

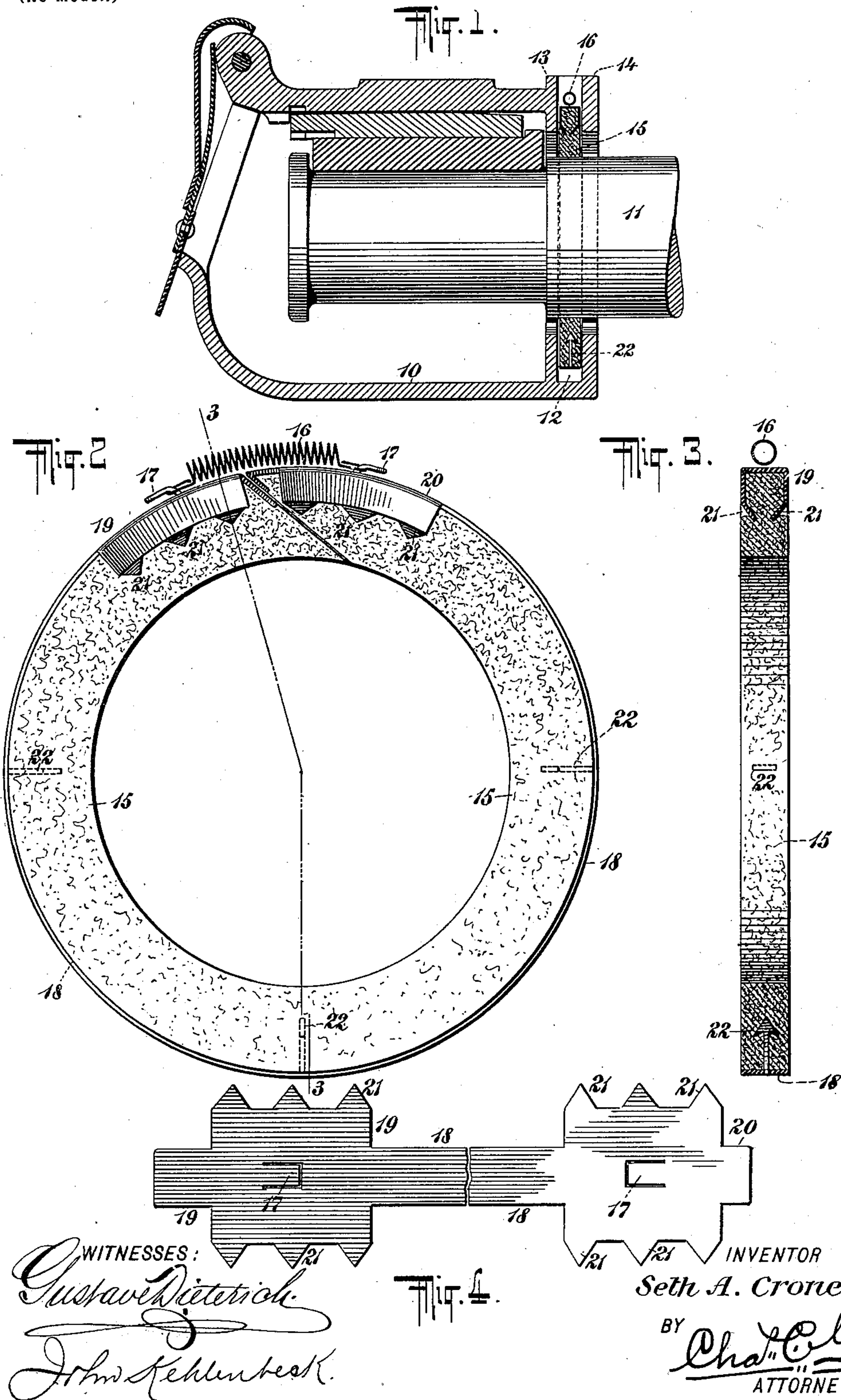
No. 657,979.

Patented Sept. 18, 1900.

S. A. CRONE.
DUST GUARD.

(Application filed July 17, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

SETH A. CRONE, OF NEW YORK, N. Y.

