

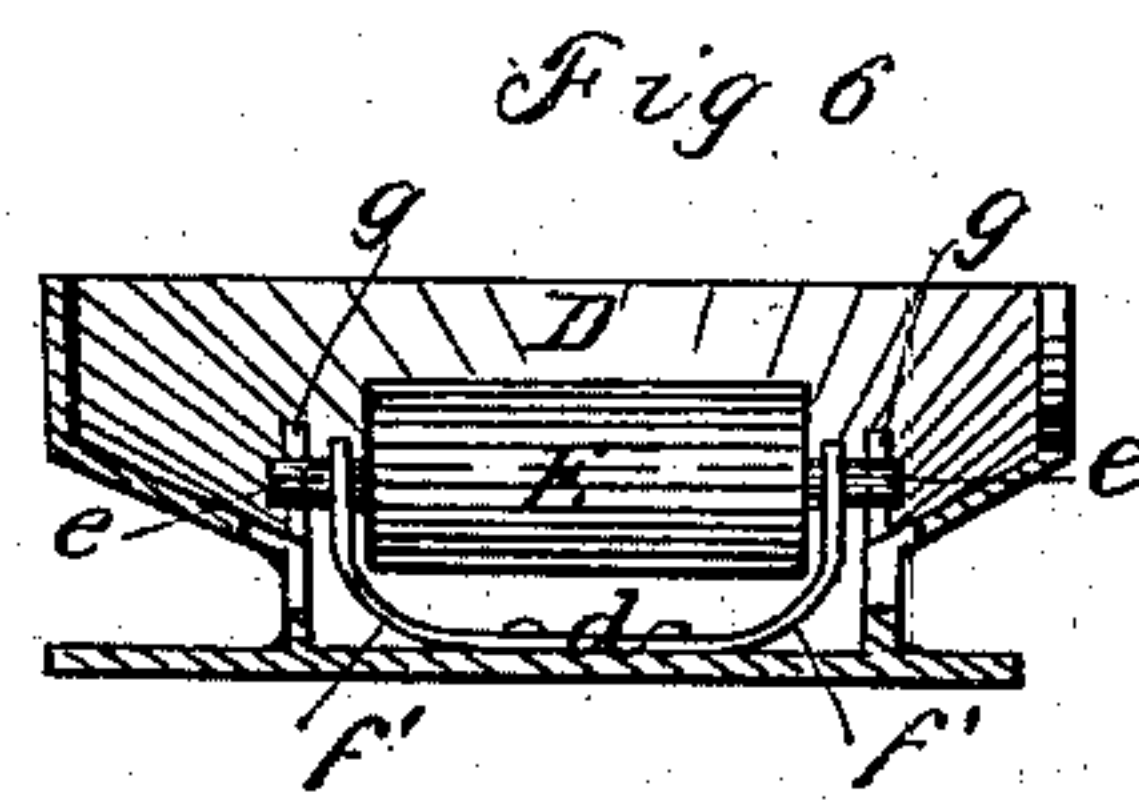
