W. S. TROWBRIDGE.

JOURNAL DUST GUARD.

APPLICATION FILED MAY 8, 1918.

1,350,429. **Patented Aug. 24, 1920.**

Fig. 1.

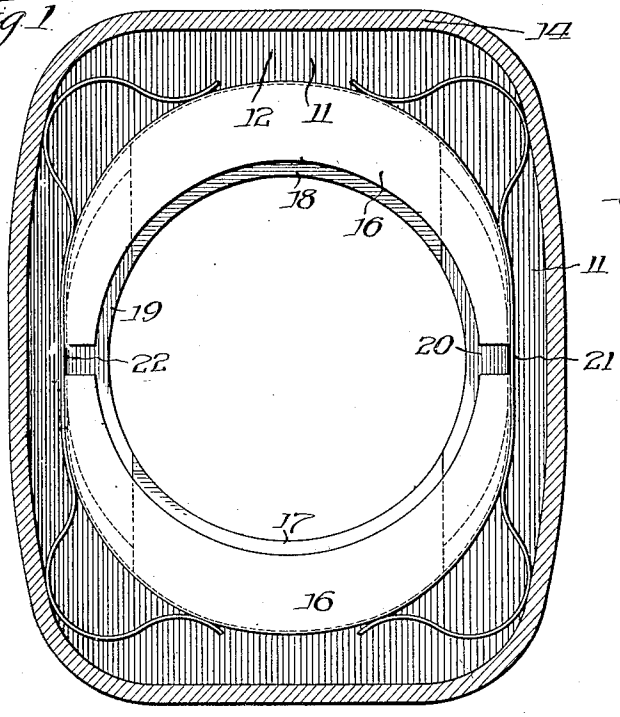


Fig. 2.

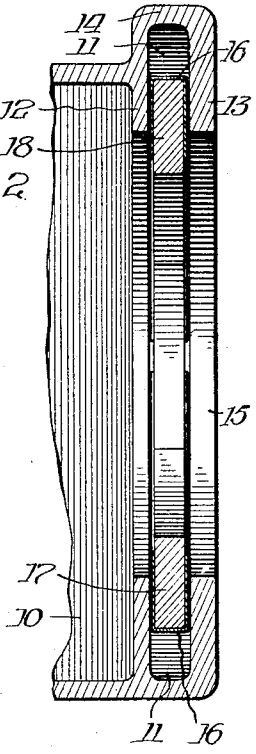
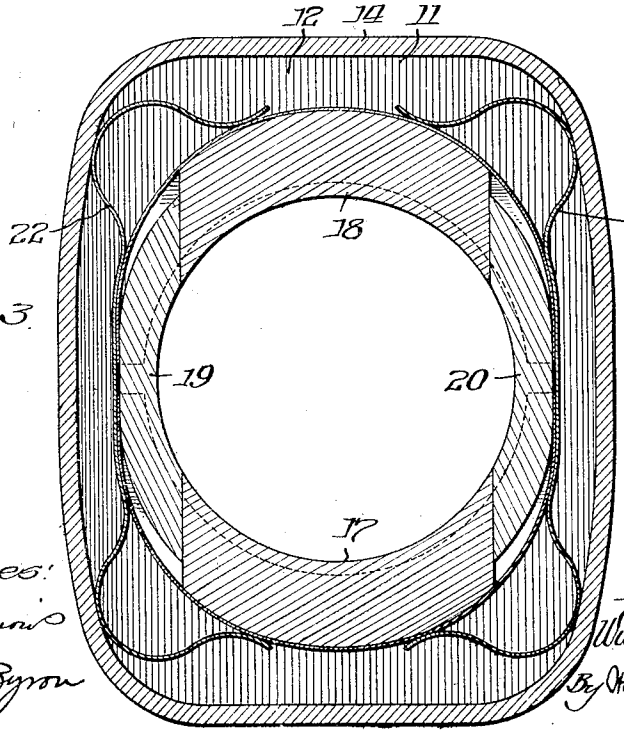


Fig. 3.



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UNITED STATES PATENT OFFICE.

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JOURNAL DUST-GUARD.

1,350,429. Specification of Letters Patent. Patented Aug. 24, 1920.

Application filed May 8, 1918. Serial No. 233,250.

To all whom it may concern:

Be it known that I, WILLIAM S. TROWBRIDGE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Journal Dust-Guards, of which the following is a specification.

This invention relates to journal dust guards.

One of the objects of this invention is to make it possible to inclose journal dust guards on all four sides to make the same more dust proof.

Another object is to provide a dust guard which may be easily placed within a journal box and easily withdrawn therefrom, even after the same has been in service a long time and received severe treatment.

Another object is to provide an adjustable journal dust guard adapted to meet the various requirements for successful commercial operation.

Generally speaking, these and other objects are accomplished by providing a journal dust guard including a container to be placed within the journal box, and a journal engaging member mounted within said container.

The invention is illustrated on the accompanying sheet of drawings, in which—

Figure 1 is a sectional view through the dust guard chamber of my improved journal box, and showing in side elevation my improved journal dust guard;

Fig. 2 is a fragmentary transverse sectional view through the journal box and dust guard; and,

Fig. 3 is a sectional view similar to the one shown in Fig. 2, but also showing the dust guard in section.

The various novel features of my invention will be apparent from the following description and drawings and will be particularly pointed out in the appended claims.

