(No Model.)

L. K. FULLER

DUST GUARD.

No. 369,596. Patented Sept. 6, 1887.

Fig. 1.

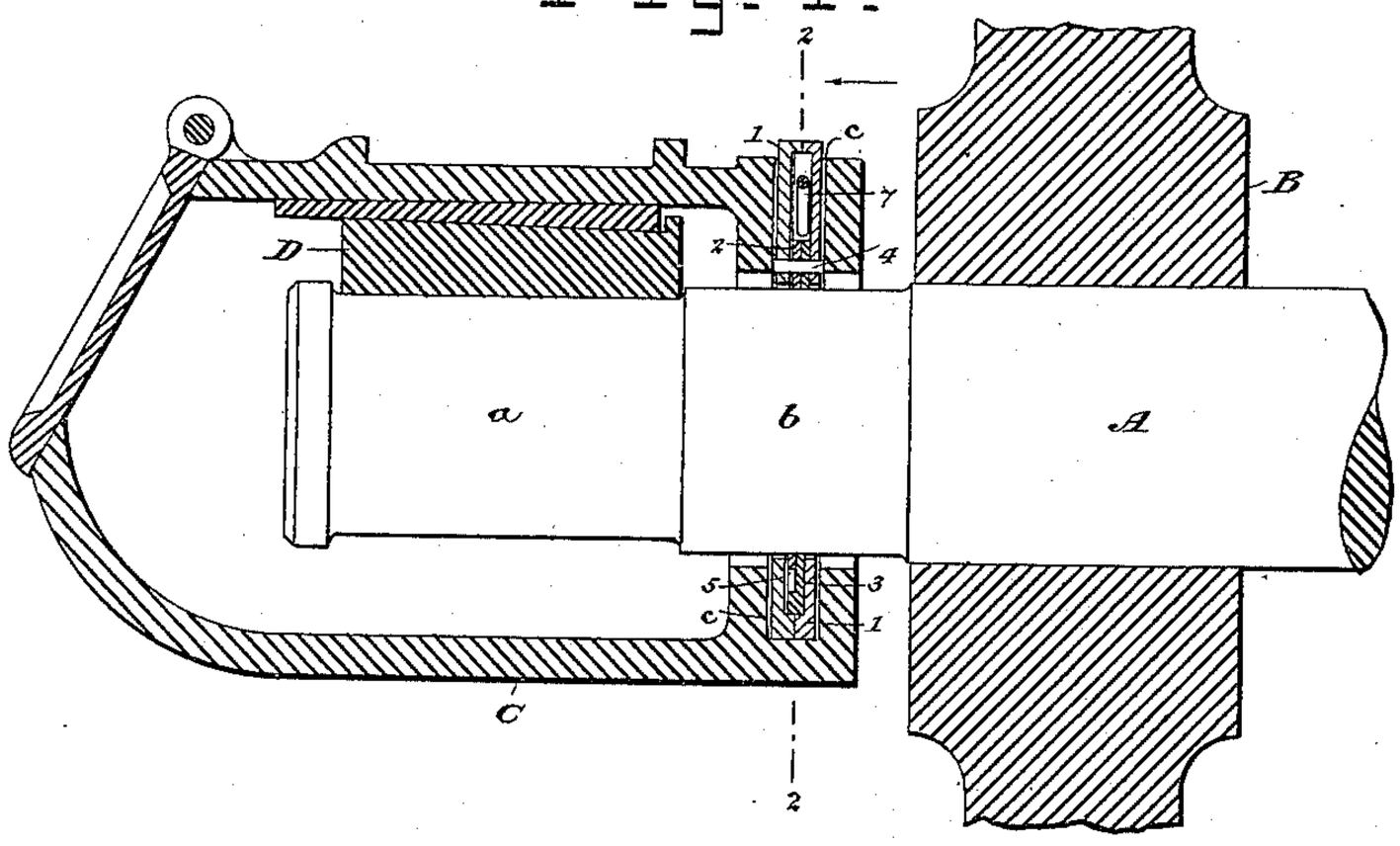


Fig. 2.

