

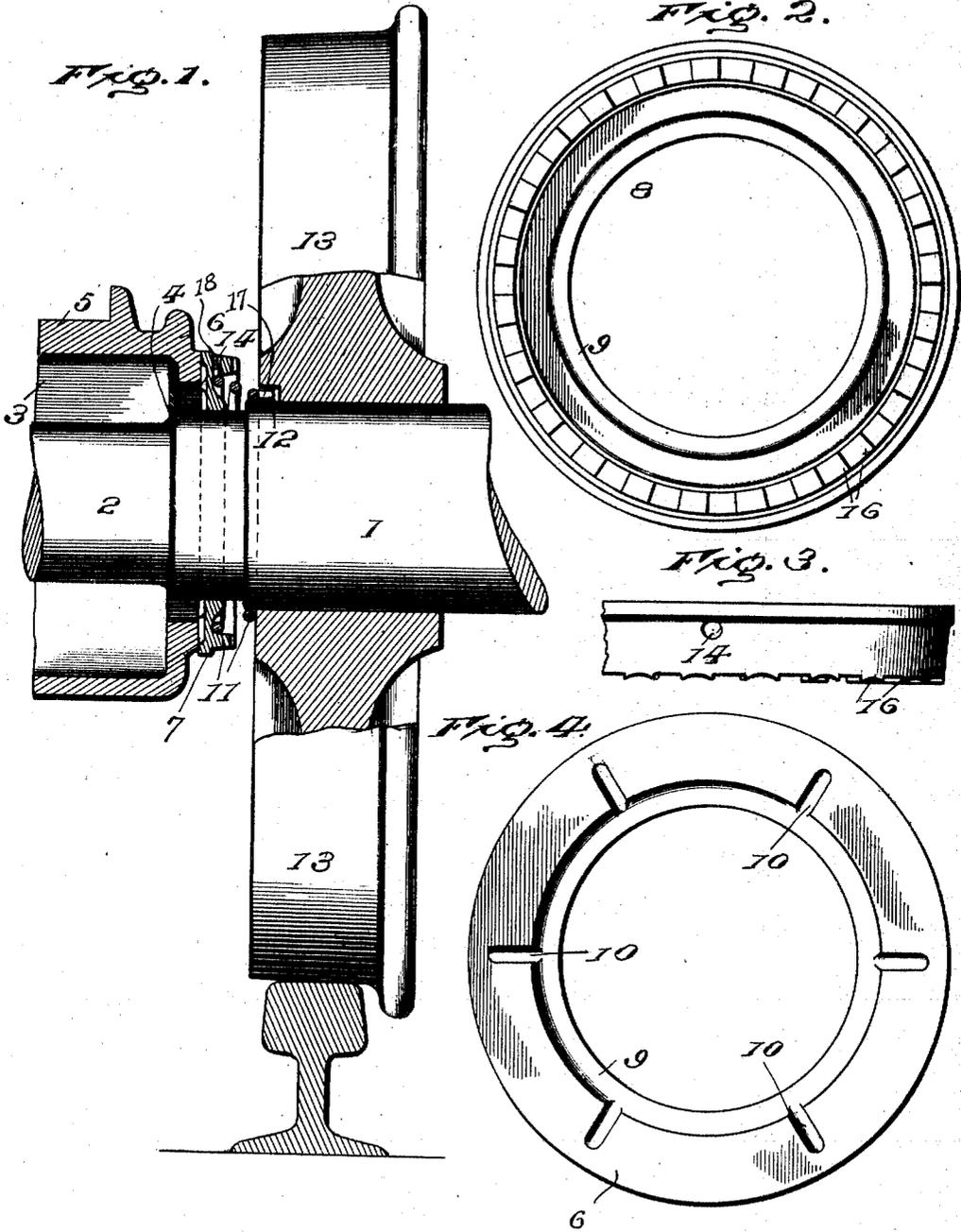
No. 764,508.

PATENTED JULY 5, 1904.

T. H. SYMINGTON.  
DUST GUARD FOR JOURNAL BOXES.

APPLICATION FILED MAR. 25, 1904.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## DUST-GUARD FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 764,508, dated July 5, 1904.

Application filed March 25, 1904. Serial No. 199,946. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HARRISON SYMINGTON, a citizen of the United States of America, and a resident of Roland Park, Baltimore county, State of Maryland, have invented certain new and useful Improvements in Dust-Guards for Journal-Boxes, of which the following is a specification.

My invention relates to a dust-guard for journal-boxes, and has for its purpose not only to prevent the ingress of dust and grit, which would cause a wearing of the journal, but also to prevent end play in the brass which bears upon the top of the journal.