To accomplish the best results it is necessary that the dust guard be mounted for vertical or up and down movement and also have horizontal movement to one side or the other in accordance with movements of the axle or journal. In jacking up the box, for instance, to change a brass, the axle moves downward in its relation to the journal box and the dust guard should move with it. In making brake applications, the axle moves to one side or the other horizontally of the box and the dust guard also should move with it.

The standard M. C. B. journal box has the top side of the dust guard pocket or chamber open and the dust guard is inserted through the top opening of the box and then the opening is closed, usually with a piece of wood. There are obvious objections to this and some railroads have made this opening on the bottom side of the journal box instead of on the top side. However, wherever there are openings more or less dust sifts therethrough and not infrequently the closures for these openings are lost, thereby exposing the dust guard and the associated journal to an excessive amount of dust.

Accordingly, I propose to give more protection to journals and their dust guards from dust. To do this I have the dust guard chamber solid on all of its four circumferential sides. Referring to the accompanying sheet of drawings, it will be noted that I have shown a journal box 10 having integrally formed therewith at its inner end a dust guard chamber 11 formed by lateral walls 12 and 13 which are connected at their outer ends by a solid integral inclosing wall 14. From this arrangement it is apparent that the dust guard must be inserted through the inner opening 15 of the journal box.

There are many dust guards made of wood, in fact, the M. C. B. standard is a plain piece of wood reinforced by rawhide, but the trouble with the wooden dust guard as used is that it soaks up the oil and the fine particles of metal ground off of the axle become embedded in the wood, and with dust form in effect a cement, and after a time the wooden dust guard is virtually cemented or fastened in position and will not move one way or the other. Conditions are known where such wooden dust guards were so thoroughly cemented or fixed in the dust guard chamber that it was necessary to chop the dust guard out with a chisel. To overcome this trouble and disadvantage, I have provided a relatively hard container 16, preferably of metal and U shaped in section. This container preferably is in the form of two or more pieces or segments which are insertible through the journal

box opening 15. After the container is placed within the dust guard chamber, the journal engaging member of the dust guard is placed within the container 16. This journal engaging member preferably is of wood and in the form of a plurality of segments 17, 18, 19 and 20, which coöperate with each other to present an inner circular surface for engaging the journal or axle which extends through the opening 15 into the journal box 10. By having the wooden segments of the dust guard mounted within the metal container, the former are held in shape and are retained in a position whereby the dust guard as a whole may freely move back and forth transversely of the journal box at any desired angle, in accordance with movements of the axle or journal.

It will be noted that the container 16 with its journal engaging member is yieldably held in a central position by means of oppositely arranged springs 21 and 22, the middle portions of which engage the sides of the container and the ends of which engage the top and bottom portions of the container, so that no matter at what angle the container with the journal engaging member is moved, the same will be returned to its normal position by the resilient members 21 and 22 which embrace the container. These springs 21 and 22 which are interposed between the container and the outer wall 14 of the dust guard chamber are inserted into the dust guard chamber through the opening 15 prior to the time that the container is placed in the chamber. By making the container in segments, and also making the journal engaging member in segments, the same may be readily placed within the dust guard chamber, and if for any reason it is desired to withdraw any of the parts from the dust guard chamber, the same may be readily accomplished.

It will be noted, as shown in Figs. 1 and 3, that when the new dust guard is applied to the journal box, the ends of the segments of the container are not in engagement with each other, the object being to permit the wood or other journal engaging member to wear a certain predetermined amount, whereupon the ends of the container segments approach each other. This adjustable dust guard, therefore, not only accommodates itself in accordance with movements of the axle or journal, but also in accordance with wearing of the parts. It will be understood that the parts of the dust guard are assembled within the dust guard chamber after the various parts of the dust guard are inserted into said chamber piece by piece.

There may be various modifications of my invention herein particularly shown and described, and it is my intention to cover all such modifications which do not involve a departure from the spirit and scope of the invention as set forth in the following claims.

I claim:

1. A journal dust guard, including a pair of metal containers U-shaped in transverse section, a plurality of segments all adapted to be inserted in a journal box through the axle opening therein and assembled in operative position within the box, each of said containers adapted to receive a plurality of the segments, and springs coöperating with the journal box guard recess and the containers to press the latter toward the axle and to cause movement of the guard responsive to movement of the axle with respect to the journal box.

2. A journal dust guard, comprising two C-shaped metal containers U-shaped in transverse section, a plurality of segmental pieces adapted to be received by said containers, the containers and pieces adapted to be inserted in the journal box through the axle opening thereof and to be assembled within said box, a pair of flat springs interposed between the box and said containers whereby to cause movement thereof responsive to the movement of the axle with respect to the journal box, the middle of each spring engaging adjacent ends of said containers with the ends of the springs engaging the journal box, said springs functioning to move said containers toward each other as the wooden pieces become worn in service.

3. A journal dust guard, comprising two C-shaped metal containers U-shaped in transverse section, a plurality of segmental pieces adapted to be received by said containers, the containers and pieces adapted to be inserted in the journal box through the axle opening thereof and to be assembled within said box, a pair of flat springs interposed between the box and said containers whereby to cause movement thereof responsive to the movement of the axle with respect to the journal box, the middle of each spring engaging adjacent ends of said containers with the ends of the springs engaging the journal box, said springs functioning to move said containers toward each other as the wooden pieces become worn in service and to cause movement of the guard with the axle.

Signed at Chicago, Illinois, this 3rd day of May, 1918.

WILLIAM S. TROWBRIDGE.

Witnesses:
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