B. F. LIVELY.

DUST GUARD FOR JOURNAL BOXES.

APPLICATION FILED MAR. 7, 1916.

1,207,183.

Patented Dec. 5, 1916.

2 SHEETS—SHEET 1.

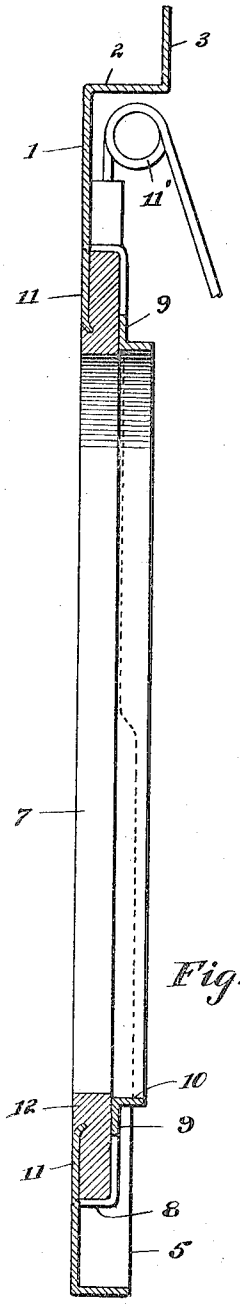


Fig. 3

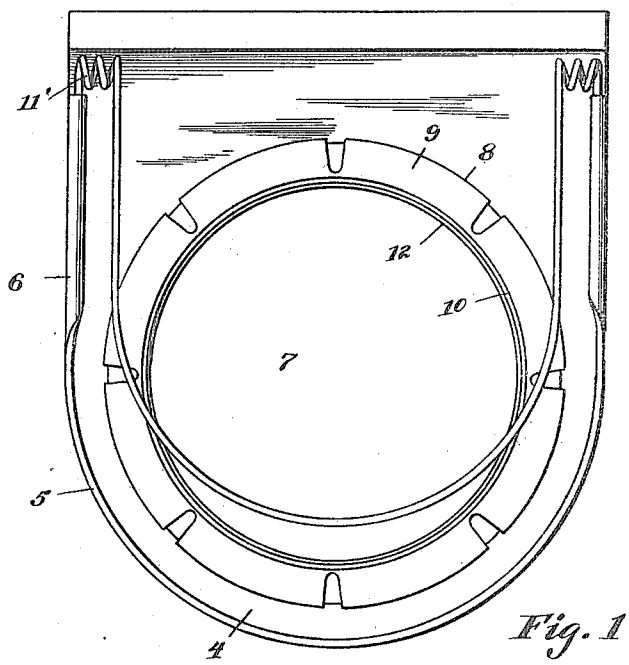


Fig. 1

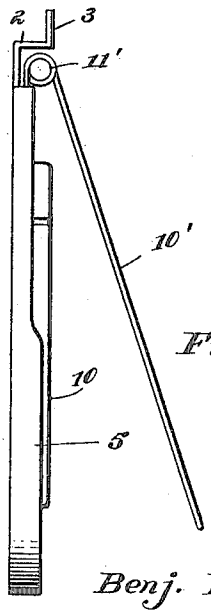


Fig. 2

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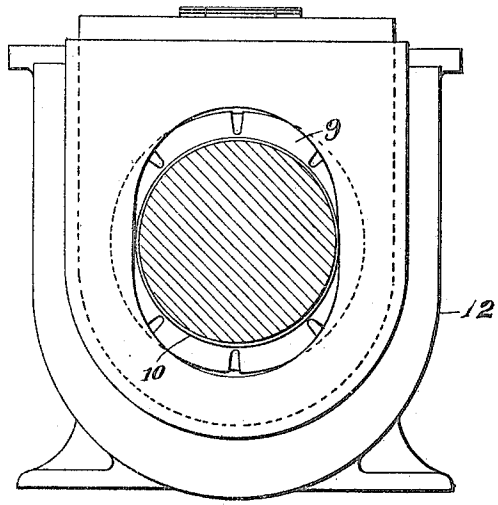


