

(No Model.)

W. D. COOPER.

CAR AXLE BOX.

No. 326,405.

Patented Sept. 15, 1885.

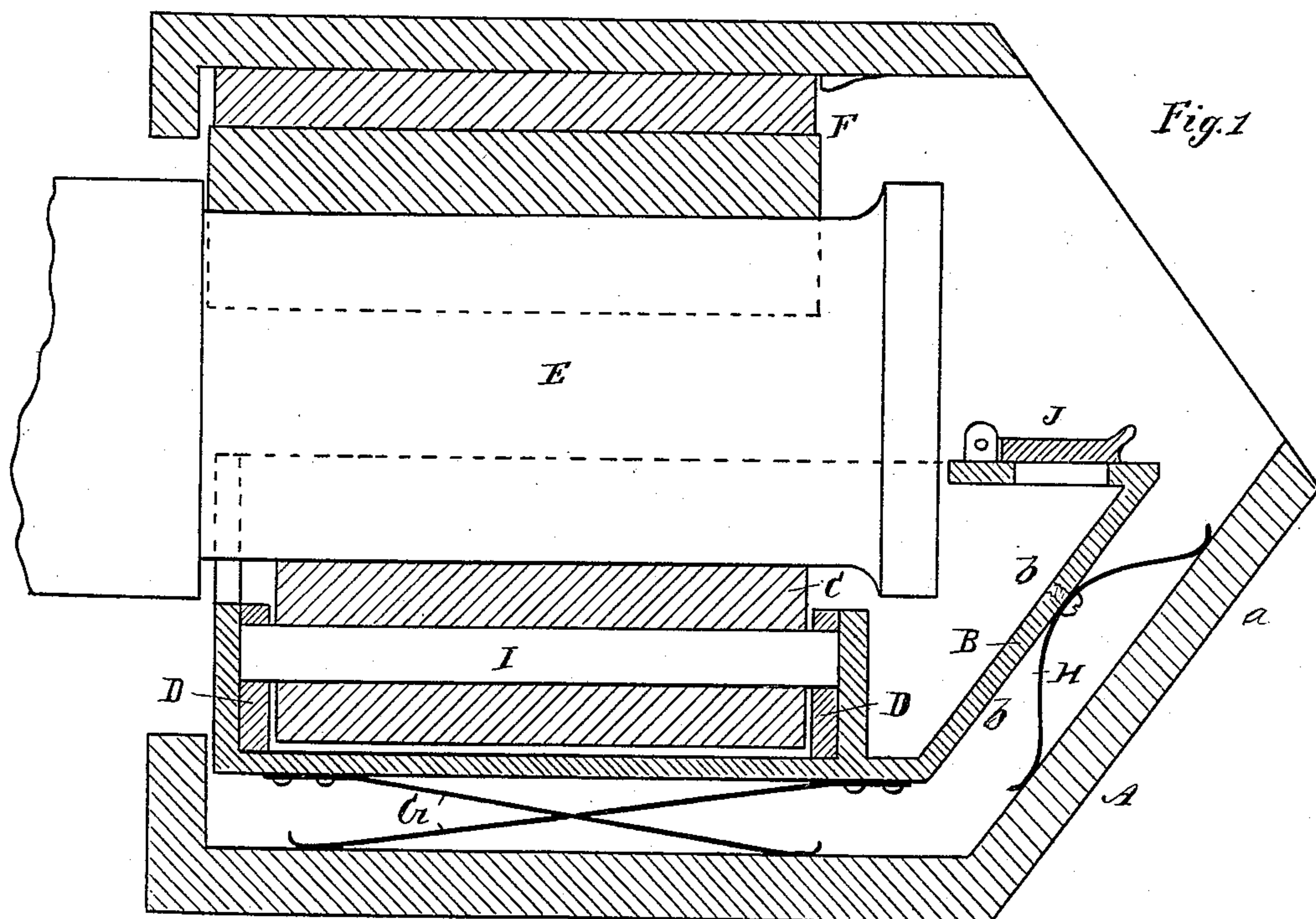


Fig. 1

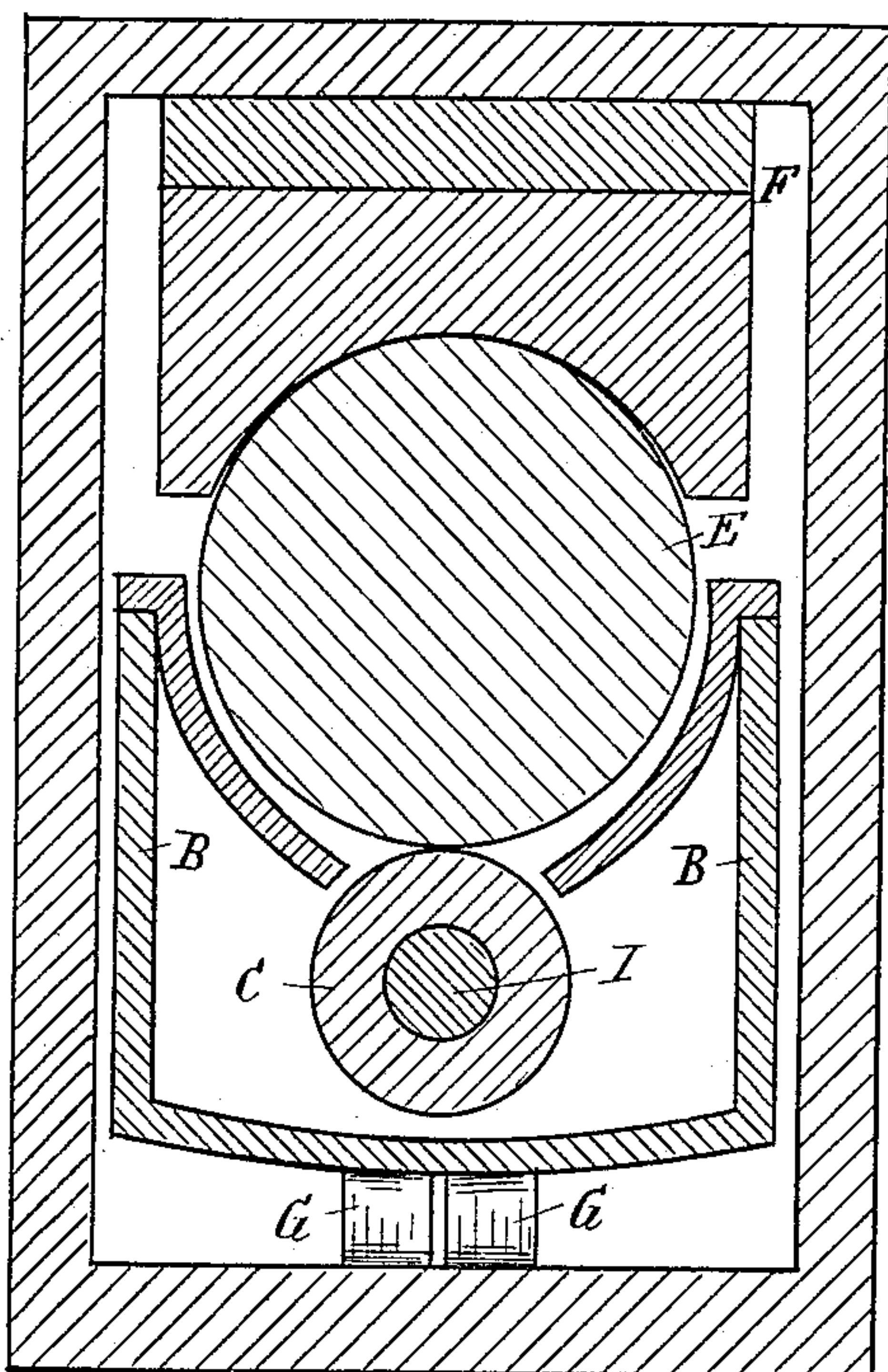


Fig. 2

Attest:
John Schuman.
H. J. Sprague.

Inventor:
William D. Cooper:
by his atty
H. J. Sprague

UNITED STATES PATENT OFFICE.

WILLIAM D. COOPER, OF WAYNE, MICHIGAN.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 326,405, dated September 15, 1885.

Application filed July 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. COOPER, of Wayne, in the county of Wayne and State of Michigan, have invented new and useful
5 Improvements in Car-Axle Lubricators; 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.

10 This invention relates to certain new and useful improvements in the construction of attachments to car-axle boxes, by means of which the journal of the axle is kept lubricated.

15 The invention consists in the peculiar construction, arrangement, and combination of the parts, all as more fully hereinafter set forth.

20 Figure 1 is a central vertical longitudinal section through the axle-box, the end of the axle, and my improvement. Fig. 2 is a vertical cross-section through the same.

25 In the accompanying drawings, which form a part of this specification, A represents a car-axle box of the ordinary or standard construction.

30 B represents a removable oil-receptacle which is designed to be inserted in the bottom of the box and rest upon the bearing-springs G and end spring, H. In this receptacle B, I journal in proper bearings, D, which should preferably be made removable, so that they can readily be replaced when worn, a shaft, I, which carries a roller, C, which is
35 preferably made of semi hard rubber or other suitable elastic material. This roller is journaled at the bottom of a semicircular recess or well in the upper portion of the receptacle, the walls of which come in close proximity to but do not touch the roller, as is clearly
40 shown in Fig. 2. The axle arm or journal rotates within this well, and in frictional contact with the roller.

