J. J. TATUM.

JOURNAL BOX.

APPLICATION FILED FEB. 6, 1918.

1,288,280. Patented Dec. 17, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

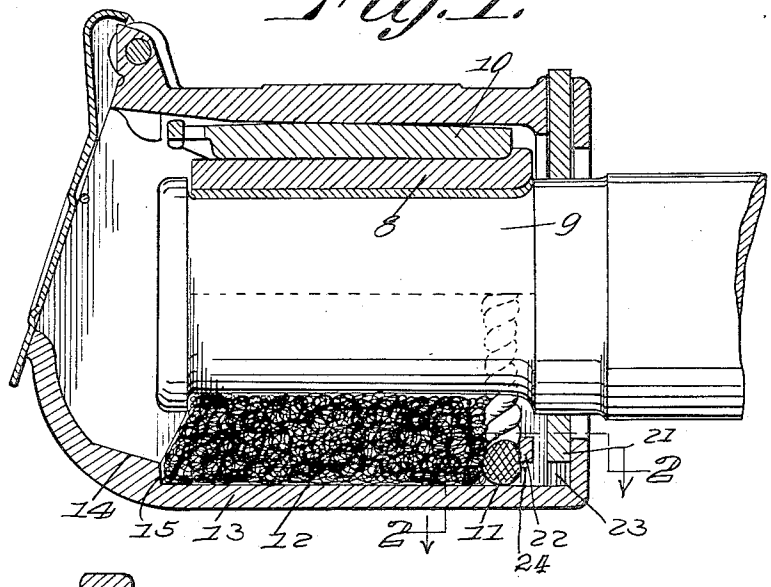


Fig. 2.

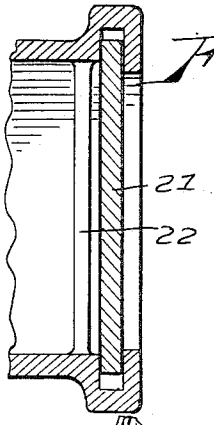


Fig. 3.

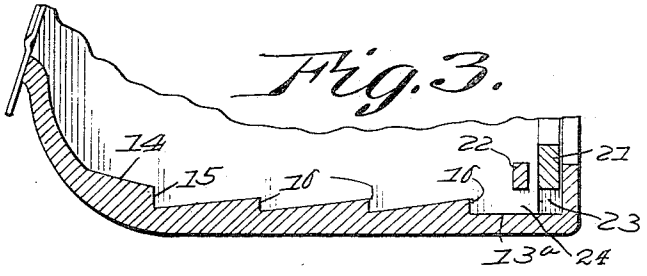
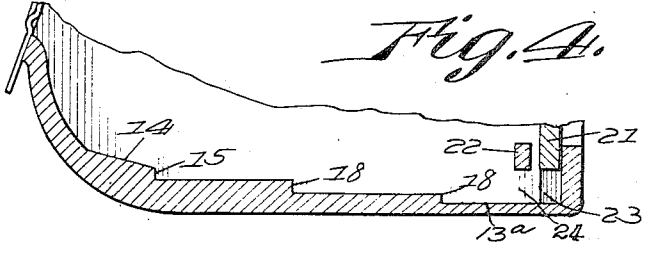


Fig. 4.



Inventor

John J Tatum

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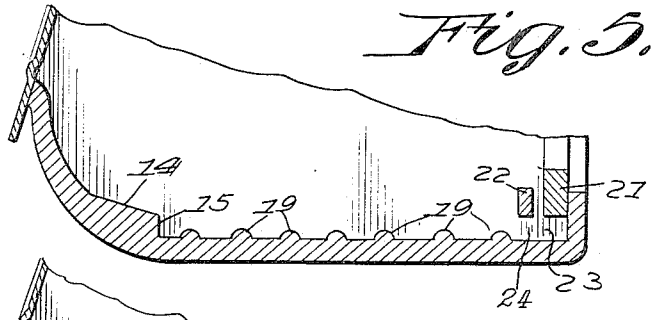
JOURNAL BOX.

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2 SHEETS—SHEET 2.

Fig. 5.



