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RAILWAY JOURNAL BOX PROTECTOR

Filed July 22, 1927

Fig. 1.

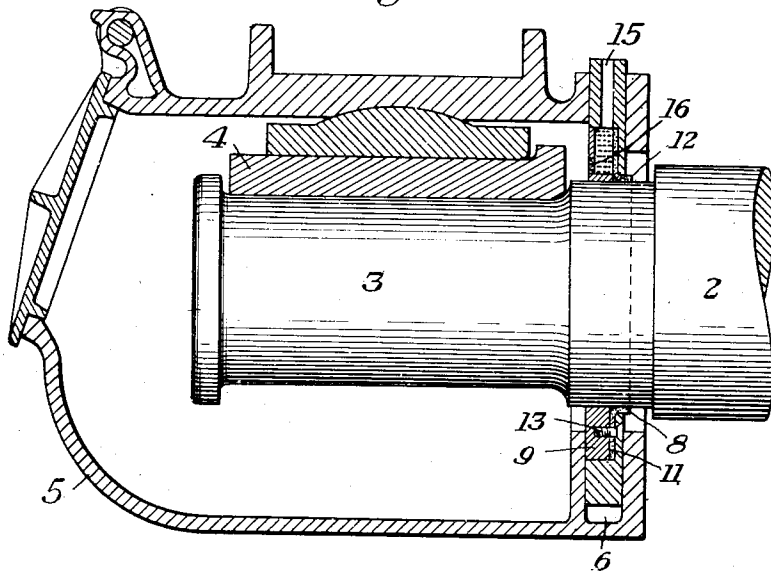


Fig. 2.

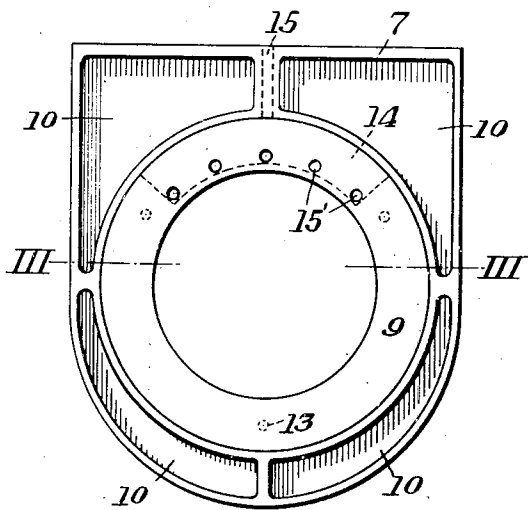


Fig. 4.

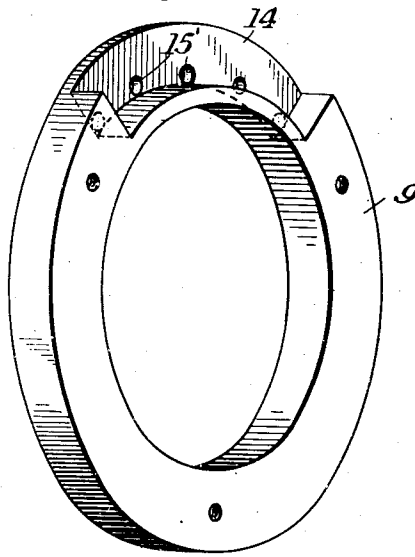
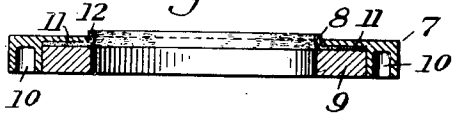


Fig. 3.



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RAILWAY-JOURNAL-BOX PROTECTOR.

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This invention relates to railway journal box protectors or dust guards. These protectors are slab-like members which fit around a railway car axle adjacent the journal portion and work in slots formed in the rear end of the journal box. They are necessarily made movable relative to the journal box and are intended to keep dirt and grit out of the journal.

Railway journal boxes, as heretofore constructed, have generally comprised a block of wood cut to the right shape and bored to receive the car axle. Wood has been employed because it will not bind on the axle despite the heat generated or despite inadequate lubrication. Wood is also used because it is light and therefore does not tend to wear a large hole as quickly as would a protector made of heavy metal. It will be understood, of course, that the weight of the protector is carried by the axle.

The wooden protectors have been open to numerous objections. They crack and split, and even though made of high quality wood, they wear large at the hole and permit dirt and grit to enter the journal.