45 In practice the oil or proper lubricant is introduced to the receptacle through the door J. When traveling, the rolling of the axle, being, as heretofore said, in frictional contact with the roller C, compels the latter to turn upon its journals, and as it is submerged, or par-

tially submerged, by the lubricant, it delivers 50 a fresh supply thereof to the journal, which in turn supplies and lubricates the "brasses" F, which rest upon the top of the axle, thereby keeping all the parts, which in this class of rolling-stock frequently become heated, 55 supplied with a continuous lubricant.

It will be noticed that the bottom of the receptacle is slightly concave, so that its deepest point is immediately below the center of the lubricating-roller. It will also be ob- 60 served that the springs G and H are for the purpose of keeping the receptacle in its relative position to the journals and a frictional contact between this roller and the journal in the various movements that are attendant in 65 a car under motion.

The lubricant-receptacle B is formed with an inclined side, b, corresponding to the inclined side a of the outer box, A. This form throws the filling-aperture, with its cover J, into con- 70 venient position for filling, while the spring H, being located between the parts a b, serves to throw the receptacle inward. These features, in connection with the concave form given to the box, I deem to be important. 75

I am aware of the Patent No. 114,157, of 1871, and do not seek to cover the construction therein set forth.

What I do claim is—

1. The combination, with the axle-box A, 80 having inclined side a, of the removable oil-receptacle B b, of similar form, and having an oil-filling orifice, as shown, the springs G, supporting the receptacle in a vertical direction, spring H, acting between the sides a b, and 85 solid lubricating-roller C, all adapted to serve with the journal E as and for the purposes set forth.

2. In an axle-box, the combination, with the box A, springs G H, and journal E, of the re- 90 ceptacle B, with its bottom formed concave in cross-section, and the solid friction-roller C; journaled in the receptacle and lying in the trough formed by said bottom, as set forth.

WILLIAM D. COOPER.

Witnesses:

H. S. SPRAGUE,
E. J. SCULLY.