

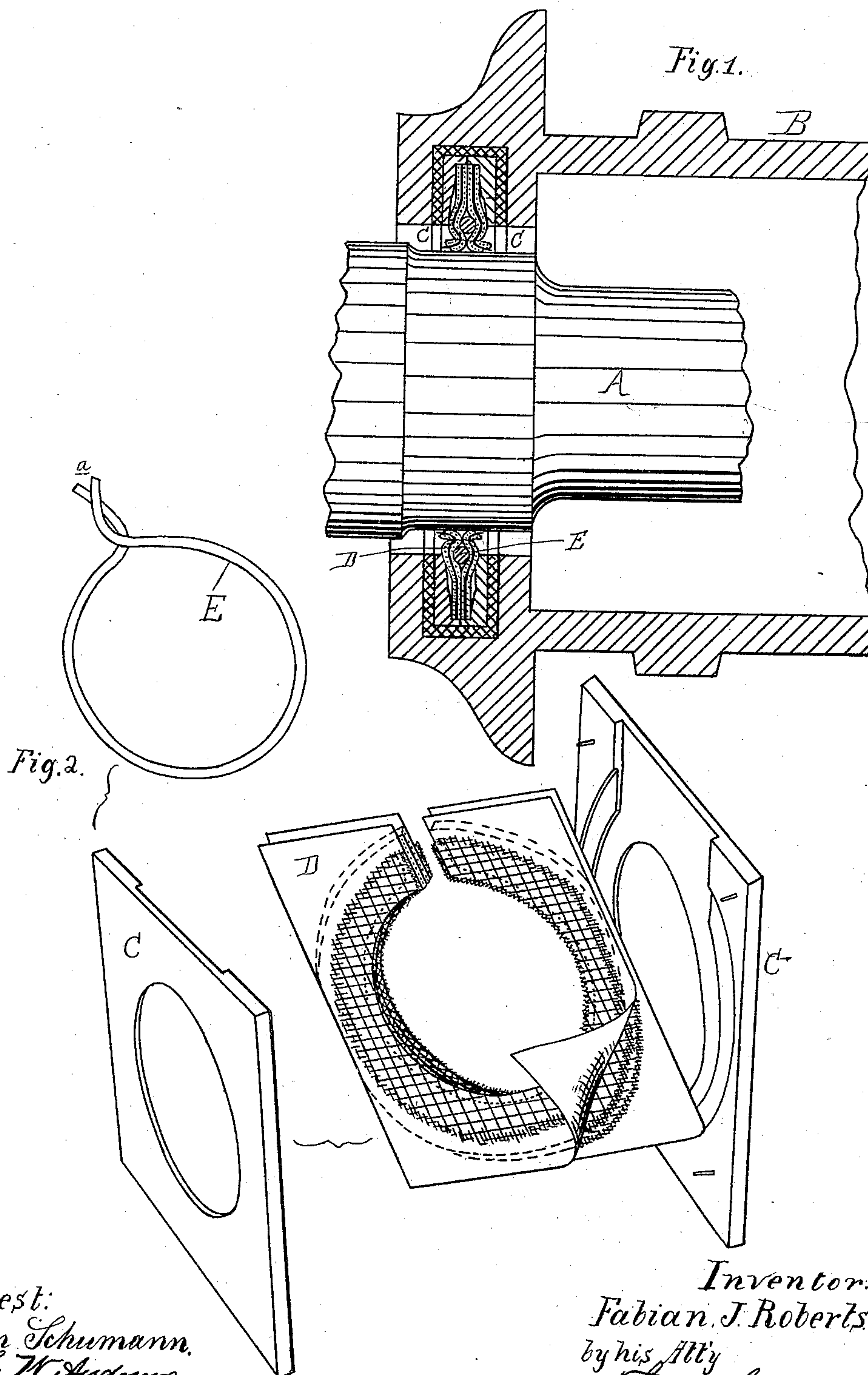
(No Model.)

