R. E. YAECKEL.

METHOD OF REMOVING BUSHINGS FROM SPINDLE BEARINGS.

APPLICATION FILED OCT. 16, 1915.

1,222,507. Patented Apr. 10, 1917.

Fig. 1.

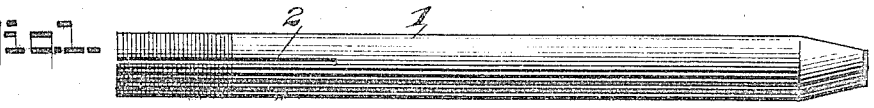


Fig. 2.

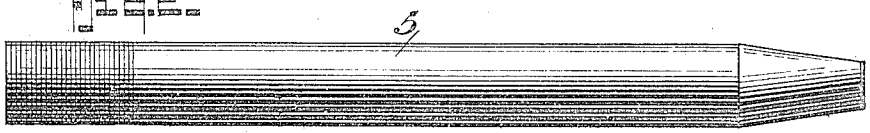


Fig. 3.

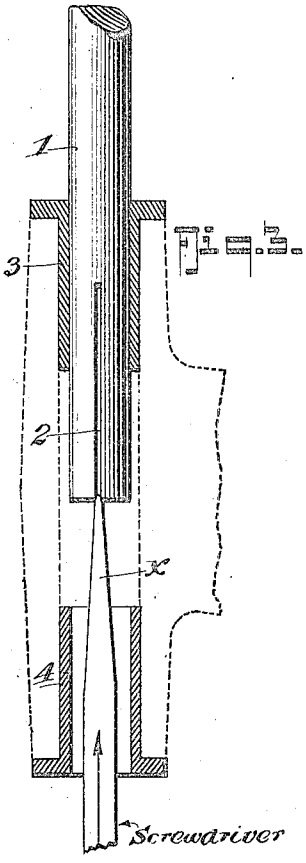


Fig. 4.

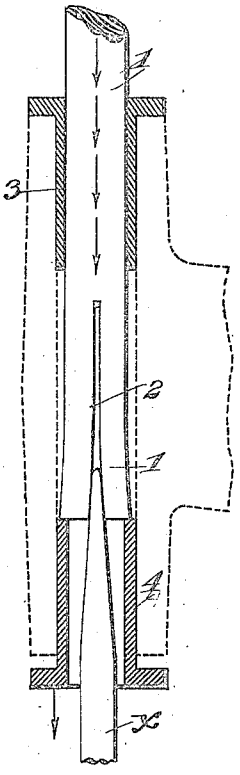
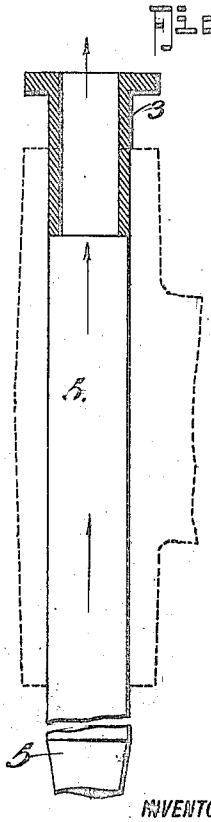


Fig. 5.



WITNESSES:

John G. Schrott

H. E. Beck

INVENTOR

Ralph E. Yaeckel.

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

RALPH E. YAECKEL, OF NANTICOKE, PENNSYLVANIA.

METHOD OF REMOVING BUSHINGS FROM SPINDLE-BEARINGS.

1,222,507. Specification of Letters Patent. Patented Apr. 10, 1917.

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To all whom it may concern:

Be it known that I, RALPH E. YAECKEL, a citizen of the United States, and a resident of Nanticoke, in the county of Luzerne and State of Pennsylvania, have made an Improved Method of Removing Bushings from Spindle-Bearings, of which the following is a specification.

My invention is particularly applicable to the Ford automobile for removing the bushings of the spindles of the front axle when the bushings have become sufficiently worn to require it.

The devices and method I employ are hereinafter described and illustrated in the accompanying drawing, in which:—

Figure 1 is a side view of a split punch constituting my principal means for carrying out the method.

Fig. 2 is a side view of a solid punch whose use is supplemental to the split punch.

Figs. 3, 4, 5 illustrate the method or operation of removing bushings.

The punch shown in Fig. 1, and whose use is illustrated in Figs. 3 and 4, has a cylindrical body 1 provided at one end with a longitudinal slot or kerf 2. The head of the punch is tapered or slightly reduced in diameter. In Figs. 3, 4, 5, the numeral 3 indicates the upper bushing, and 4 indicates the lower bushing of a spindle bearing of a Ford automobile, the body of the bearing being shown by dotted lines.

The bushings are provided with flanges as shown. In order to remove the lower bushing 4, the split punch 1 is introduced through the upper bushing 3, as shown in Fig. 1, and then a screw-driver or analogous tool x having a tapered end is inserted up through the lower bushing 4 and driven into the kerf or slit of the punch 1, thereby enlarging it so that when the punch is driven it will rest on or abut the lower bushing 4, as shown in Fig. 4. Then, by driving on the head of the split punch, it will force out the lower bushing 4. The punch and screw-driver, or other enlarging tool, being then removed, the bearing of the spindle is left free and open for insertion of a supplemental punch 5, illustrated in Figs. 2 and 5.

The punch 5 being inserted through the lower end of the spindle bearing, it comes in contact with the lower end of the upper bushing 3, and forces it up and out of the bearing, as will be readily understood. Thus the removal of the two bushings is effected with ease and despatch.

It will be understood that the punch 1 is necessarily constructed of metal or other material having a certain degree of elasticity.

What I claim is:—

The method of removing one of a pair of spaced apart bushings extending into opposite ends of a spindle bearing which consists in inserting one end of a punch having its said end split through one of the said bushings, inserting a tool through the other bushing and into the split end of said punch to expand the latter within the bearing between the bushings, and in striking the outer end of the punch to force its inner expanded end against the inner end of the last mentioned bushing and to drive the latter out of the bearing.

RALPH E. YAECKEL.

Witnesses:

ARTHUR W. KINGSBURY,

DANIEL J. JONES.