawings, I have shown an extension member, designated by letter N, having a flaring flange N′ at one end which is adapted to be embedded in the metal H which is poured in a molten state about said extension and, when set, will serve to securely hold the flaring end of the extension against the box, as shown.

In Fig. 4 of the drawings, I have shown a modification of the invention; in place of the usual cast extension member described, a core is inserted in the boxing and extends through the end thereof, after which a molten metal, such as Babbitt metal, is poured about the projecting end of the core, as shown in Fig. 8 of the drawings, and after the metal has set the core is withdrawn from the boxing, thereby forming an extension member to the axle box of a Babbitt or other metal, the outer end of which is flush with the shoulder upon the axle and adapted to form a bearing surface for a nut formed upon the axle.

From the foregoing, it will be noted that, by the provision of the extension means shown and described, all wear coming upon the axle box may be readily taken up without the employment of loose washers which are now commonly used for this purpose.

What I claim is:—

1. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic extension mounted concentrically with the end of the boxing, the outer end of the hub having undercut holes, a fusible metal engaging said holes and adapted to anchor the extension to the hub and against the end of the box, as set forth.

2. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell mounted concentrically with and against the end of the boxing, a fusible metal surrounding said extension and anchoring the same to the hub of the wheel, as set forth.

3. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell mounted concentrically with and against the end of the boxing, projections upon said extension, and a fusible metal anchord to the hub and in which said projections of the extension are anchored, as set forth.

4. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell having a shoulder formed upon the inner surface thereof and held against the end of an axle box, a fusible metal surrounding said extension and anchord to the hub, lugs projecting from said extension and embedded in said fusible metal, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM A. SHORT.

Witnesses:

W. E. MADDERON,

MAC POWELL.