DUST-GUARD.

SPECIFICATION forming part of Letters Patent No. 657,979, dated September 18, 1900.

Application filed July 17, 1900. Serial No. 23,864. (No model.)

To all whom it may concern:

Be it known that I, SETH A. CRONE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Dust-Guards for Car-Axle Boxes, of which the following is a specification.

The invention relates to improvements in dust-guards for car axle or journal boxes; and it consists in the novel features and combinations of parts hereinafter described, and particularly pointed out in the claims.

The object of the invention is to provide an efficient dust-guard which shall be capable of being applied to or removed from its operative position within the journal-box while the end of the car-axle is therein and without disturbing said axle; and to this end I have produced a dust-guard in the form of a flexible strip, as hereinafter explained, which may be slipped around the car-axle and then have its ends connected together to form a ring which will encircle the axle and exclude the dust. The ends of the said ring may when deemed necessary be detached from one another, so that the guard may be withdrawn by simply pulling outward on one of its ends. The guard will preferably have its ends connected together by a spring, so that the guard-ring may have a yielding tension against the axle.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section through a journal-box equipped with a dust-guard constructed in accordance with and embodying my invention. Fig. 2 is an enlarged side elevation of a dust-guard embodying my invention. Fig. 3 is a sectional view of same on the dotted line 3 3 of Fig. 2; and Fig. 4 is a detached top view, partly broken away, of the blank from which the inclosing band for the guard is formed.

In the drawings, 10 denotes a usual form of the car-axle journal-box, and 11 a portion of the car-axle shown in position within said box. The journal-box 10 is provided at its inner end with the vertical dust-guard space 12, formed between the vertical walls 13 14, through suitable openings in which walls

the car-axle 11 passes, as shown in Fig. 1, and into which space 12 is placed the dust-guard of my invention to encircle said axle and prevent the entrance of the dust or other foreign matter to the journal-box.

The dust-guard is illustrated in position in Fig. 1, but is more clearly illustrated in Figs. 2 and 3, in which it may be seen that the dust-guard comprises a strip of flexible material 15, whose ends may be brought together and secured by means of a spring 16, engaging small hooks or lugs 17, carried by the ends of said strip 15. When the ends of the strip 15 are brought together and secured by means of the spring 16, the said strip then forms a ring adapted to the diameter of the axle 11. The strip 15 will preferably be formed of felt, jute, cloth, or other packing material of flexible character, and in the preferred form of the dust-guard the strip 15 will at its outer edges have the flexible metallic band 18, while at its ends said flexible strip 15 will have secured to it the metallic clips 19 and 20, respectively, formed from sheet metal and extending along the outer surfaces and down upon the side surfaces of the said strip 15 and provided at the lower edges of their sides with the teeth or prongs 21, adapted to be pressed into the substance of the strip 15, as shown in Fig. 3, for the purpose of holding said clips 19 and 20 firmly in position. The lugs 17 will preferably be integral with the clips 19 and 20, said lugs being blanked up from the substance of the said clips, as indicated in Fig. 4. The lugs 17 afford convenient means for hooking the ends of the spring 16 to the clips 19 and 20, and when in use the said lugs will be sufficiently separated from one another to require that the spring 16 be under a tension, so that said spring may operate to keep the inner edges of the strip 15 against the car-axle and compensate for any wear that may take place on the inner edges of said strip 15. The ends of the strip 15 are, as shown in Fig. 2, correspondingly cut off at an angle, so that the joint between the meeting ends of said strip shall be at a tangent to the circle of the car-axle. The band or flexible metallic strip 18 may be formed in one integral piece with the clips 19 and 20, and said band 18, when thus formed or when in any other way rigidly connected with said clips, will be by the latter secured to the