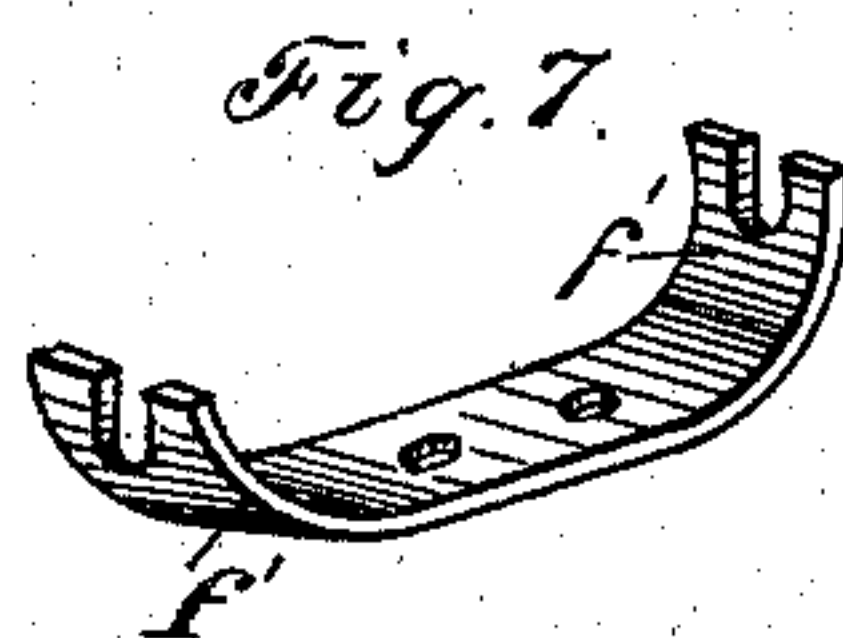
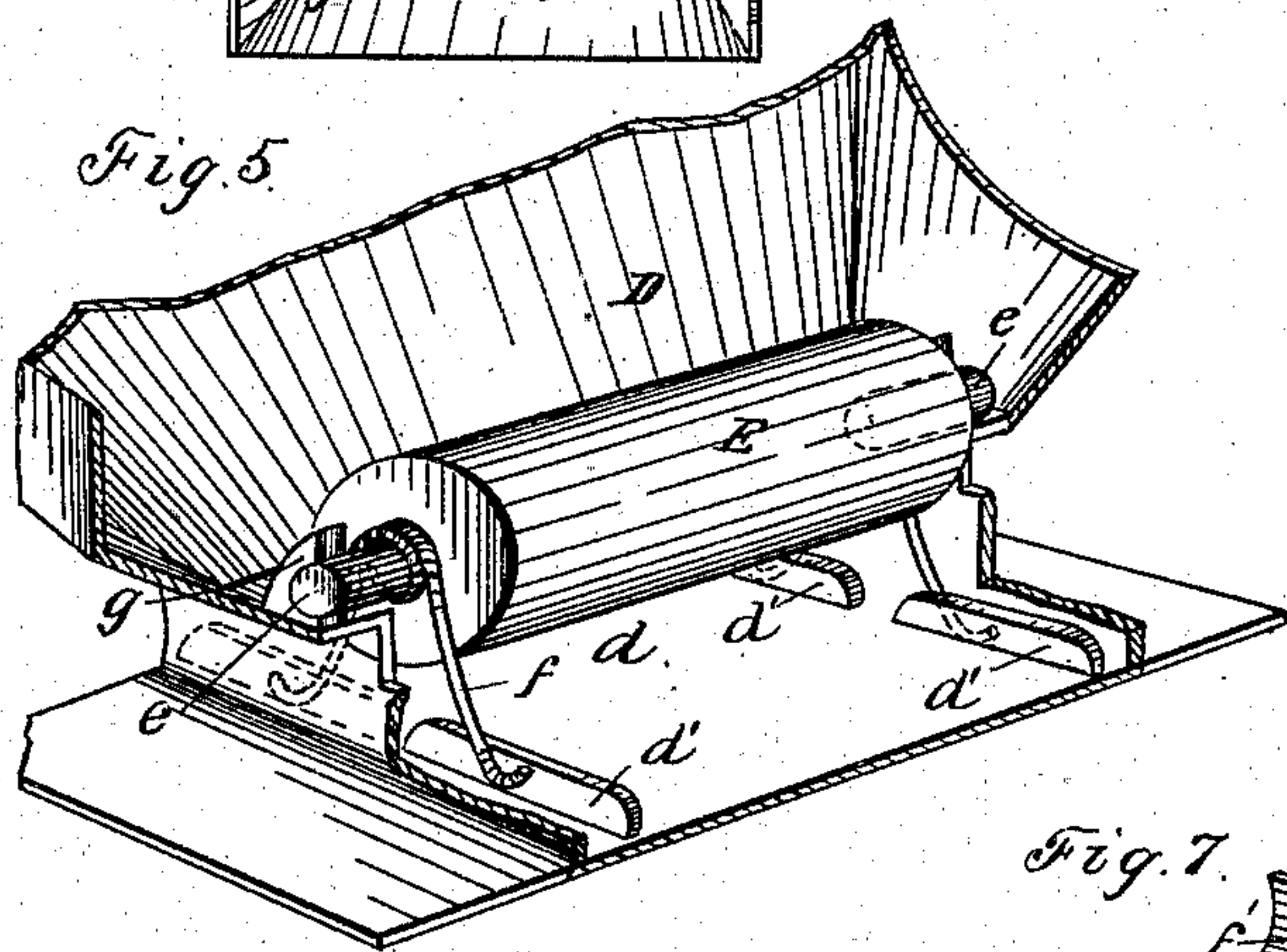
