May 27, 1924. 1,495,857

A. N. LUKENS

JOURNAL BOX LID

Filed April 10, 1922

Fig.1.

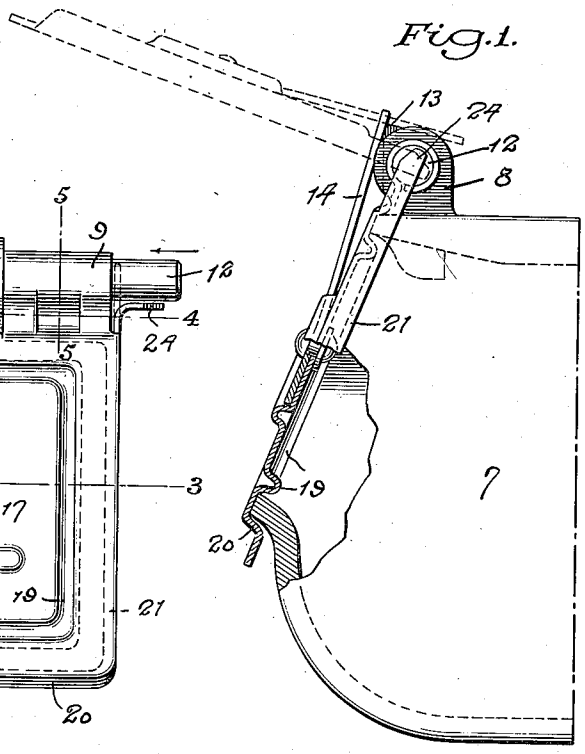


Fig.2.

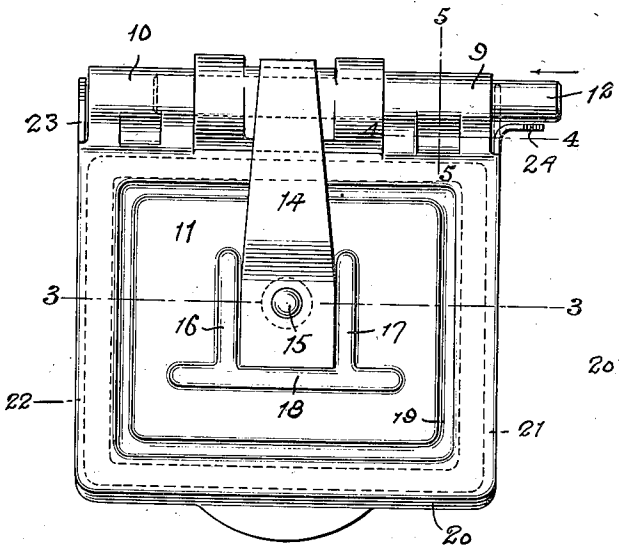


Fig.3.

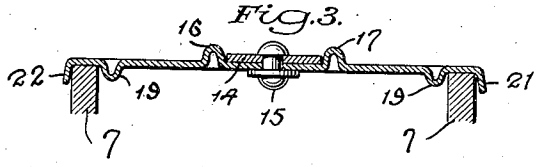


Fig.4.

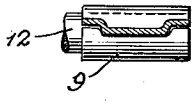


Fig.5.

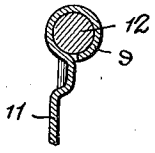
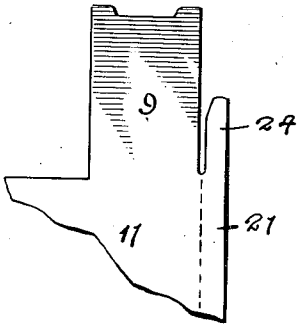


Fig.6.



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UNITED STATES PATENT OFFICE.

ALAN N. LUKENS, OF ELIZABETH, NEW JERSEY.

JOURNAL-BOX LID.

Application filed April 10, 1922. Serial No. 550,943.

To all whom it may concern:

Be it known that I, ALAN N. LUKENS, a citizen of the United States of America, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Journal-Box Lids, of which the following is a specification.

My invention relates to journal box lids, and the object of my invention is to provide a lid having certain novel features of construction hereinafter described and shown in the accompanying drawings, in which—

Fig. 1 is a broken side elevation of portion of a journal box having mounted thereon a lid in which my invention is embodied in one form;

Fig. 2 is a front elevation of the lid;

Figs. 3, 4 and 5 are sections on the lines 3—3, 4—4 and 5—5, Fig. 2; and

Fig. 6 is a partial plan view of the blank from which the lid may be shaped.

The present lid is designed for use with a journal box 7 of standard type for railroad trucks, and having a hinge eye 8 which is spanned by the hinge eyes 9 and 10 projecting from the lower edge of the downwardly pressed flange 25 at the top margin of the lid 11, through the aligned holes of which passes the pintle 12 on which the lid swings. The fixed lug 8 on the journal box may be provided with a cam 13 of standard type for engagement by the plate spring 14 on the lid in both the closed and open positions of the lid as indicated in Fig. 1.

