

(No Model.)

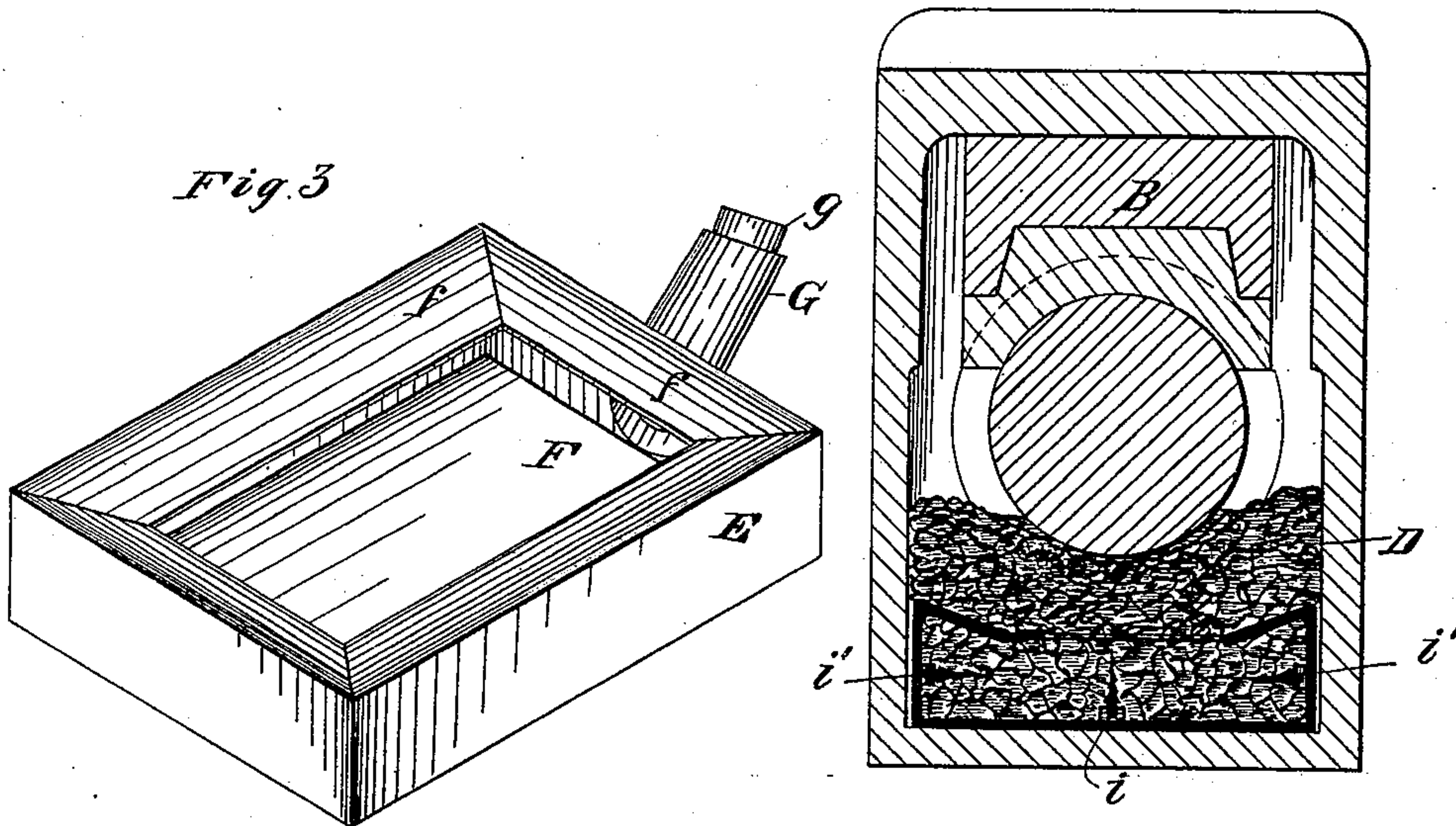
