Aug. 28, 1923. 1,466,137

E. B. MEAD

BUSHING FOR CAR WHEELS

Filed May 29, 1922

Fig. 1.

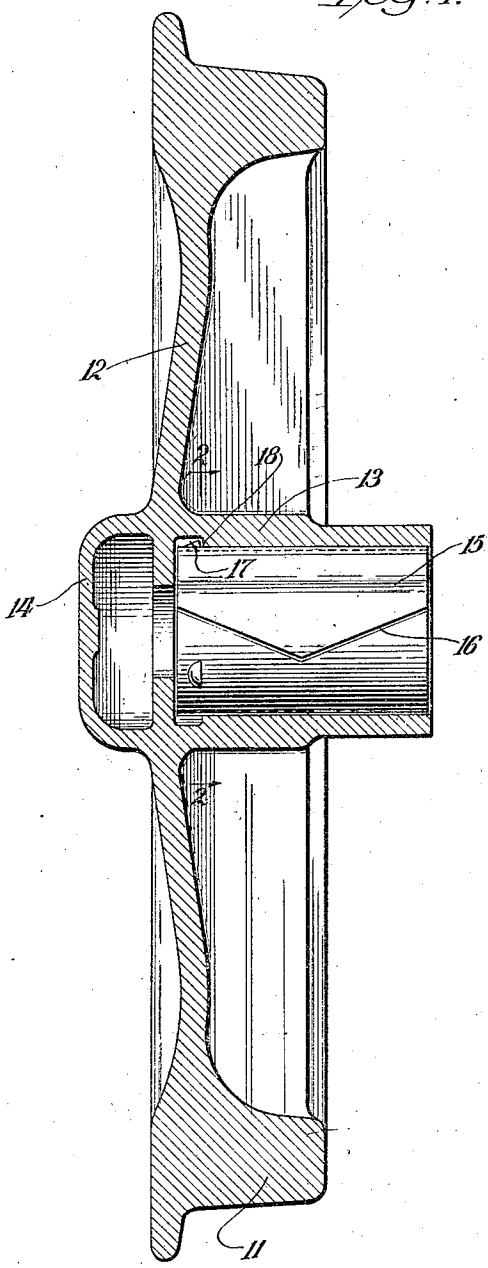
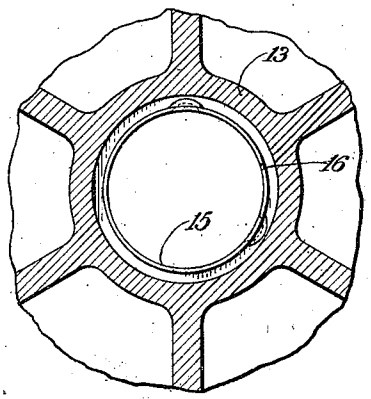


Fig. 2.



Inventor:
Ezra B. Mead.
By- Munday, Clarke & Carpenter
Attys.

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UNITED STATES PATENT OFFICE.

EZRA B. MEAD, OF OTTUMWA, IOWA, ASSIGNOR TO OTTUMWA IRON WORKS, OF OTTUMWA, IOWA, A CORPORATION OF IOWA.

BUSHING FOR CAR WHEELS.

Application filed May 29, 1922. Serial No. 564,455.

To all whom it may concern:

Be it known that I, EZRA B. MEAD, a citizen of the United States, residing in Ottumwa, in the county of Wapello and State of Iowa, have invented a new and useful Improvement in Bushings for Car Wheels, of which the following is a specification.

My invention relates in general to metal bushings, such as are employed in the manufacture of car wheels and like articles, and has for a particular object the provision of means for retaining the bushing in desired relationship in the hub of the wheel and against displacement under conditions of service.

It is also an important object of the invention to provide an improvement of the character specified which will be of simple and inexpensive form and which will involve merely a simple additional operative step in the formation of an ordinary bushing.

Other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings,

Figure 1 is a vertical section taken through a car wheel and showing, in the position of service, a bushing in which my invention is embodied; and

Fig. 2 is a section through the hub, taken substantially on the line 2—2 of Figure 1.

For purposes of illustration, I have shown on the drawing a flanged car wheel 11, having the usual web sections 12 and a hub 13, beyond which is a journal box 14 of the usual form. In the construction of the wheel, a bushing 15 is employed in the hub of the wheel and is longitudinally split, as indicated at 16, to permit radial expansion and contraction thereof. I have found that, under usual conditions of service, the bushing sometimes becomes displaced and interferes with the operating tool extending therethrough and, to overcome this difficulty, I provide one, or more, external projections, or lugs 17 on the inner end of the bushing, these in the present instance being merely punched outwardly from the material of the cylindrical member employed for this purpose. The projections 17, as is clearly shown in Figure 1, extend behind a shoulder 18 in the hub of the wheel and prevent withdrawal, or displacement of the bushing when it is in its normal expanded position. The material employed is, preferably, somewhat resilient and, by reason of the longitudinal slot 16, the cylindrical body may be radially contracted to provide clearance for the projections 17, thus permitting the positioning or withdrawal of the bushing, and is expansible to the normal position shown in Figure 1, in which the projections retain the bushing against longitudinal movement.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A bushing for use in the manufacture of car wheels, comprising a split cylinder adapted to be inserted in the wheel hub and having external projections arranged to engage behind a shoulder within said hub, to prevent displacement of the bushing in service.

2. A bushing for use in the manufacture of car wheels, comprising a member insertable into the wheel hub and radially expansible to operative position, said member being provided with a radial projection, adapted to engage a shoulder in the hub to prevent displacement of the bushing in service.

3. A bushing for use in the manufacture of car wheels, comprising a member insertable into the wheel hub and radially expansible to operative position, said member being provided with a radial projection adapted to engage a shoulder in the hub to prevent displacement of the bushing in service, and said bushing being contractable radially to provide clearance for said projections in positioning and withdrawing the bushing.

4. A car wheel having a hub closed at one

end, a bushing insertable within the hub from the other end, and interlocking parts on said hub and bushing adapted to snap into inter-engagement when the bushing reaches its final position.

5. A car wheel having a hub terminating at one end in an inwardly extending wall or flange, an enlargement adjacent said flange, and a bushing having projections adapted to snap into said enlargement.

6. A car wheel having a hub, an enlargement within the ordinary bore of said hub, a bushing adapted to be inserted within the hub and having projections adapted to snap into said enlargement.

EZRA B. MEAD.