Jan. 3, 1939. P. E. YANCEY 2,142,230

DUST GUARD COVER

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Fig. 1.

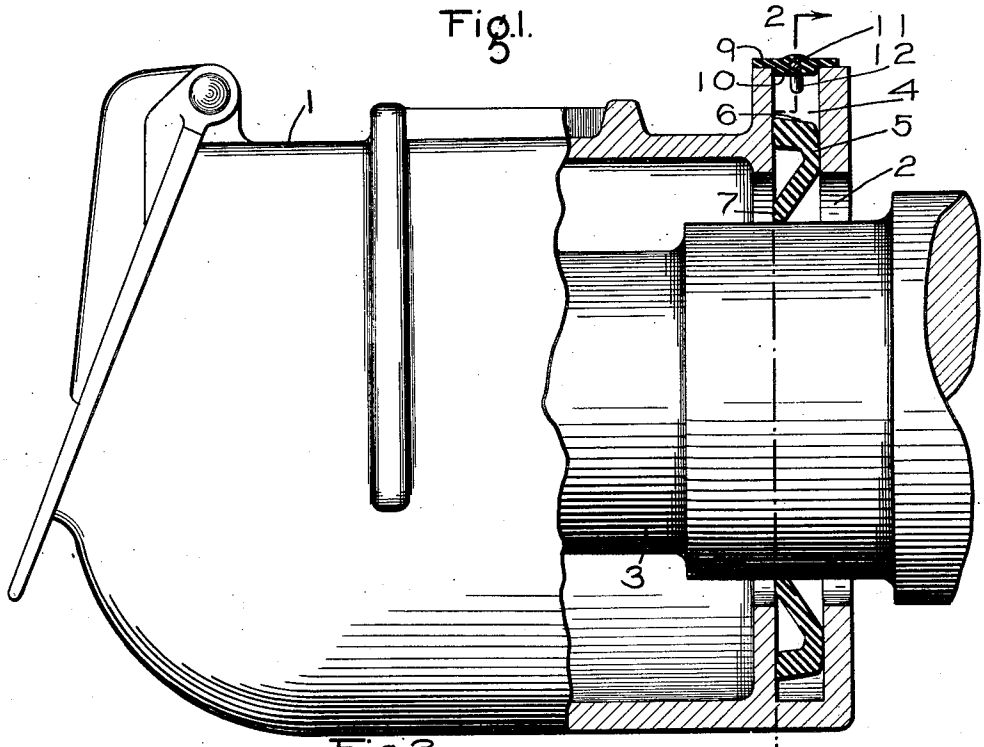


Fig. 3.

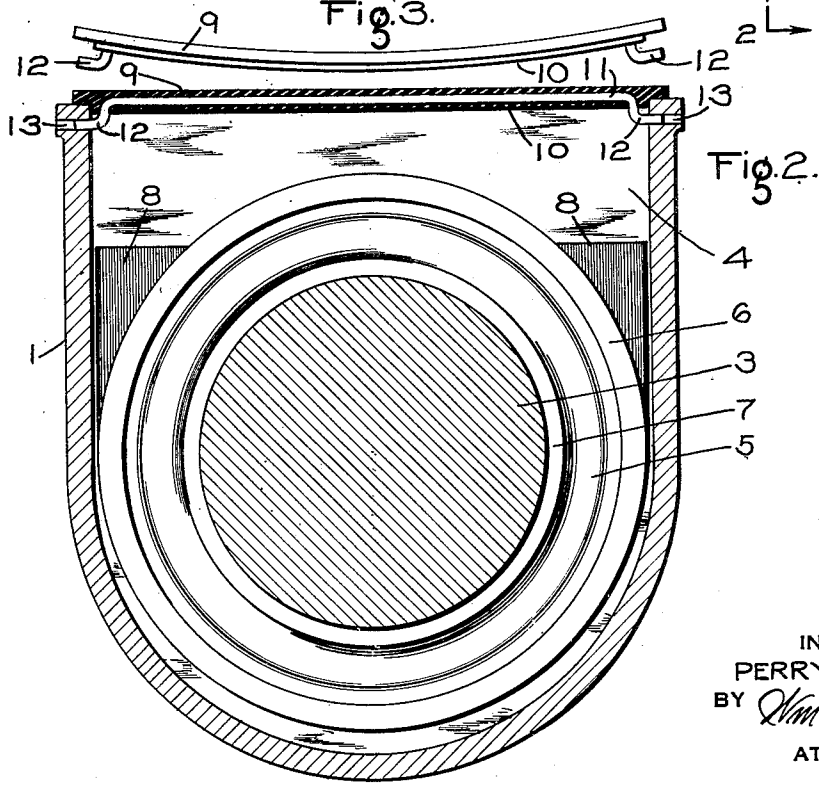


Fig. 2.

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DUST GUARD COVER

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3 Claims. (Cl. 286—6)

This invention relates to journal boxes particularly of the type employed in railway cars in which the end of a car axle extends through one end of the box and is journaled therein.

In the end of the journal box through which the car axle extends there is provided a well which is open at the top of the box and which extends vertically downwardly around the car axle. This well is provided for carrying a dust guard adapted to engage the side walls of the well and to fit around and engage the car axle in order to prevent cinders or other foreign matter from entering the journal box through the opening in the axle end thereof. This dust guard is inserted into the well through the top open end thereof before the journal box is applied to the car axle.