strip 15. The band 18 at points removed from its ends should also be secured to the strip 15, and as one convenient means for thus securing the band 18 I stamp up from the material of said band the arrow-shaped darts or prongs 22, which may be pushed into the strip 15, as indicated in Figs. 2 and 3, and hold said strip 15 and band 18 together. The darts 22 simply constitute one convenient means for securing the strip 15 to the band 18, and it will be apparent that the invention is not limited to any special devices for securing the band 18 and strip 15 together. The band 18 adds stability and efficiency to the dust-guard, and hence in its preferred form the dust-guard will comprise the flexible packing-strip 15, the flexible inclosing band 18 and the spring 16 drawing the ends of the guard toward one another. In the preferred embodiment of the invention also the diameter of the dust-guard ring (shown in Fig. 2) will substantially equal the distance between the vertical end walls of the dust-guard space 12, and the thickness of said dust-guard will substantially equal the space between the vertical side walls 13 14 of said space, and thus when the dust-guard is in position within said space 12 it will preferably normally, though lightly, contact with the side and end walls thereof and closely encircle the car-axle. It is not intended that the dust-guard shall rotate with the car-axle, and such rotation of the dust-guard will be prevented by the spring 16, which constitutes a projection which when the guard commences to rotate with the car-axle will come into contact with the end wall of the space 12 and check any further rotary movement of the dust-guard, there being insufficient space between the dust-guard proper and the end wall of the said space 12 for the spring 16 to pass.

The flexible packing-strip 15 and its flexible metallic band 18 may be readily inserted into the space 12 and around the car-axle 11 while the latter is in position within the journal-box 10, and this is a feature of importance. The ends of the strip 15 will be detached from one another when said strip is to be applied, and one end of said strip will be inserted downward into one end of the space 12 at one side of the axle 11 and then brought around under the car-axle and up through the other end of said space 12, and thereupon the two ends of the strip 15 will be hooked together at the upper side of the axle 11 by means of the spring 16, which will hold the guard in position around the car-axle with a yielding tension and also serve as a projection to prevent the rotation of the guard with the car-axle. If found more convenient, the operator in applying the dust-guard may fasten a wire to one of its ends and then pass the wire around the car-axle for the purpose of using the wire in pulling the guard around said axle.

The dust-guard of my invention is entirely efficient in use and may be applied to and removed from the car-axle without removing

the latter from the journal-box; and in addition the said dust-guard lacks complication and is comparatively inexpensive of manufacture.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The dust-guard comprising the flexible strip 15 adapted to be inserted around the car-axle while the latter is in position in the journal-box, said strip at its ends being correspondingly cut off at an angle so that the joint between the meeting ends of said strip is on a tangent to the car-axle, combined with the spring 16 for connecting the ends of said strip to maintain the latter around the car-axle, and means carried at the ends of said strip to engage the ends of said spring; substantially as and for the purposes set forth.

2. The dust-guard comprising the flexible strip 15, and the flexible band 18 connected thereto, said strip and band being adapted to be inserted around the car-axle while the latter is in position in the journal-box, combined with the hooks 17 adjacent to the ends of said strip, and the spring 16 to engage said hooks 17 and connect the ends of said strip to maintain the latter around the car-axle; substantially as and for the purposes set forth.

3. The dust-guard comprising the flexible packing-strip 15, the flexible band 18 connected thereto, and the clips 19 and 20 secured to the ends of said strip 15, combined with means for connecting the ends of the guard together to form a ring when said guard is in operative position; substantially as set forth.

4. The dust-guard comprising the flexible packing-strip 15, the flexible band 18 connected thereto, the clips 19 and 20 connected with the ends of said strip 15, and the hooks 17 on said clips, combined with the spring 16 for engaging said hooks and connecting the ends of the guard to form a ring when said guard is in operative position; substantially as set forth.

5. The dust-guard comprising the flexible strip 15 adapted to be inserted around the car-axle while the latter is in position in the journal-box, combined with the hooks 17 adjacent to the ends of said strip, and the spring 16 to engage said hooks 17 and connect the ends of said strip and maintain the latter under a spring tension around the car-axle; substantially as and for the purposes set forth.

6. The dust-guard comprising the flexible strip 15, and the metallic clips 19 and 20 secured to its ends, combined with the spring 16 for engaging said clips and binding said strip in the form of a ring around the car-axle; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 16th day of July, A. D. 1900.

SETH A. CRONE.

Witnesses:

CHAS. C. GILL,
GUNDER GUNDERSON.