(No Model.)

I. H. RANDALL.

DUST RING FOR AXLE BOXES.

No. 302,356. Patented July 22, 1884.

Fig. 1.

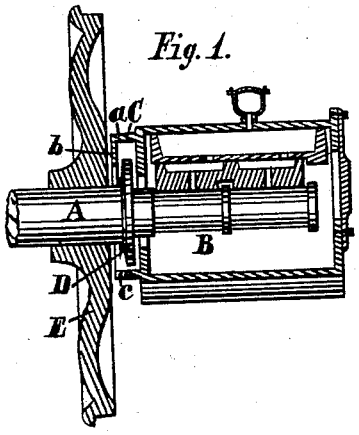


Fig. 2.

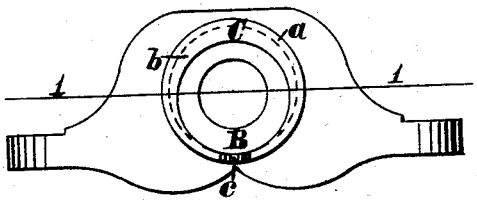
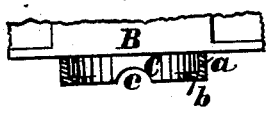


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DUST-RING FOR AXLE-BOXES.

SPECIFICATION forming part of Letters Patent No. 302,356, dated July 22, 1884.

Application filed November 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISAAC H. RANDALL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Dust-Ring, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide means to prevent dust or dirt from getting into the boxes and onto the bearings of wheel-axles.

The device is especially useful on horse-cars.

The invention consists in a ring, which I call a "dust-ring," of the construction hereinafter described, attached to the side of an axle-box, and also in the combination of said ring with a collar on the axle, as hereinafter specified.

In the drawings, Figure 1 shows a vertical section of an axle-box and of a dust-ring attached thereto; also shows part of an axle having a collar thereon, and a section of a car-wheel. Fig. 2 shows the inner face of the axle-box having the dust-ring connected therewith. Fig. 3 is a plan view of part of the box, and shows a section of the dust-ring taken on line 1 1 in Fig. 2.

The axle A has a bearing in the box B, the axle and box being of a construction now in use. On the inner side of the box I attach the dust-ring C, which may be cast as one piece with the shell of the box. This dust-ring is composed of the cylindrical part *a* and an inwardly-extending flange, *b*, joined thereto. This flange *b* extends only part way around the cylindrical part *a*, so that the opening to the ring farthest removed from the box is eccentric to the cylindrical part, and so that there is no part of said flange at the bottom of the ring. A collar, D, is fastened on the axle A, between the box B and wheel E, and in such position with reference to the dust-ring that the cylindrical part *a* will extend around the collar D, and that this collar will be between the side of the box and the flange *b*. It is intended that the collar D will not come in actual contact with the box or the dust-ring at any part, while the flange *b* projects somewhat over the face of the collar D, at the top and sides of this collar, as shown.

In operation, dust or dirt, which without my attachment would fall on the axle and work into the box, will fall on the dust-ring and on the face of the collar D farthest removed from the box, and thence down out of the way, outside of the dust-ring. Any dust or dirt that may find its way into the dust-ring will fall to the bottom of the ring and thence out of the same, there being no part of the flange *b* at the bottom of the ring. To provide certain egress for dust or dirt that may get within the ring, I form a notch or recess, *c*, in the cylindrical part *a*, at the bottom thereof, as shown.

My dust-ring, while of simple construction and easily applied, will effectually protect the axle-bearing, especially as used with the collar, without the use of leather washers or the like, which have heretofore been employed for a similar purpose, and which create friction and are quickly worn out.

I claim as my invention—

1. In combination with an axle-box, a dust-ring formed of the cylindrical part *a*, extending completely around the axle, or the collar on the axle, having a recess, *c*, at the bottom thereof, and the flange *b*, substantially as specified.

2. The combination of the axle A, having a collar, D, box B, and dust-ring C, formed of the cylindrical part *a*, extending completely around the axle, or the collar on the axle, and the flange *b*, extending part way around the same, substantially as described.

ISAAC H. RANDALL.

Witnesses:
I. H. FROST,
JOHN H. REARDON.