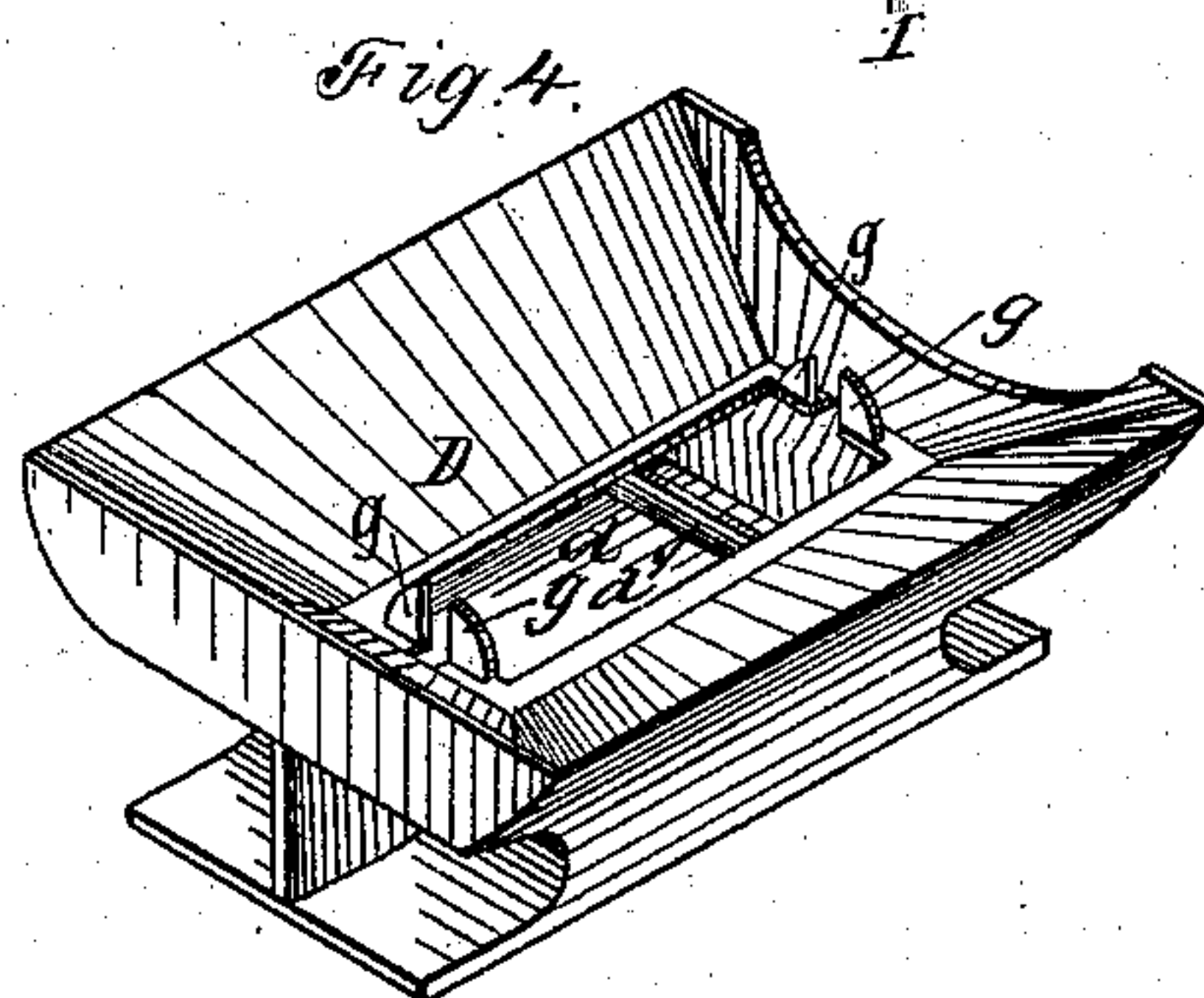