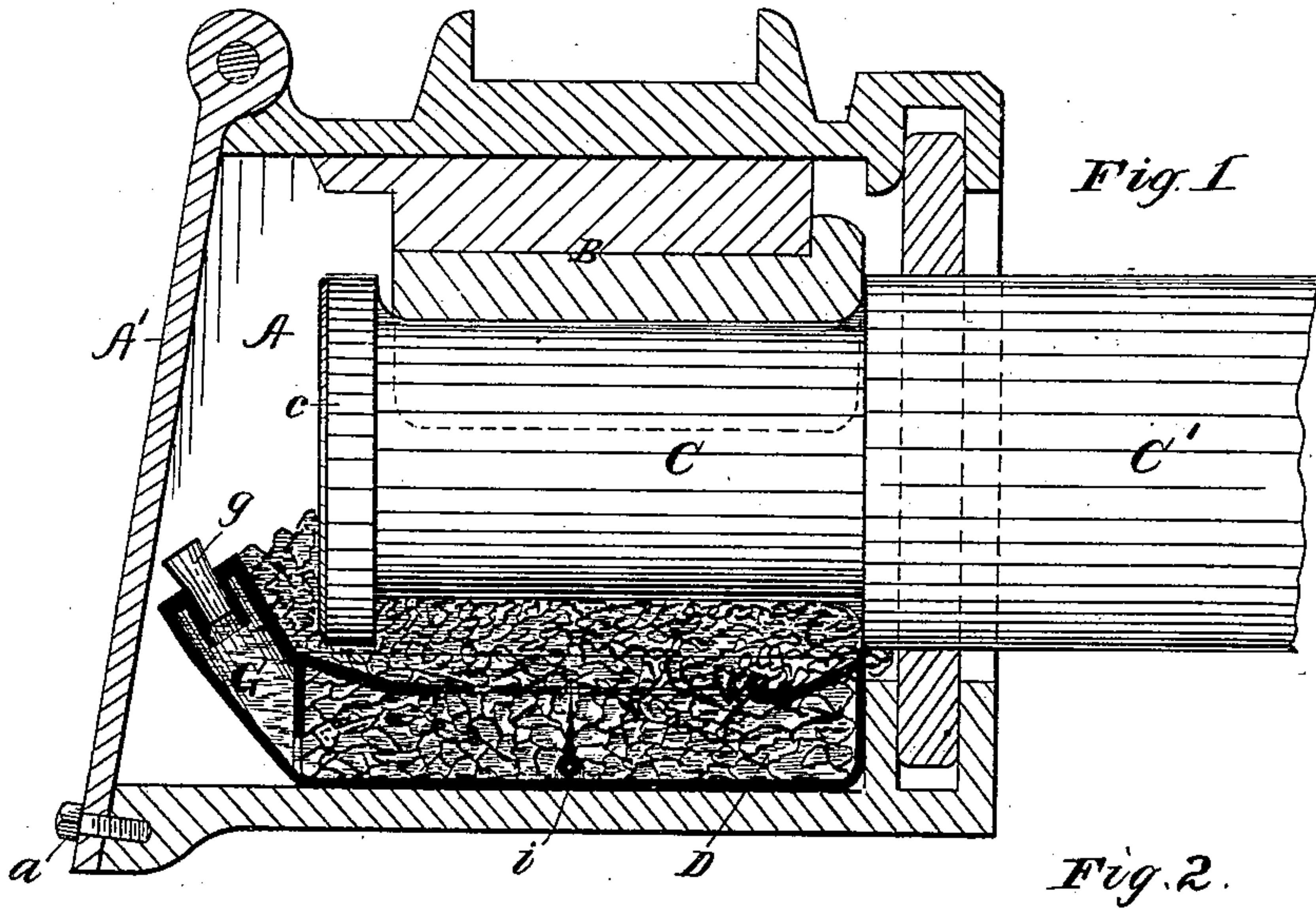
2 Sheets—Sheet 1.