In most journal-boxes heretofore made the brass is held upon the journal merely by the shoulder and head of the journal, and the journal-box rests upon the brass, and the whole structure, box, and brass are permitted under the influence of the usual jolting of a railroad-car to move back and forward on top of the journal. The result of this operation is to wear the brass and its ends by contact with the shoulder and head of the journal, and thus increase the possibility of end motion, which as it increases magnifies the wear upon the brass. I propose to prevent this wear in great measure by causing the dust-guard structure to occupy and almost to fill the space between the interior surface of the journal-box and the exterior surface of the wheel, so that as the axle and wheel are thrust outward by irregularities of the track the wheel will make contact with the interior of the dust-guard ring and force the journal-box and brass in the same direction as the journal is moving and prevent in great measure the blow of the shoulder of the journal against the interior end of the brass.

Referring to the drawings, Figure 1 is a vertical section of a portion of the journal-box and my dust-guard, also part of the wheel, showing the axle in full with its two ends broken away. Fig. 2 is a front elevation of my dust-guard ring. Fig. 3 is a side elevation of a part of the ring. Fig. 4 is an elevation of the opposite side of the dust-guard ring to that shown in Fig. 2.

Referring to the drawings, 1 is the axle hav-

ing a journal 2, on the upper surface of which rests a brass 3.

4 is the journal-shoulder.

5 is a journal-box resting upon brass 3, and thus supported upon the journal. Upon the top of the journal-box rests the car structure. (Not shown.) In the rear end of the journal-box is an aperture 6 larger than the axle and through which the axle passes. The dust-guard is designed to close this aperture.

7 is my dust-guard ring, made in a single piece, preferably of iron. The hole 8 in the dust-guard ring is approximately of the same diameter as the axle behind the shoulder 4, and it fits upon the axle with as little play as possible, although it is not designed that it should fit tight. The structure of this ring is peculiar. Its exterior face is grooved with circular and radial grooves 9 and 10, as shown in Fig. 4, and this exterior face rests against the rear surface of the axle-box, which is turned or ground to a plain surface to receive the bearing of the ring. The interior surface of the ring is as shown in Fig. 2. It has a circular recess and an exterior flange 15, the flange projecting inwardly parallel to the axis of the journal. The edge of this flange is serrated or notched, as shown in Fig. 3.

11 is a coil-spring having both of its ends turned at right angles to the coil to form hooks 17 18.

12 is a hole drilled in the exterior face of the wheel 13 just at the surface of the axle parallel to the axis of the axle, and 14 is a hole drilled in the dust-guard ring, made in a line radial of the ring. One end of the spring 11 is hooked into the hole 12. The other end of the spring 11 is hooked into the hole 14, and through the medium of this spring the dust-guard ring is driven by the wheel.

It will be noticed that the dust-guard ring overhangs the space between the axle and the rear of the journal-box, and through this space oil will escape from the interior journal-box to the exterior face of the dust-guard ring and will lubricate, through the channels 9 and 10, the contacting surfaces of the journal-box and the dust-guard ring. This surface, while always a bearing-surface, will in this

way be constantly lubricated, and wear will in a great measure be prevented. The flange 15, having a serrated edge 16, stands but a short distance from the exterior surface of the wheel 13. Any irregularity of the track which may throw the wheel outward will compress the spring 11 and bring the wheel in contact with the serrated edge 16 of the flange. This contact will cause the wheel to push the journal-box before it, and with it the brass. It will also have the effect of causing the dust-guard ring to bind upon the face of the wheel and be turned by the wheel.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a dust-guard for journal-boxes the combination of a box with a ring made of a single piece of metal fitting closely around the axle and bearing against the rear of the journal-box, a coil-spring wound around the axle between the wheel and the dust-guard ring, one end of which spring is secured to the wheel and the other end secured to the dust-guard ring, the ring being driven by the wheel, substantially as described.

2. In a dust-guard for journal-boxes the combination of a journal-box with a single ring fitting closely around the axle and having a bearing upon the rear of the journal-box, said ring having upon its interior surface a laterally-projecting flange which extends inward toward the wheel, and a coil-spring encircling the axle, one end of which is secured to the wheel and the other end to the dust-guard ring,

whereby the ring is caused to rotate with the wheel and to bear upon the rear surface of the journal-box.

3. In a dust-guard for journal-boxes the combination of a journal-box, a ring surrounding the axle and having a bearing upon the outside rear surface of the journal-box, and having oil-grooves in its bearing-face which communicate with the interior of the journal-box for the transmission of oil to the bearing-surface of the journal-box, a coil-spring surrounding the axle and having a hook on each end, one end engaging a suitable recess in the wheel and the other end a suitable recess in the ring, whereby the ring is driven by the wheel.

4. In a dust-guard for journal-boxes the combination of a journal-box with a dust-guard ring surrounding the axle and fitting thereon, and having a bearing upon the rear exterior surface of the journal-box, the opposite side of the ring being provided with a laterally-projecting flange the edge of which is notched or serrated, and a coil-spring wound around the axle, one end of which is secured to the wheel, while the other end is secured to the ring, whereby the ring is driven by the wheel substantially as described.

Signed by me at Baltimore city, State of Maryland, this 24th day of March, 1904.

THOMAS HARRISON SYMINGTON.

Witnesses:

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