I provide a journal box protector which is made of a light weight metal, preferably aluminum. This does away with all the splitting and cracking troubles experienced with wooden protectors. At the same time the tendency of the hole to wear large is reduced—first, because the protector is very light in weight, and second, because I secure a better bearing between the protector and the axle than has heretofore been obtained.

I preferably employ a ring of fibrous material which is carried by the protector and extends around the car axle. This ring may be made of felt or the like, thus securing sufficient flexibility to maintain a relatively tight joint despite any slight wear which may occur. The felt ring lies close against the axle at all times and thus prevents dirt from entering the journal box.

The protector is preferably made hollow so as to receive a lubricant. This lubricant is not intended to be used in normal car operation, but is for emergency purposes only. The hollow space is connected by a passage extending toward the journal, this passage being normally sealed off by a suitable material, such as wax, which will retain the lubricant in the hollow body under the normal

working temperature of the journal. In case a hot box develops, the wax is melted and the journal is supplied with lubricant.

In the accompanying drawings which illustrate the present preferred embodiment of my invention,

Figure 1 is a vertical longitudinal section through a journal box having my improved protector or dust guard applied thereto,

Figure 2 is a front elevation of the protector or dust guard,

Figure 3 is a horizontal section taken on the line III—III of Figure 2, and

Figure 4 is a perspective view of a ring forming part of the protector.

In the illustrated embodiment of the invention there is shown a railway car axle 2 having a journal portion 3 bearing on a brass 4. The brass 4 is carried in a journal box 5, which may be of any desired construction.

The journal box 5 is provided with slots 6 adjacent its rear section, and the protector fits in these slots.

The protector or dust guard comprises a body portion 7, a felt ring 8 and a retaining ring 9. The body portion 7 is made of aluminum and is cored out as indicated at 10 to form an annular flange and a flange at the edge of the body surrounding the first flange, which flanges are connected to each other at spaced intervals by short webs, so that it will be as light as possible and still have the desired structural strength.

The felt ring 8 comprises a flat flange-like portion 11 lying in a recess formed in the body 7, and a cylindrical portion 12 which lies along and closely engages the car axle 2. The portion 12 is integral with the portion 11, and by reason of this construction the natural spring of the felt causes it to closely embrace the axle at all times.

The ring 8 is held in place by the ring 9 which in turn is secured by screws 13.

The ring 9 is hollowed at its top portion, as indicated at 14, and a passage 15 is provided in the body portion 7 so that the hollow portion 14 may be filled with lubricant. The ring 9 makes a sufficiently close fit with the other parts of the protector that the lubricant will be retained. The ring 9 is provided with openings 15' extending from the hollow portion 14 toward the journal 3. These openings are normally plugged with a material such as wax or hard grease 16

having a suitable melting point. Normally the lubricant in the hollow portion 14 is prevented from running out through the openings 15 by reason of the openings being plugged with the wax or hard grease 16. If a hot box develops and the temperature within the journal box is thus elevated above the normal running temperature, the wax or grease 16 will be melted and the lubricant is free to run from the hollow space 14. Graphite may be employed, and when the passages 15 are opened by the temperature rise, it will flow toward the journal and provide the desired lubrication.

While I have illustrated and described the preferred form of my invention, it is not limited to this form alone, but may be embodied within the scope of the following claims.

I claim:—

1. A dust guard for railway journal boxes adapted to be inserted in guides in a journal box, having a main portion with an axle opening and provided with a recess therein surrounding the axle opening, a ring having an axle opening seated in said recess and having a recess therein above the axle opening to receive a lubricant, the ring having a passage extending from the last mentioned recess toward the journal in the box, and a material normally closing off said passage

and adapted to melt and permit the lubricant to flow through the passage upon being unduly heated.

2. A dust guard for railway journal boxes adapted to be inserted in guides in a journal box, having an axle opening and provided with a recess therein above the axle opening to receive a lubricant, the dust guard having a passage extending from the recess toward the journal in the box, and means responsive to temperature and effective for opening the passage upon being unduly heated.

3. A dust guard for railway journal boxes comprising a body portion having an axle opening therethrough, an annular flange on one side of the body surrounding the axle opening, there being an annular recess surrounding the axle opening formed by a portion of the body and said annular flange, a second flange at the edge of the body surrounding the annular flange, webs connecting said flanges at spaced intervals, a ring of fibrous material seated within the annular recess, a securing ring in the recess, and securing screws passing through the body and fibrous ring into the securing ring.

In testimony whereof I have hereunto set my hand.

CHARLES J. FENSKE.