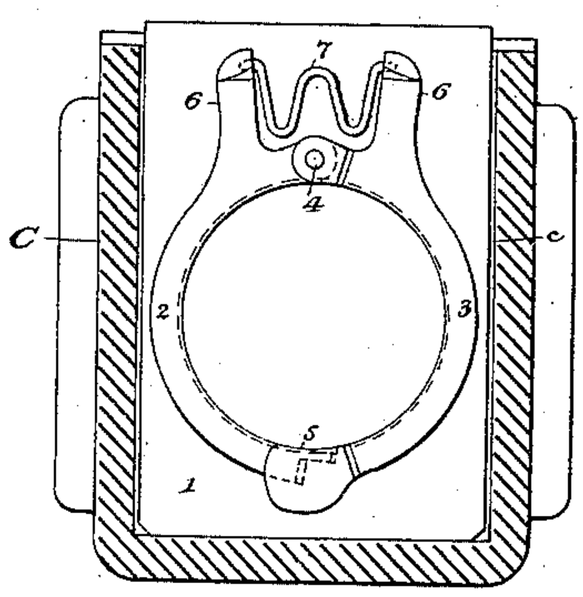


Fig. 3.

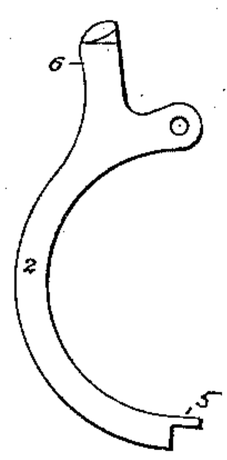


Fig. 4.

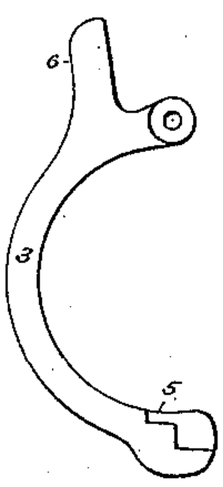


Fig. 5.

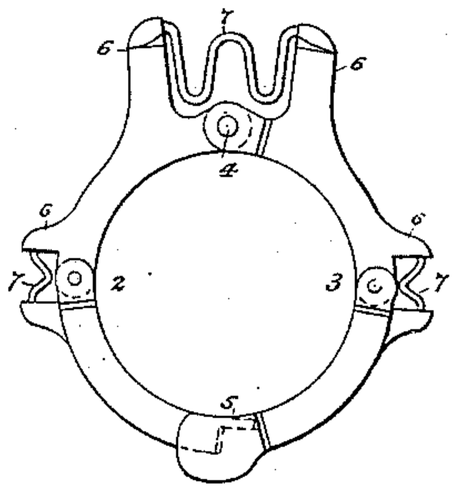
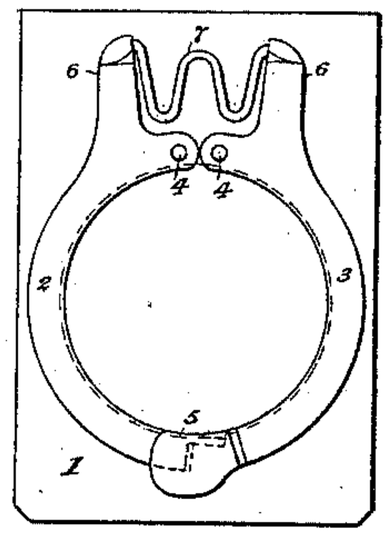


Fig. 6.



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DUST-GUARD.

SPECIFICATION forming part of Letters Patent No. 369,596, dated September 6, 1887.

Application filed May 21, 1887. Serial No. 239,017. (No model.)

To all whom it may concern:

Be it known that I, LEVI K. FULLER, a citizen of the United States, and a resident of Brattleborough, in the county of Windham and State of Vermont, have invented certain new and useful Improvements in Dust-Guards for Car-Axles and the Like, of which the following is a specification.

My invention relates to dust-guards of the class employed for excluding dust from the journals or bearings of car-axles and from other like bearings, and which have parti-circular segments that embrace the bearing, such segments being held up to the bearing elastically by springs.

While the primary object of my invention is to provide a dust-guard for the journals of car-axles, it may also be employed as well on journal-bearings for any kind of machinery where there is liability of injury from dust or grit finding access to the bearing.