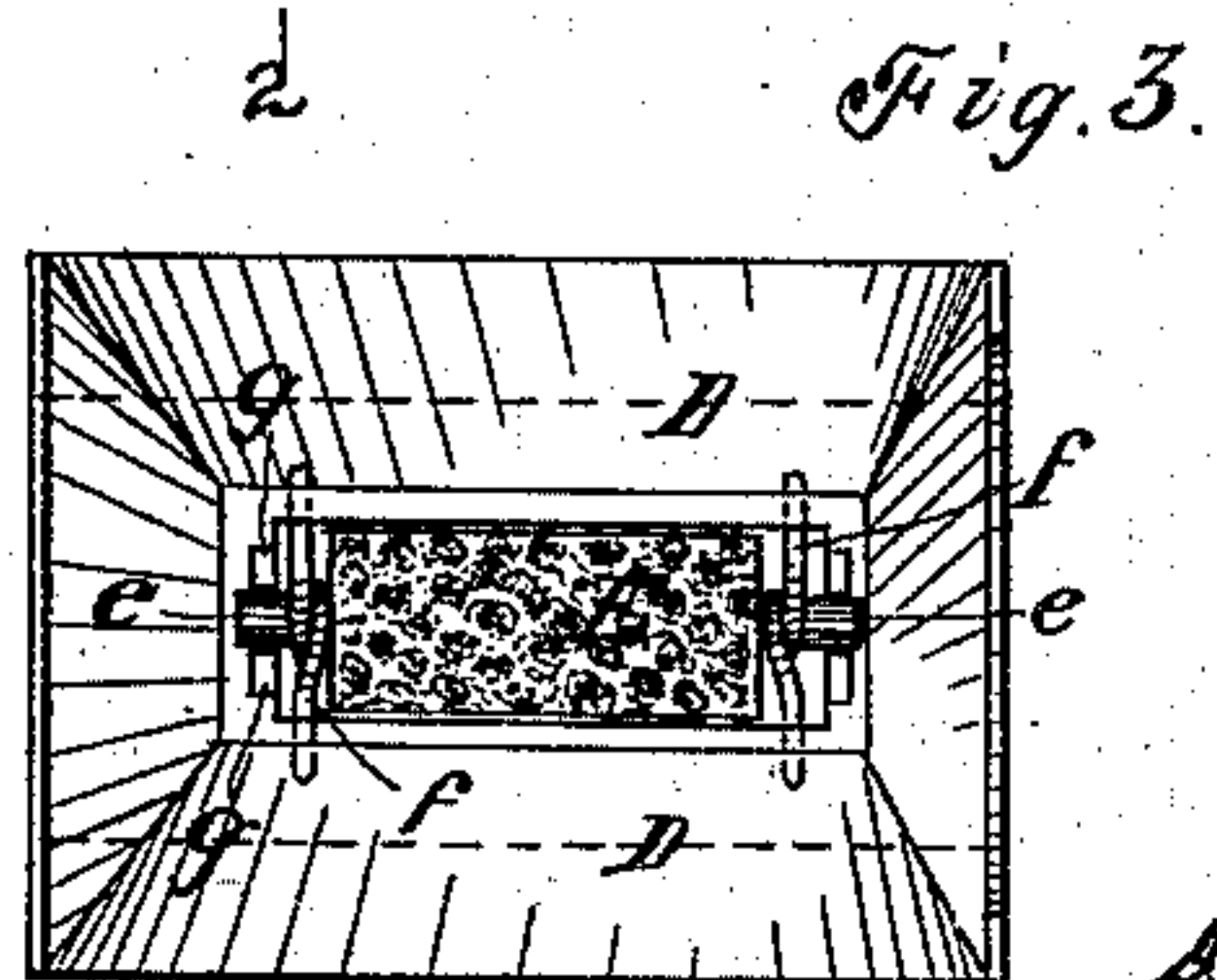
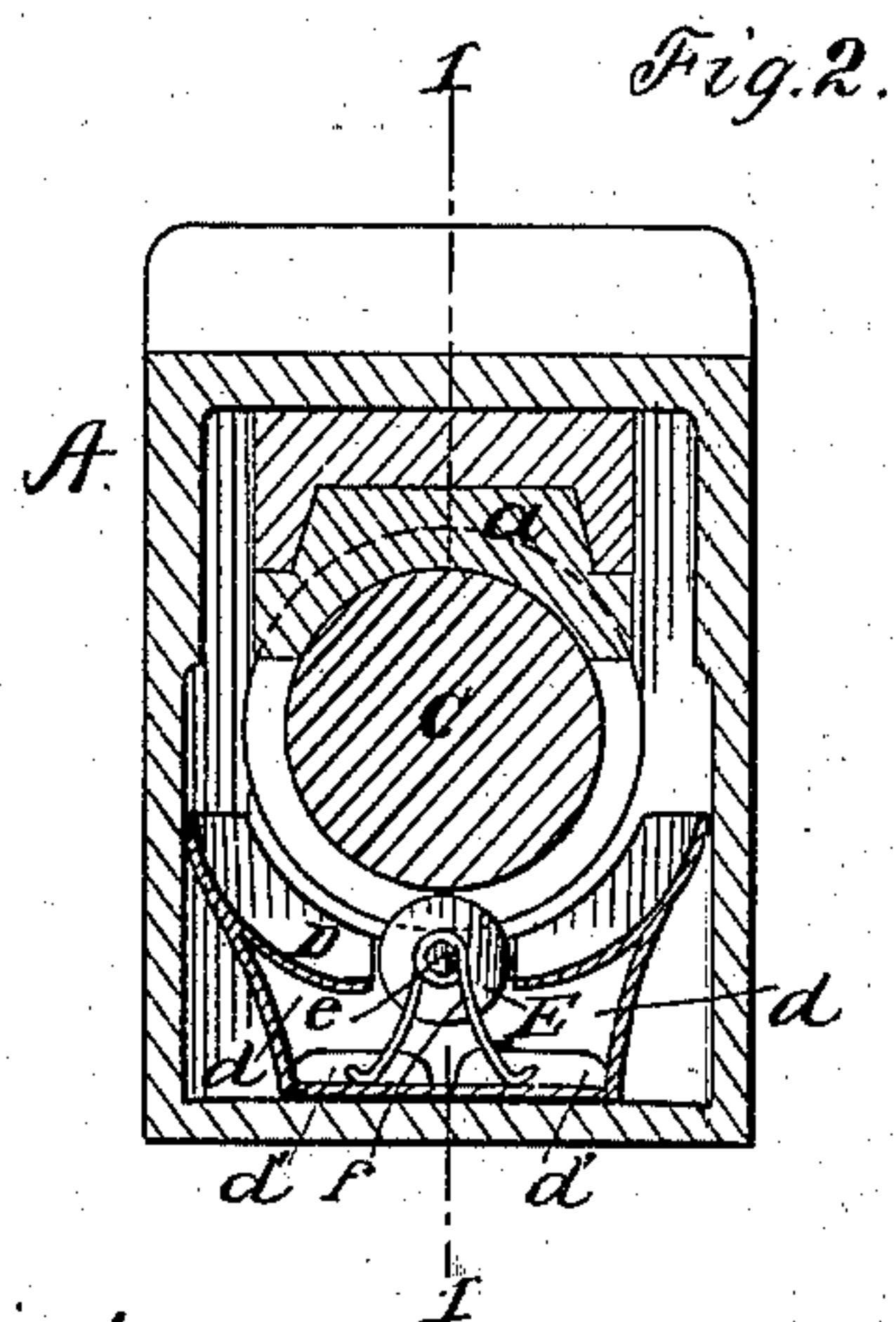