J. C. RICHARDSON.

CAR AXLE BOX.

No. 252,591.

Patented Jan. 17, 1882.



Witnesses.

W. R. Edlin.

Robert H. Porter

Inventor.

John C. Richardson

Per. Nullock Stallick

Att's.

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2 Sheets—Sheet 2.

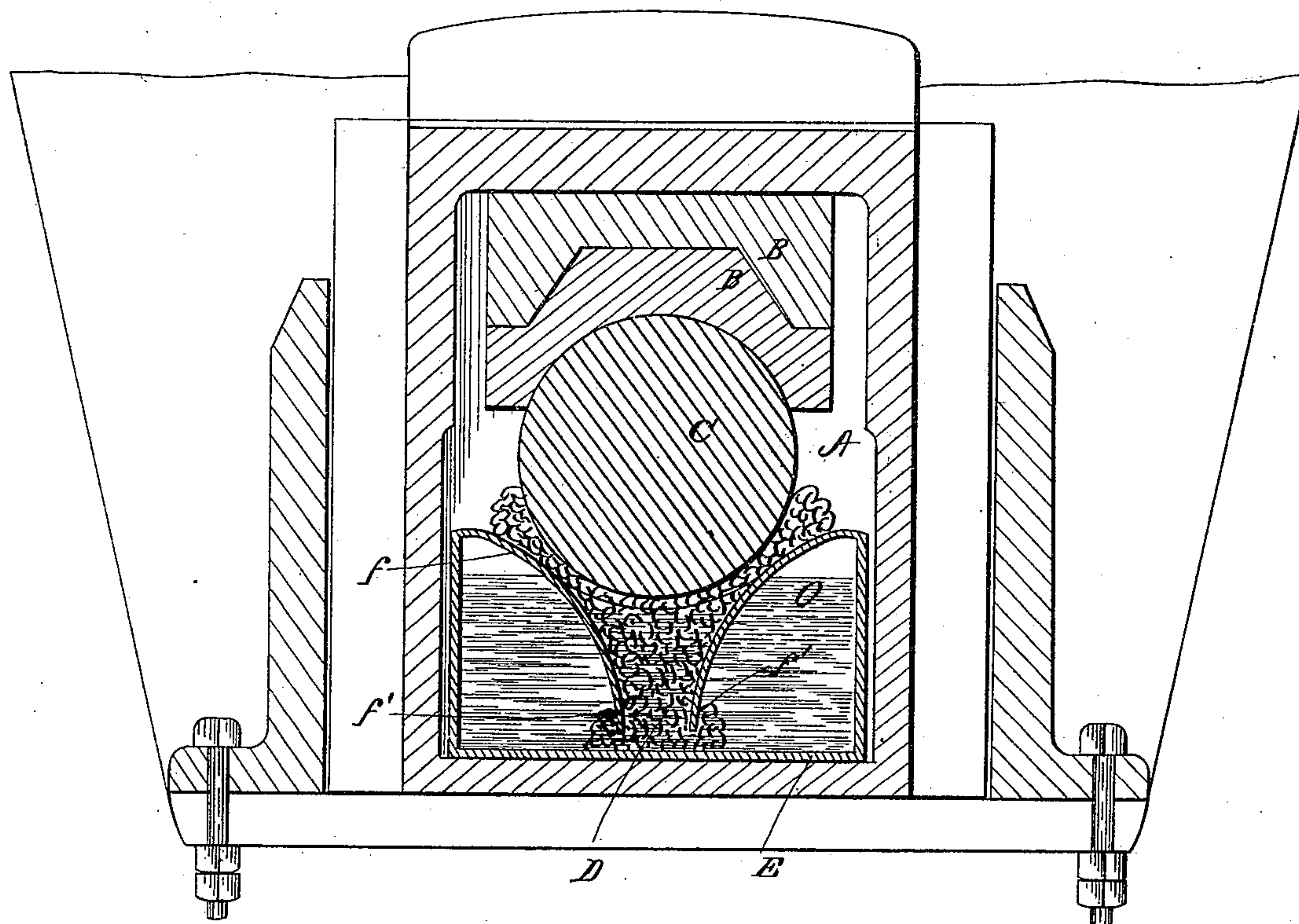
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*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

JOHN C. RICHARDSON, OF UNION CITY, PENNSYLVANIA, ASSIGNOR TO  
JENNIE R. COOPER, OF SAME PLACE.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 252,591, dated January 17, 1882.

Application filed October 28, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, J. C. RICHARDSON, a citizen of the United States, residing at Union City, Erie county, Pennsylvania, have invented new and useful Improvements in Devices for Lubricating Railroad-Car Axles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters or figures of reference marked thereon.

My invention relates to improvements in devices for lubricating the journals of railway-cars.

Heretofore the devices for holding and feeding the lubricants to the journals of railway-cars have been very defective in construction, and also in operation, on account of the means employed for absorbing the lubricants and feeding the same with sufficient rapidity to the journals.

With my improved devices I overcome all defective means of lubricating the journals of railway-cars by means of the devices which will be hereinafter more fully described.

In the drawings, Figure 1 represents in longitudinal vertical section a railway-car axle-box containing my improved devices, with the journal in side elevation. Fig. 2 is a transverse vertical section of my improved devices, taken in the direction of the dotted line *xx* of Fig. 1. Fig. 3 represents in perspective the oil or lubricating box for holding the conducting material. Fig. 4 represents in transverse vertical section a railway-car axle-box and its journal, with my improved portable box and conducting material somewhat modified.