The spring 14 comprises a strap of spring metal anchored at 15 by a single rivet to the lid 11, and held against swivelling by a pair of pressed-up ribs 16 and 17, arranged on opposite sides of the spring butt, and by the end abutment rib 18. The latter is preferably extended beyond the ribs 16 and 17 and serves, with the latter, as means for stiffening the body of the lid.

Surrounding the mid area of the lid is a continuous inwardly pressed rib 19 of rectangular outline conforming to the shape of the journal box opening and lying within the margins of the latter to form a dust-excluding flange. The four marginal edges of the lid are offset to form flanges 20, 21, 22 and 25, which embrace the outside of the walls of the journal box opening and cooperate with the rib 19 to exclude dust from the interior of the journal box. This function is one of considerable importance, since the entry of dust into the box results in materially increased wear on the wheel axles at the journal bearings. It has been found in practice that the rib 19 alone does not effectually exclude the dust, whereas the combination of this rib and the four marginal flanges does accomplish this desirable result.

In order to retain the pintle 12 against escape from the hinge elements 8, 9 and 10 on the box and lid respectively, the side flanges 20 and 21 of the lid are extended to obstructing position in line with the eye loops 9 and 10. The extension 23 of the flange 22 may be permitted to remain in obstructing position while the corresponding extension 24 of the flange 21 is bent back (Fig. 2) to permit the ready insertion of the pintle 12 through the aligned hinge members. When the pintle is fully inserted the extension 24 may be readily bent to obstructing position by a hammer, and the escape of the pintle thus effectively prevented. It will be observed that the extensions 23 and 24 intersect the pivoting axis of the lid and are thus maintained in obstructing position, regardless of the angular position of the cover on its axis. It will be noted furthermore from Fig. 2 that the extension 24 is on a radius of considerable length. This relatively long radius of curvature is of marked practical value since it minimizes breakage at this point when the flange extension is bent either to obstructing position or backward to non-obstructing position, should it become necessary to remove the lid for journal box repairs. In this respect it is a marked improvement over lugs protruding from the hinge eyes, or from the top edge of the lid, which lugs must of necessity be bent on a very short radius of curvature and are commonly broken off long before the lid has been otherwise worn out.

I prefer to make the cover of sheet steel, but it may be formed from any malleable metal which can be pressed or stamped to the configuration shown, and the lug 24 may be bent without fracture.

Various modifications in details of construction and configuration will readily occur to those dealing with the problem, which do not depart from what I claim as my invention.

I claim—

1. A journal box lid having a lug extending from its upper margin and shaped to form a hinge loop, in combination with a flange offset from an adjacent side margin of the lid, said flange being extended beyond the upper margin from which the hinge lug projects and serving to obstruct a hinge pin inserted through the hinge loop.

2. A journal box lid having at the end of the upper margin thereof a hinge loop extension, a flange offset from the adjacent side margin of said lid, said flange lying in a plane intersecting the axis of the loop, together with an extension of said flange independent of the hinge loop and serving to obstruct a hinge pin inserted through the loop.

3. A journal box lid having at the end of the upper margin thereof a hinge loop extension, a flange offset from the adjacent side margin of said lid, said flange lying in a plane intersecting the axis of the loop, together with an extension of said flange independent of the hinge loop and serving to obstruct a hinge pin inserted through the loop, said flange extension being bendable on a curve of relatively long radius to non-obstructing position.

4. A journal box lid blank having at one end thereof an extension adapted to be shaped to form a hinge loop, and an adjacent lug independent of said hinge loop extension, said lug forming an extension of a side margin of the blank adapted to be offset to form a side flange for the lid, the plane of which flange and lug intersects the axis of the hinge loop.

5. A journal box lid having at the opposite ends of the upper margin thereof hinge loop extensions, flanges offset from the adjacent sides of said lid and lying in planes intersecting the axis of the hinge loops, an extension for one of said flanges obstructing the aperture of the adjacent loop, together with an extension for the other side flange bent substantially at right angles thereto on a relatively long radius of curvature into non-obstructing position, said latter extension being displaceable into a position substantially in alignment with its marginal flange and serving in its displaced position to obstruct the aperture of the adjacent hinge loop.

6. A journal box lid formed from sheet metal and having spaced from its margin a depressed inwardly extending continuous rib fitting within the opening of the journal box closed by said lid, in combination with marginal flanges offset from each side of the lid in the same direction as the continuous rib and forming in effect a continuous marginal flange spaced from said rib and adapted to embrace the outer edges of all of the box walls at the opening closed by the lid, together with hinge lugs extending from the marginal flange at one side of the lid, the marginal flanges at the adjacent sides of the lid being extended beyond the ends of the flange from which the hinge lugs extend and serving to obstruct the passage through the hinge lugs.

In testimony whereof I have signed my name to this specification.

ALAN N. LUKENS.