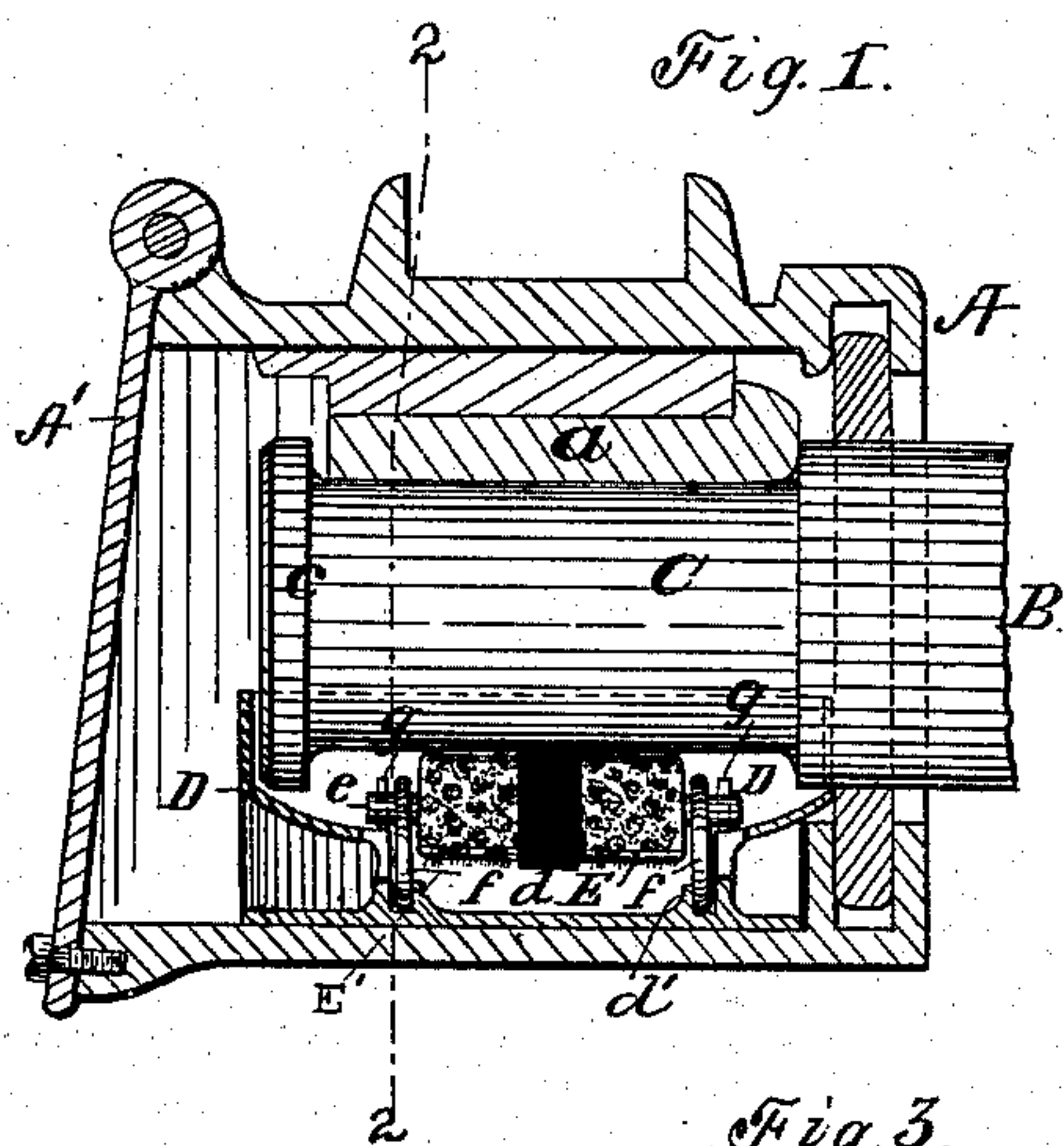
(No Model.)