In describing the various figures in connection with my invention, A indicates the railway-car axle-box, which is secured between horns or guides *a* in the ordinary manner, as shown at Fig. 4 of the accompanying drawings. The door A' of said box is made sufficiently large so as to cover the end of the same, and it is secured or fastened by means of the bolt *b*. By making the said door sufficiently large the opening in the end of said box A can be the full size of the same, which device offers greater facilities for putting in and arranging the lubricants and their accompanying con-

ducting materials. On the inside and upper part of said box A is the bearing B, for receiving the journaled end C and its collar *c* of the axle C'.

The portable box E, which is filled with sponge D or other porous conducting material and the lubricant O, is placed under the journal C, which envelops the same about one-fourth of its circumference, and also the collar *c*, which is the continuation of, and forms the extreme end of, said journal, all of which is fully shown at Figs. 1 and 2 of the accompanying drawings. Said portable box E has on its top a partial covering or ledge, *f*, which is inclined inwardly and terminates in a hole or central opening, F, for receiving the conducting materials or sponge D and its lubricants O, as before stated. These ledges may be thin-edged, thus leaving an open space between the top and bottom. The sponge is partly inserted through the opening into the chamber, and is held in place by the thin edges around the opening, which edges act after the manner of a wedge, leaving part of the sponge above and part below the top. A box made in this form dispenses with distinct and costly means for attaching the feeding device to the lubricating-oil receptacle. The shaft is also partly encircled by the feeder, thus preventing the oil, to a great extent, from being thrown against the walls of the axle-box. As said box E fits closely inside the box A, all surplus oil or other lubricating material that may be thrown against the sides of said box A through the centrifugal force of the journal C or from sudden concussion of the cars, flows on the sponge O, or on the inclined top or ledge *f*, and thence into the box E. On the bottom, and also on the opposite sides of the inside of said box E, are located barbed points *i* and *i' i'*, which are hinged so as to allow a slight movement of said points under certain conditions—that is, when removing the sponge or pushing it to one side in case heavy lubricants are used. Said barbed points are mainly designed to prevent the sponge from becoming disengaged from the box, which might ensue from various causes. Said box is also provided with a short tube or spout, G, and a stopper, *g*, as the lubricants have to be replenished frequently, in compari-



son to the sponge D. By this arrangement the oil can be conveyed to the bottom of said box E, without removing the same from the car-box A, thus making it very convenient and saving considerable time by using a box of my improved construction.

The inclined cover or ledge *f* can be of any desired contour—straight, concave, or convex.

The convex cover *f'*, (shown in Fig. 4,) and which is inclined downwardly until it comes within a short distance of the bottom of the box E, has many advantages. By such a construction the oil is not so liable to surge through the pores of the sponge from undue agitation of the cars, (as the conducting material D does not entirely fill the box E, but terminates on the bottom of said box, and almost within the inclosure of the terminating ends of said convex cover *f'*;) as the lubricant would naturally surge and force against the inside confines of said box E, and thus spend its energy without increasing to excess the flow of the oil or other lubricants through the sponge or other conducting material.

I do not confine myself to the exact construction shown of the box E, as it can be of any desired contour without detriment to the spirit of my invention. Nor do I confine myself to the exact arrangement of the cover or inclines, as shown in said box E, as other forms will work perhaps equally as well.

I am aware that lubricating devices provided with a reservoir having its top sloping down-

wardly to allow the waste oil to run back into the reservoir are old; but this form differs from mine in that the top does not partly overlap and hold the feeding device in place. I therefore make no claim to the sloping top, *per se*; but

What I do claim as new is—

1. In a car-axle-lubricating device, a portable feed-box having a top provided with an oblong opening, for the purpose set forth, a packing or absorbent material held in place by the overhanging ledges of the top, and a supply-spout located outside the sides of the box, for the purpose described.

2. A lubricator for railway or other car journals, provided with a sponge or other porous material, in combination with a portable box, E, having hinged barbed points *i* and *i'*, and a spout or tube, G, for the purposes as herein described and shown.

3. In a lubricator, a portable box or reservoir, having barbed points attached at suitable places upon the inner surface for holding its feeding device in place, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of 60 September, 1881.

JOHN C. RICHARDSON.

Witnesses:

WM. C. JACKSON,  
JENNIE R. COOPER.