My invention will be fully described hereinafter, and its novel features carefully defined in the claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a longitudinal vertical axial section of a journal-box or axle-box of a railway-car provided with my improved dust-guard. Fig. 2 is a transverse section of the same on line 2 2 in Fig. 1. Figs. 3 and 4 are views of the members of my improved guard detached. Figs. 5 and 6 illustrate modifications.

Referring to Fig. 1, A represents the axle of a car; B, a part of a car-wheel thereon; C, the axle-box or journal-box, and D the journal-bearing. *a* is the journal of the axle, and *b* the dust-guard bearing on the axle. In the inner end of the axle-box is formed a chamber, *c*, to receive the dust-guard, said chamber being open at the top. All of these parts are constructed in the usual manner.

1 is a plate of wood, which is made of the proper width and length to fit into the dust-guard chamber *c*, and provided with a circular aperture through which the dust-bearing *b* of the axle passes, and in which said bearing rotates loosely or freely.

2 and 3 are the two parti-circular or semi-circular members of my improved dust-guard. These members are made from comparatively thin metal or other suitable material, and are hinged together on a pin or screw, 4, whereby they are also pivoted to the plate 1. At their free ends the members 2 and 3 are made to overlap, as seen at 5 in Figs. 2, 3, and 4, whereby the members may open and close to a limited extent without opening a crevice or way for the admission of dust. Each of the members is provided with a lug, 6, and between these lugs is arranged a spring, 7, which acts to spread apart the lugs back of the hinge, and thus keep the inner edges of the members of the guard pressed elastically against the bearing *b*.

In order to protect the guard against injury and to make it fit the better in the dust-guard chamber as ordinarily provided in axle-boxes, I cover the members 2 and 3 with a recessed plate, 1′, usually of wood. This latter may be screwed to the plate 1, and the pivot-pin 4 may be passed through both plates and riveted at its ends. This cover-plate also has an aperture to receive the axle-bearing.

It will suffice to make the guard of two hinged members only, as above described; but I may make it of more than two. In Fig. 5 I have shown it constructed of four members—that is to say, each of the members 2 and 3 is jointed or hinged at its middle, and springs similar to spring 7 are provided back of these hinge-points. The construction is well illustrated in the figure and will require no more minute description.

As the inner edges of the hinged members wear away, they are kept pressed up close to the bearing *b* by the spring. As the whole dust-guard bears by its weight on the axle and the hinge-point of the members is above the axle, this portion of the members adjacent to the hinges will wear away uniformly with the remainder, and thus preserve the circular form of the aperture and the close fit of the members on the bearing.

I do not wish to limit myself to the integral rectangular wooden plate 1 as a base or support on which to mount the members 2 and 3. This support might be made of other materials and in other forms. Good results may also be produced by arranging the hinging-point of the members at one side, for example, instead of above the axle.

The characteristic feature of my invention is the hinging or pivoting of the parti-circular members to a supporting-plate at substantially

one common point; also in housing the said members between two plates of wood, as described.

I have shown the members of the dust-guard hinged directly together; but they might be hinged together indirectly by hinging each member separately to the plate 1, as seen in Fig. 6, for example.

Having thus described my invention, I claim—

1. A dust-guard consisting of a rectangular base or support having an aperture in it for the passage of the bearing, two or more parti-circular members pivoted or hinged to said base at the same or substantially the same point, and a spring or springs mounted on and carried by said members to keep them pressed up to the bearing elastically.

2. A dust-guard consisting of the base or support 1, the two curved or parti-circular members 2 and 3, hinged together and to said base at one common point and provided with lugs 6, and a spring, 7, arranged between said lugs, substantially as set forth.

3. A dust-guard consisting of a base or support, 1, two curved or parti-circular members, 2 and 3, hinged together and to said base at a common point, said members being each provided with a lug, 6, and with overlapping free ends, and a spring arranged between said lugs 6, substantially as set forth.

4. The combination, with a base, 1, and a cover-plate, 1′, attached to said base, of the curved or parti-circular members 2 and 3, arranged between the said base and cover-plate and hinged to said base, and their spring or springs, substantially as and for the purposes set forth.

5. The combination, with an axle-box provided with a dust-guard chamber, of a base-plate, 1, constructed to fit into said chamber, and having an aperture in it for the axle-bearing, the curved members of the dust-guard hinged together and to said plate, and their spring, all arranged substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI K. FULLER.

Witnesses:
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