J. R. COOPER.

CAR AXLE BOX

No. 252,357.

Patented Jan. 17, 1882.



Witnesses
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UNITED STATES PATENT OFFICE.

JENNIE R. COOPER, OF UNION CITY, PENNSYLVANIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 252,357, dated January 17, 1882.

Application filed September 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, JENNIE R. COOPER, a citizen of the United States, residing at Union City, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Devices for Lubricating the Journals of 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 that class of devices for lubricating the journals of car axles in which the oil is conveyed from the reservoir to the journal by a roller which is in frictional contact with the journal, and is thereby revolved and is also partially immersed in the oil in the reservoir, and by thus revolving while so immersed conveys the oil from the reservoir to the journal.

My invention consists in providing such an apparatus with certain improvements in construction and operation, as is hereinafter fully described, and designated by the claims.

My invention is illustrated in the accompanying drawings as follows:

Figure 1 is a longitudinal section taken on the line 1 1 in Fig. 2. Fig. 2 is a transverse vertical section taken on the line 2 2 in Fig. 1. Fig. 3 is a top or plan view of the oil-reservoir and conveying-roller. Fig. 4 is a perspective view of said reservoir with the roller removed. Fig. 5 is a perspective view, on a larger scale than the foregoing, of the said reservoir, with parts broken off, so as to show internal construction. This view also shows the roller in place. Fig. 6 is a longitudinal vertical section of the oil-reservoir on the same scale as in Fig. 3, and shows also an alternative construction of the spring supporting the roller. Fig. 7 is a perspective view of the spring which is shown in Fig. 6.