Fig. 4

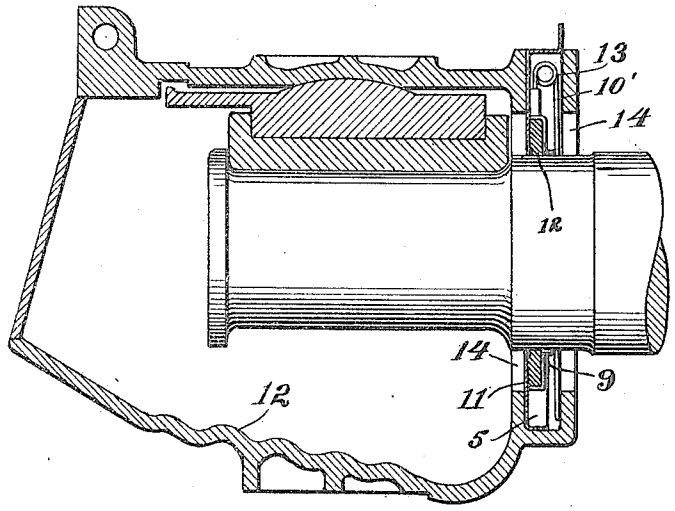


Fig. 5

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UNITED STATES PATENT OFFICE.

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DUST-GUARD FOR JOURNAL-BOXES.

1,207,183. Specification of Letters Patent. Patented Dec. 5, 1916.

Application filed March 7, 1916. Serial No. 82,715.

To all whom it may concern:

Be it known that I, BENJAMIN F. LIVELY, a citizen of the United States, residing at Lenoir City, in the county of Loudon and State of Tennessee, have invented new and useful Improvements in Dust-Guards for Journal-Boxes, of which the following is a specification.

This invention relates to improvements in dust guards for journal boxes and has particular application to a detachable or removable guard, the present invention being in the nature of an improvement upon my allowed application for Letters-Patent Serial No. 825,298, filed March 17, 1914, allowed May 11, 1914.

In carrying out the present invention, it is my purpose to provide a dust guard for journal boxes which may be readily and quickly inserted in and removed from the pocket or cavity in the journal box and which will be held in frictional engagement with one of the walls of the cavity in the journal box so as to maintain the same in proper position.

It is also my purpose to improve and simplify the general construction of dust guards of the class described and to provide a guard which may be manufactured and marketed at a small cost and which will embody few parts and these so correlated and arranged as to reduce the possibility of derangement to a minimum.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the claims.

In the accompanying drawings: Figure 1 is a view in side elevation of a dust guard constructed in accordance with my present invention. Fig. 2 is a view in end elevation thereof. Fig. 3 is an enlarged vertical sectional view through the dust guard removed from the journal box. Fig. 4 is a view in end elevation of a journal box equipped with a dust guard constructed in accordance with the invention. Fig. 5 is a vertical longitudinal sectional view through the journal box showing the dust guard in the pocket or cavity.