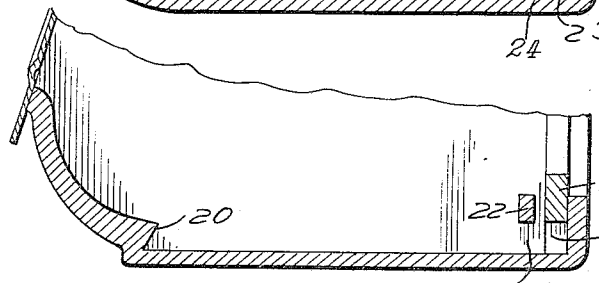


Fig. 6.

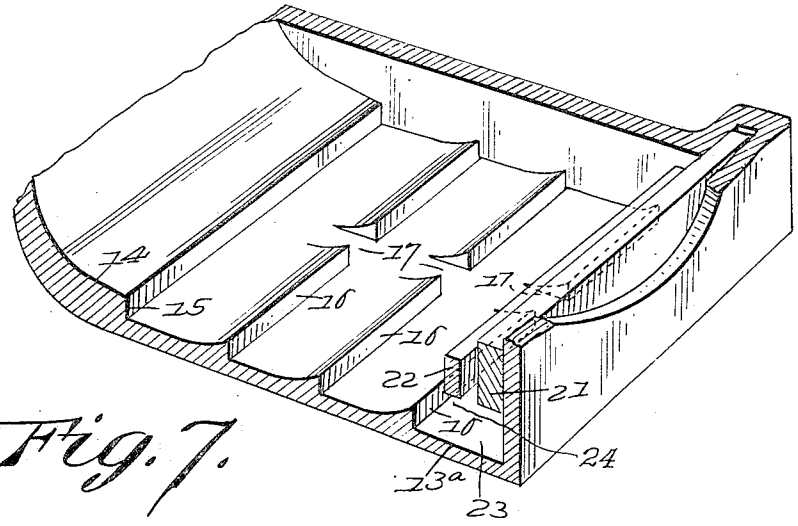


Fig. 7.

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UNITED STATES PATENT OFFICE.

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JOURNAL-BOX.

1,288,280. Specification of Letters Patent. Patented Dec. 17, 1918.

Application filed February 6, 1918. Serial No. 215,590.

To all whom it may concern:

Be it known that I, JOHN J. TATUM, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification.

The object of my invention is to provide a journal box with a bottom floor of such construction that the sponging under the journal will be retained in place thereby insuring proper application of oil to the journal.

A further object of my invention is to so construct the floor of the journal box as to insure the oil with which the sponging is to be kept saturated, being fed back by gravity to the sponging in case any of the oil, is thrown out or off from the sponging by movement of the journal, whereby the oil in the box is kept constantly in use to feed the sponging under the journal, so that the journal will always be kept supplied with oil for lubrication; and with these and other objects in view my invention consists of the parts and combination of parts as will be hereinafter set forth.

In the drawings:

Figure 1 is a vertical longitudinal sectional view of a journal box embodying my invention.

Fig. 2 is a detail sectional view on the line 2—2 Fig. 1.

Figs. 3, 4, 5, and 6 are vertical longitudinal sectional views of journal boxes, the upper portion being broken away, showing other embodiments of my invention.

Fig. 7 is a perspective view of the bottom wall of a journal box showing the groove extending longitudinally of the floor and transverse of the undulations on the floor or bottom wall.

The reference numeral 8 designates a journal bearing, 9 the journal and 10 the journal bearing wedge or key, all of M. C. B. construction.

According to M. C. B. practice the journal box is packed by first placing "rolls" 11 which are placed at the rear of the box to prevent oil from working out through the dust guard opening. The loosely formed sponging 12 is then firmly placed under the journal to avoid the same settling away, packing it more lightly on each side of the journal to avoid the wiping effect produced when the waste is pressed too tightly between the journal and the side of the box. The height of the sponging must not extend beyond the center line of the journal, nor beyond the inside of the journal collar. It is also the practice to place sponging between the end of the journal and the front wall of the box, but it must have no thread connection with any of the sponging under or on the side of the journal, and must not extend more than one inch above the lower edge of the collar on the end of the journal. This sponging, which does little or no lubricating, should be comparatively dry, as its function is to prevent the sponging on the sides and under the journal from working forward out of the normal position for satisfactory service. In new equipment a journal box, according to its size requires from about 7 to 20 pounds, while replacing requires from 6 to 16 pounds. As a result of my invention I am enabled to save approximately ten cents worth of packing in each of the eight journal boxes of a car or eighty cents per car and as these packings are required about once a year it will be seen that the saving is very material when the large number of cars in use is considered.