The parts shown in the drawings are designated by letters of reference as follows:

A represents an ordinary car-axle box; A', the cover to the same. B is the car-axle proper, and C the journal of the same. D is the oil-reservoir, which is a metallic box or bowl, separate and distinct from the box A, and sets within the same below the journal C. It is divided into two parts—a reservoir-chamber and a hopper or dishing top. E is the roller; e e,

the journals of the roller; f f, the springs supporting the roller in proper position. f' f' are the alternative forms of springs for supporting the roller. g g g g are guides for keeping the roller in proper position vertically. d' d' are lugs for keeping the springs f f in proper position laterally.

The essential features of my invention are as follows: first, providing the roller E with bristles like a brush; second, keeping the roller in place by vertical guides, and sustaining it in contact with the journal by springs, to which the roller is journaled; third, making the oil-reservoir a separate and detachable vessel, and providing it with a hopper-shaped top for catching the drippings of oil from the journal.

The construction and arrangement of parts are as follows:

First, of the roller. I am aware that rollers of various construction have heretofore been used for the purpose herein shown. My device consists of a roller having tufts of bristles arranged upon its body, as shown in Figs. 1 and 3. The object of this construction is to facilitate the operation of conveying the oil to the journal. The bristles should not be very long, and should be as stiff as possible. However, to insure the rotation of the roller when the bristles become too pliable, the roller or its shaft or journal may be provided with a bearing-surface of wood, metal, or any hard substance, which will be so arranged as to come in direct frictional contact with the journal of the axle. Such a construction is shown in Fig. 1 and marked E'.

Second. The devices for keeping the roller in place vertically and keeping it in frictional contact with the journal of the axle are as follows: These devices, in other words, constitute the hangings of the roller. Lugs g g g g at the ends of the opening in the top of the oil-reservoir form guides for the journals of the roller, permitting vertical movement of the roller, but preventing lateral movement. The roller is supported by a wire, f, at each end, which is bent so as to form a spring and also a journal-bearing for the roller. These are shown clearly in Figs. 2 and 5. In Figs. 6 and 7 an alternative construction is shown for the spring. The feet of the springs f rest upon the bottom of the oil-reservoir, and are kept in place by

guides d' , which are lugs cast on the bottom of the reservoir. These devices for hanging the roller may be used for any kind of a roller, whether plain or prepared with bristles or covered with felt or other absorbent.

Third. The oil-reservoir D is made with an oil-compartment, d , and with a flaring hopper-shaped top. The opening between the two is occupied by the roller E. The whole device is made so as to be set into the axle-box A, as shown in Figs. 1 and 2, and may be taken out for cleaning and repair at any time. It may be made of cast metal, all in one piece, or of sheet metal, such as tin, if desired. The hopper-shaped top flares out and reaches up by the side of the axle-journal C, so as to catch the splatterings and drippings of the oil.

The exact form of parts, as shown, is not strictly essential, as they may be varied without affecting the object and purposes sought by my invention.

What I claim as new is as follows:

1. In a car-axle-lubricating device, the oil-conveying roller provided on its surface with fibrous and absorbent material, and a traction-surface, E' , in direct contact with the axles, substantially as and for the purposes set forth.

2. In a car-axle-lubricating device, the combination, with the journal of the oil-conveying roller, of the vertical guides $g g$, supporting-spring f , having its feet resting upon the reservoir floor or bottom, and the guides d , located, as shown, to prevent the feet of spring f from slipping laterally, all combined and arranged substantially as described.

3. An oil-reservoir for car-axle-lubricating devices, having a hopper shaped top for catching the drippings, vertical guides for the journals of a roller, and lateral guides upon the floor, for the purpose set forth, in combination with a roller having springs attached to the journal and resting upon the floor between the side walls and lateral guides, substantially as set forth.

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

JENNIE R. COOPER.

Witnesses:

JNO. K. HALLOCK,
W. R. EDELEN.