Dust guards of the type just described do not, however, prevent foreign matter entering the top open end of the well and such foreign matter is liable to work on past the dust guard into the journal box and one object of the present invention is to provide improved means adapted to be applied to a journal box for closing the open end of the well in order to obviate this difficulty.

Another object of the invention is to provide an improved relatively simple and inexpensive cover for the dust guard well of journal boxes which can be readily applied to the journal box and removed therefrom at will, and which can be repeatedly used.

In the accompanying drawing, Fig. 1 is a view partly in side elevation and partly in vertical section of a journal box showing my improved dust guard well cover applied thereto; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1 and showing a longitudinal section of my improved cover; and Fig. 3 is a side elevational view of my improved cover.

As shown in the drawing, the journal box 1 is of the usual construction having at the inner end an opening 2 through which the car axle 3 extends into the box.

The box 1 is provided at the inner end with the usual vertical slot or well 4 which is open at its upper end and in which there is disposed a dust guard 5 having an outer annular portion 6 engaging the opposite side walls of the well 4 and an inner peripheral lip-like portion 7 engaging the car axle 3 for preventing entrance of foreign matter through the opening 2 into the journal box. The dust guard 5 is provided with oppositely disposed ears or lugs 8 adapted to engage the end walls of the well 4 upon rotation of the axle 3 relative to the box 1 in order to prevent the dust guard 5 from turning with the axle.

The upper open end of the well 4 is closed by a cover 9 which embodies the invention. The cover 9 is a relatively thin, long, rectangular shaped element made of any suitable material such as a rubber composition and adapted to engage the box around the periphery of the well 4 so as to effectively seal the open end of the well against the entrance of foreign matter. The cover 9 is provided on the lower side with a thickened portion 10 which loosely fits into the open end of the well 4, and extending lengthwise through this thickened portion is a flexible spring element 11 preferably made of piano wire or the like inbedded therein in the process of manufacture. The spring 11 is provided at each end with an off-set portion 12 spaced from the inside face of the cover 9, and each of these off-set portions is adapted to extend into a recess 13 provided in the respective end wall of the well 4. The recesses 13 are preferably in the form of bores which are drilled through the end wall of the well from the outside of the journal box 1.

The spring element 11 is so formed and located in the cover 9 that when the cover is removed from the box and free, it will be bowed outwardly or assume a concave shape with the offset portions 12 of the spring element 11 on the convex side, as shown in Fig. 3 of the drawing. Thus when the cover is applied to the journal box the spring element 11 will act to press it into engagement therewith over the open end of the well 4.

To apply the cover 9 to the journal box, the off-set portion 12 at one end of the spring 11 is inserted into the recess 13 at one end of the well. The central portion of the cover is then sprung to reverse the concavity thereof sufficiently to permit the off-set portion 12 at the other end of the spring to be entered into the recess 13 at the other end of the well. The cover is then let go of and the spring 11 pulls same into sealing engagement with the portion of the box surrounding the open end of the well and in this position acts to prevent foreign matter entering said well. To remove the cover 9 from the box the above operations are just reversed, as will be evident.

From the above description it will be evident that a relatively simple and inexpensive cover is provided for effectively sealing the open end

of the dust guard wells in journal boxes against the entrance of foreign matter, and this cover may be readily applied to and removed from journal boxes and may be repeatedly used, if desired. Further, the improved cover is readily applicable to journal boxes now in use by the mere drilling of the two holes 13 for receiving the offset ends 12 of the spring element 11.

While one illustrative embodiment of the invention has been described in detail, it is not the intention to limit the scope to that embodiment or otherwise than by the terms of the appended claims.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A cover for closing the open end of the dust guard well of a journal box in which a recess is provided in each end wall of the well, said cover comprising a flexible rectangular shaped member engaging said box over the open end of said well, a normally concave shaped spring element extending lengthwise of and secured to said member, one end of said element being adapted to engage in one of said recesses and the other end in the other recess, said spring element being tensioned when one end is in engagement in one of said recesses and the other end is in engagement in the other recess whereby said member is urged into engagement with said box, the ends of said spring element being movable out of said recesses upon flexing said element to permit removal of said member from said box.

2. A cover for closing the open end of the dust guard well of a journal box in which a recess is provided in each end wall of the well, said cover comprising a resilient, rectangular shaped member normally curved to provide a convex face and adapted to be secured to a journal box with the normally convex face engaging said box over the open end of the well for closing same, means at both ends of said cover off-set from the normally convex face thereof and spaced apart a distance such as to engage said box within said recesses when said cover is substantially straight, bowing of said cover so that the normally convex face thereof becomes concave being adapted to reduce the distance between said means to a degree sufficient to permit application of said cover to and removal from said box.

3. A cover for closing the open end of the dust guard well of a journal box having a recess in both end walls of the well, said cover comprising a flexible, rectangular shaped, moulded member adapted to engage said box over the open end of the wall, a spring wire embedded in said member and extending longitudinally through the center of said member and bent to provide a normally convex side adjacent the box engaging face of said member, the ends of said wire extending out through the box engaging face of said member and being bent to form at both ends an off-set portion spaced from the box engaging face of said member and from each other so as to engage said box within said recesses upon substantial straightening of said wire for holding said member in engagement with said box, said cover flexing with said wire and being adapted when said wire is bowed oppositely to its normal convex shape to position said off-set portions to permit application of said cover to and removal thereof from said box.

PERRY E. YANCEY.