D. M. BELL.

DUST GUARD.

APPLICATION FILED MAR. 22, 1917.

1,284,173. Patented Nov. 5, 1918.

Fig. 2

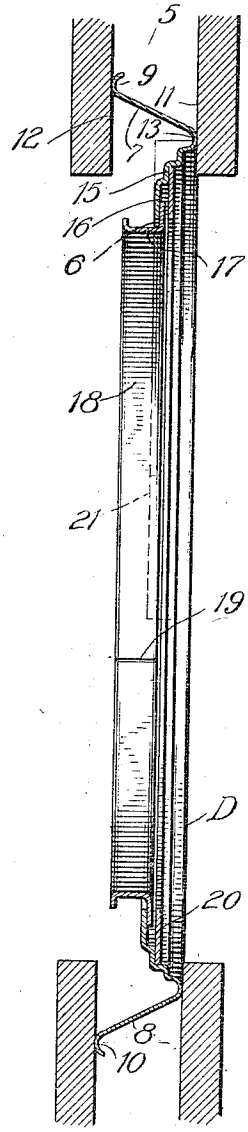
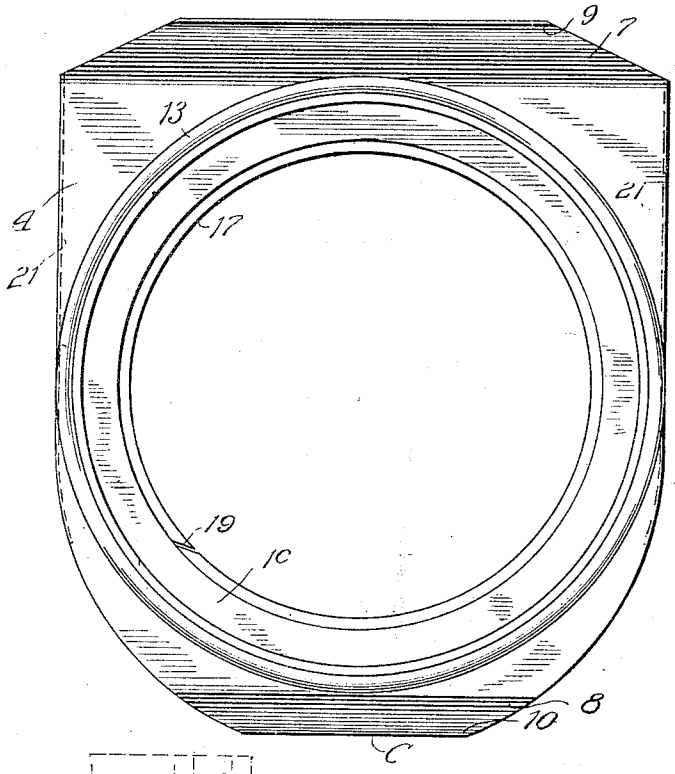


Fig. 1



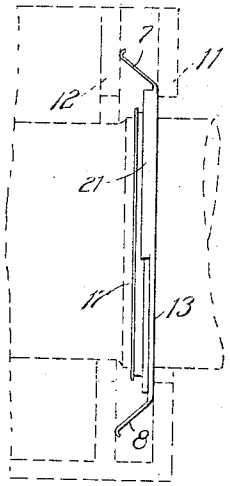


Fig. 3

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DUST-GUARD.

1,284,173. Specification of Letters Patent. Patented Nov. 5, 1918.

Application filed March 22, 1917. Serial No. 156,730.

To all whom it may concern:

Be it known that I, DILLWYN M. BELL, a citizen of the United States of America, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dust-Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to dust-guards for axle boxes, and comprises the novel construction as hereinafter set forth.

In the drawings, Figure 1 is an elevation of the guard; Fig. 2 is a vertical central section through the guard in engagement with the journal box and axle; and Fig. 3 is an elevation at right angles to the plane of Fig. 1 on a reduced scale showing portions of the axle and bearing box to which the invention is applied in dotted lines.

The plate 4 is designed to fit within the dust space 5 of the axle box and is formed with an opening 6 of slightly larger diameter than the diameter of the axle which extends therethrough. At its upper and lower edges respectively the plate is struck up to form inclined flanges 7, 8, with beaded edges 9, 10, the flanges being of such length and inclination relative to the plane of the plate that when the latter is inserted in the dust space with its front face engaging the wall 11, the flanges bear resiliently upon the wall 12 of the dust space. The plate is struck up to form a bead 13 and a pair of shoulders 15, 16 concentric with the opening, and the innermost shoulder receives the flange 17 of a ring 18 which immediately surrounds and embraces the axle. The ring is substantially L-shaped in cross-section, as shown in Fig. 2, and is split on an incline or secant 19, (see Fig. 1) so that by its resiliency it tends to closely embrace the axle and to be rotated therewith. The opening 6 in the plate is of sufficient diameter to permit the necessary lateral movement of the axle, and the flange 17 overlaps the edges of the opening sufficiently to form a seal notwithstanding any displacement of the axle from a true concentric position with reference to said opening. The ring is maintained in place by an annulus 20 resting upon the shoulder 15 and secured thereon in any suitable manner, as for example, by spot welding. Thus the flange 17 is permitted a limited movement within the annular pocket formed between the annulus 20 and the inner shoulder 16 of the plate.

In use, the guard is inserted in the axle box and is engaged with the axle in the usual manner, and when in place the resiliency of the flanges 7 and 8 will press the plate against the adjacent wall 12 of the axle box so as to form a dust seal. At the same time the ribs 21 at the sides of the plate will stiffen the same sufficiently, so that the tension produced by bending the flanges 7 and 8 will not warp the plate. Thus the annulus 18 will at all times be free to revolve within the channel between the embossed portion 16 and annulus 20.

I claim:

1. In a dust-guard, the combination with an annulus for engaging the axle, of a plate having a revoluble engagement with said annulus, and comprising means for resiliently pressing said plate against the bearing in the axle box, and means for stiffening the plate to prevent warping of the same.

2. In a dust-guard, the combination with an annulus for engaging the axle having an outwardly-extending flange, of a plate adjacent to said flange and a parallel flange secured to said plate on the opposite side of the flange of said annulus to form a dust-proof engagement therewith.

3. In a dust-guard, the combination with an annulus of L-shaped section having an outwardly-extending flange, of a stationary plate adjacent to said flange, a flange secured to said plate on the opposite side of the flange on the annulus, resilient bendable flanges on said plate for pressing the same against the bearing in the box, and side flanges for stiffening said plate and preventing warping thereof.

In testimony whereof I affix my signature.

DILLWYN M. BELL.

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