Referring now to the drawings in detail, 1 designates a plate stamped from a sheet of metal and having one end edge bent at right angles to itself as at 2 and thence outwardly as at 3 to form a gripping surface and the opposite end edge rounded as at 4 to conform to the curvature of the lower wall of the cavity in the journal box and seat against such wall. The rounded end 4 of the plate 1 and the contiguous side edges are formed with an annular flange 5. The upper ends of the flange 5 terminate short of the bent portion 2 of the plate and the outer edges of the end portions of the flange are formed with outwardly projecting wings 6 that are bent into tubular form. Formed in the plate 1 and adapted to register with the openings in the opposite side walls of the cavity in the journal box is an opening 7 and formed on the wall of the opening 7 and projecting outwardly from the plate in the same direction as the flange 5 is a circular flange 8, and formed on the outer edge of the flange 8 is an inwardly projecting flange 9. The inner edge of the flange 9 is, in turn, formed with an outwardly projecting flange 10 and these flanges 8, 9 and 10 are arranged concentrically of the opening 7 in the plate. The flanges 8 and 9 are stamped or cut, at suitable intervals, to form fingers 11 and these fingers project outwardly from the plate in a direction opposite from the flanges and seated in the rabbet or depression formed by the flanges 8 and 9 is a washer 12 formed of felt, leather or other suitable substance and designed to encircle the journal to prevent the passing of dust and other foreign matter into the journal box. After the washer has been seated in the depression formed by said flanges 8 and 9, the fingers 11 are bent against the washer and the outer ends of the fingers are bent at an angle to the inner end portions thereof and sharpened to penetrate the washer so that the washer will be securely and effectively held in the depression. In the present instance, a substantially U-shaped pressure device 10′ has the opposite ends thereof coiled upon themselves to form springs 11′ and thence extended at an acute angle and disposed within the tubes formed by the wings 6 so that the pressure device will be held to the plate, the device corresponding to the curvature of the rounded end edge 4 of the plate 1.

In Figs. 4 and 5 of the drawings, I have shown the dust guard as applied to a journal box and in these figures 12′ designates

a journal box of the M. C. B. type having the inner end thereof formed with the usual pocket or cavity 13 and the walls of the cavity formed with alining openings 14 through which the wheel journal passes. In practice, the curved portion of the pressure device is moved toward the rounded end edge of the plate 1 and the guard inserted in the pocket or cavity 13, the pressure device engaging the inner wall of the cavity, while the outer face of the plate 1 contacts with the opposite wall of the cavity. As the plate 1 is forced into the pocket, the rounded end edge thereof seats upon the curved end wall of the cavity, while the pressure device engages the inner wall of the cavity and so holds the outer face of the plate in frictional contact with the confronting face of the adjacent wall thereby holding the guard within the cavity against rattling and accidental movement. When it is desired to remove the guard, the outwardly extending end portion 3 is grasped and the guard pulled out of the cavity against the holding action of the pressure device 10'.

From the foregoing description taken in connection with the accompanying drawings, the construction, mode of operation and manner of employing my improved dust guard will be readily apparent. It will be seen that I have provided a dust guard which may be applied to the journal box rapidly and conveniently and whereby the entrance of dust, dirt and other foreign matter to the box is avoided. Furthermore, it will be noted that the circular flange 10 surrounding the opening in the plate serves to center the latter and hold the same in proper position within the cavity, while the flange 5 on the rounded inner end edge of the plate acts to reinforce the plate.

While I have herein shown and described one preferred form of my invention by way of illustration, I wish it to be understood that I do not limit or confine myself to the precise details of construction herein described and delineated, as modification and variation may be made within the scope of the claims and without departing from the spirit of the invention.

I claim:

1. A dust guard for journal boxes comprising a plate stamped from a sheet of metal and having one end edge thereof bent at right angles to itself and then bent outwardly to form a gripping member and the opposite end edge rounded, a curved flange formed on said rounded edge and the contiguous side edges of said plate and terminating short of said right angular portion, the upper side portions of said flange being formed with wings bent into tubular form, a pressure device carried by said wings, said plate being formed with an opening, a flange on the wall of the opening projecting laterally therefrom, and a washer disposed concentrically of the opening in said plate and secured to the face of the plate opposite from said last-named flange.

2. A dust guard for journal boxes comprising a plate stamped from a single sheet of metal and formed centrally with an opening, a laterally extending flange integral with the edge wall of said opening, a radially extending flange integral with the outer end of the first-named flange and cooperating with the first-named flange to form an annular depression, a washer seated in said depression, gripping fingers stamped from said laterally and radially projecting flanges and adapted to engage said washer to hold the latter in the depression formed by said flanges, and a laterally projecting circular flange integral with the inner edge of said radially projecting flange.

In testimony whereof I affix my signature in presence of a witness.

BENJAMIN F. LIVELY.

Witness:
BENNETT S. JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."