In the simplest embodiment of my invention, shown in Fig. 1 I construct the floor of the journal box on two different planes; the main floor 13, under the journal being in a lower plane than the plane of the floor 14 beyond the outer end of the journal, there being a shoulder or stop 15 at the juncture of the two levels which shoulder or stop, as will be seen from Fig. 1 keys the sponging in place under the journal and holds it there in proper normal position, and prevents it from working toward the front of the box. It frequently happens in the construction of M. C. B. box that the sponging works forward when the wheels jump over crossings and frogs, but by reason of the stop 15 in my construction this cannot happen.

By reason of my invention I dispense with the sponging placed in M. C. B. construction between the end of the journal and the front of the box.

In Fig. 3 I provide the lower floor 13ª with a plurality of stops 16 faced toward the rear end of the box, the top of the stop being inclined toward the front of the box whereby oil is fed toward the front of the box. While the vertical faces of the stops hold the sponging from working toward the front of the box. These stops are each pro-

vided with a transverse groove 17 which permits oil to feed from end to end of the box.

In Fig. 4 the lower floor 13^a is provided with a series of stops 18 each on a different and higher plane progressively disposed toward the front of the box.

In Fig. 5 the lower floor is provided with a plurality of transverse stops 19 all disposed in substantially the same plane under the journal. These stops 19 are each provided with transverse grooves similar to the grooves 17 in Fig. 7.

In Fig. 6 the stop 20 at the front of the box is undercut. It will be noted that the floor 14 is, in each instance, inclined downwardly toward the rear of the box whereby oil thereon is fed by gravity to the floor and sponging under the journal. The usual dust guard 21 is employed in my improved journal box. The lower inner wall 22 of the dust guard groove is positioned a greater distance from the rear wall of the journal box than is usual so that a space 23 is left between the lower ends of the dust guard and the wall 22, whereby the lower end of the dust guard groove is of greater width than the thickness of the dust guard. The object of this construction is to prevent oil from creeping along the journal outside of the journal as is the case with the present type of journal box. Any oil that may start to creep along the journal will come in contact with the inner face of the dust guard 21 and there being no support for said oil at this point it will, by gravity, fall through the space 23 on to the bottom floor of the journal box and pass through the port 24 under the wall 22 into the sponging to be used again. By preventing the oil from creeping along the journal outside of the box I not only save a considerable amount of oil but I eliminate the splashing of the oil over the car wheel and associated parts.

It is of course obvious that the stops may be continued up the side walls of the journal box to a proper height without departing from the spirit of my invention. My invention may be embodied in its entirety in a journal box made of cast metal or of pressed metal.

What I claim is:

1. A journal box, a journal therein, said box having a shoulder or chock in the bottom thereof in substantially the vertical plane of the front end of the journal and terminating short of the periphery of the journal.

2. A journal box having its lower dust guard wall off-set toward the front of the box whereby the groove for the dust guard is wider at the bottom of the box than at the sides and the top of the box, said lower wall having a port through it substantially at the floor of the box, so that oil in moving toward the wheel will drop down into the open space between the lower inner wall of the dust guard and run back, through the port in the lower dust guard wall to the sponging under the journal in the box.

3. A journal box having a lower inside wall for the dust guard, a port at the bottom of said wall leading inside of the box so that the oil getting into the lower dust guard groove will run back into the sponging in the box.

4. A journal box having a dust guard opening wider than the dust guard at the floor of the box than at the side walls of the box so that the thickness of dust guard will not fill out the lower dust guard opening or groove.

5. A journal box having a dust guard groove wider at the bottom of the box than the thickness of the dust guard requires.

In testimony whereof I affix my signature.

JOHN J. TATUM.