PUBLISHED
MAY 25, 1943.
BY A. P. C.

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BUSHINGS

Filed June 24, 1940

Serial No.
342,188

Fig. 1

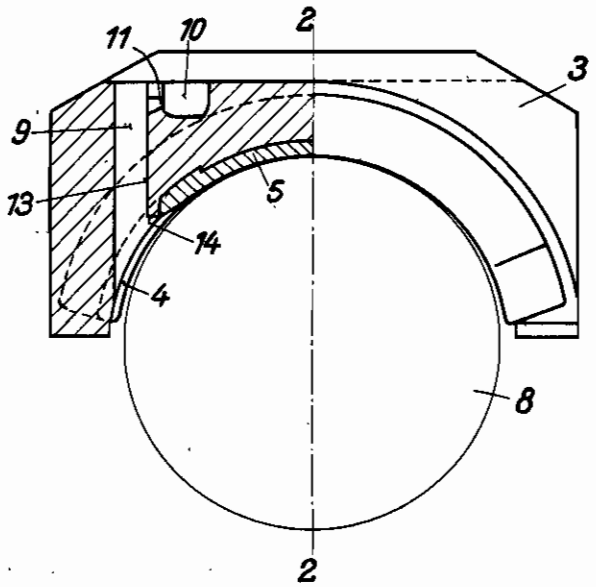
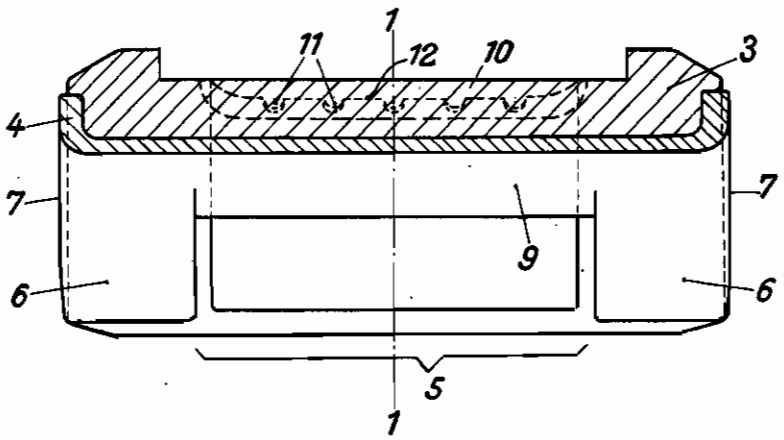


Fig. 2



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Published May 25, 1943 Serial No. 342,188

ALIEN PROPERTY CUSTODIAN

BUSHINGS

Fritz Pesarese, Hagen, Germany; vested in the Alien Property Custodian

Application filed June 24, 1940

This invention relates to a wide-extending standard bushing for axle bearings provided with top lubrication.

Bushings for this type of lubrication are known to comprise two groups. The bushings of the first group embrace the axle journal up to the central region and possess clearances and oil grooves in their bearing face for supplying oil to the journals. Such bushings, are, however, open to the objection that their manufacture is relatively expensive, due to the necessity of providing clearances and oil grooves in their bearing face, and also to another still more serious objection, namely, that they do not insure sufficient oiling of the journals owing to the unavoidable displacement or deformation of the metal during operation, whereby the oil grooves and clearances are damaged or even closed.

The second group includes bushings which embrace the journal only at a small angle and oil is supplied to the journals from an outer limiting area of the bushings. This construction requires a small subtending angle to safely guide the lubricant to the surface of the journal and, on the other hand, fails to provide for secure guiding of the axle journal itself. Furthermore, the end face for taking up axial shocks is so small that it is subject to damage during operation.

The invention overcomes the drawbacks mentioned by causing the central portion of the bearing face of the bushing recede relative to the flanks thereof which form the contact faces for the axle journal and by providing in this central portion, outside the bearing face, passages for oil supplied to the journals by free fall, the oil flowing along the face of the passage nearest the journal and the face limiting the central portion of the bearing surface.

In further accordance with the invention, oil distribution is effected already in the grooves on the back of the bushing through passages in an overflow, and the well distributed lubricant flows along the vertical guide face of the central passage nearest the journal and onto the latter. The relative distance of the vertical guide faces of the passages is smaller than the smallest turned journal to insure positive oiling of a new journal as well as of one that has been turned down to the permissible minimum size.

The bearing face of the bushing according to the invention is therefore free from oil grooves and clearances, and the central portion thereof, or of the lining recedes relatively to the front ends of the bushing and the sides of the bearing face. In this way, large end faces are formed which are capable of taking up axial shocks and which embrace the ends wide enough to prevent the axle from rolling out. In the narrow central portion of the bearing face of the bushing oil is positively fed to the journals through slotlike passages formed in the bushing during production.

The bushing according to the invention is simple to manufacture, complies with all requirements of intensified railroad traffic and provides for liberal lubrication of the journals within range of their center, whereby thorough oiling and cooling of the sliding faces in both directions of rotation for all axle journals found in practical operation is effected.

The invention is illustrated by way of example in the accompanying drawing, in which

Figure 1 is a front view of a bushing according to the invention and a section on the line 1—1, of Fig. 2; and

Fig. 2 is a longitudinal section of a bushing according to the invention on the line 2—2, of Fig. 1.

The bushing 3 has a bearing or contact surface 4 whose central portion 5 recedes relative to the flanks 6 which with their faces 7 form also end contact members for the axle journal 8 to take up shocks occurring in axial direction. The central portion 5 of the bushing 3 is provided with slotlike passages 9 outside the bearing face 4, and lubricant flows from a channel 10 through clearances 11 of an overflow 12 and down along the face 13, nearest the journal 8, of the passage 9, passes to the face 14, limiting the central portion 5 of the bearing face 4, whence it drops in free fall upon the journal 8 which is thus positively lubricated.

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