F. J. ROBERTS.

DUST GUARD FOR CAR AXLE BOXES.

No. 307,682.

Patented Nov. 4, 1884.



Attest:
John Schumann.
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UNITED STATES PATENT OFFICE.

FABIAN J. ROBERTS, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO CHARLES REEBER, JOSEPH REEBER, AND HENRY A. WEBER, ALL OF SAME PLACE.

DUST-GUARD FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 307,682, dated November 4, 1884.

Application filed August 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, FABIAN J. ROBERTS, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Dust-Guards for Car-Axle Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof; reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in guards for car-axle boxes; and the invention consists in the peculiar construction of a packing and of a spring designed to encircle the axle and compress the packing firmly against it, for the purpose of excluding dust from the axle-bearing, all as more fully hereinafter set forth.

Figure 1 is a horizontal section through a car-axle box provided with my improved guard. Fig. 2 is a perspective in detail of the various parts forming the guard.

In the accompanying drawings, which form a part of this specification, A represents the car-axle, and B the journal-box, provided with the usual chamber for the reception of the guard.

C C represent the two plates of the guard, their inner faces being recessed to receive the packing D. This packing I make of several pieces of heavy canvas, interposing between them one or more pieces of rubber cloth or any other suitable material, the whole being stitched together, as shown in Fig. 2, and is designed to inclose a metallic spring-compression hoop, E. After the guard has been put together I cover the two sides and bottom edges with felt or other suitable material. In practice, the spring-hoop compels the packing to snugly fit around the axle to the exclusion of all grit and dust, while it also prevents the escape of the lubricant. This guard is first placed in its proper compartment in the box before the latter is put upon the journal. The opening of the packing being somewhat smaller than the cross-section of the axle, necessitates an expanding of the hoop to receive the axle. In order that this may be easily done, I make the hoop open and provide it

with arms *a*, which project nearly to the top of the box, where they may be within easy access.

It will be found that a guard constructed as herein described will readily accommodate itself to the vibrations of the axle, and will always remain tight upon the axle.

I am aware that a rigid ring has been used in connection with flexible packing, and I am also aware that a wire ring compressed around the axle by set-screws has also been used in connection with a packing composed of two or more thicknesses of leather or other similar material, and do not claim such as forming part of my invention, for in such constructions the ring is not compressed by its own resiliency.

I am also aware that an annular coiled spring packed with a fibrous material has been used for the same purpose, but make no claim to such construction, which is objectionable, as it soon becomes worn, owing to the constant rubbing of the axle against the inner faces of the coils. My ring can be made of ordinary wire, requires no skilled labor to construct it, and is much more durable, as it never comes in contact with the axle, owing to the stitching which secures it within the packing.

What I claim as my invention is—

1. As an improved dust-guard, the ring E, inclosed in an annular pocket, and constructed to reduce the diameter of the same by its own resiliency, substantially as and for the purpose specified.

2. A dust-guard for axles, consisting of a textile fabric provided with a divided annular pocket, in combination with an annular spring inclosed within said pocket, and constructed to cause the intercepted ends of said pocket to approach each other, substantially as and for the purpose described.

3. In a dust-guard substantially as described, the combination, with the flexible packing D, of the ring E, adapted to compress said packing by its own resiliency, and provided with the arms *a*, substantially as and for the purpose set forth.

4. In a dust-guard, a packing consisting of

several thicknesses of textile fabric and one or more pieces of rubber interposed between them, and the metallic ring E, inclosed within said packing, and adapted to compress the same against the axle by its resiliency, substantially as and for the purpose specified.

5 5. In a dust-guard, the combination of the plates C, having their inner faces recessed to receive the packing, the flexible packing D,

inclosed within the recesses in said plates, 10 and the spring-ring E, inclosed within said packing, and constructed to compress the same, substantially as described.

FABIAN J. ROBERTS.

Witnesses:

H. S. SPRAGUE,
E. W. ANDREWS.