

(No Model.)

2 Sheets—Sheet 1.

J. R. HOSIER.
CAR AXLE LUBRICATOR.

No. 427,994.

Patented May 13, 1890.

Fig. 1.

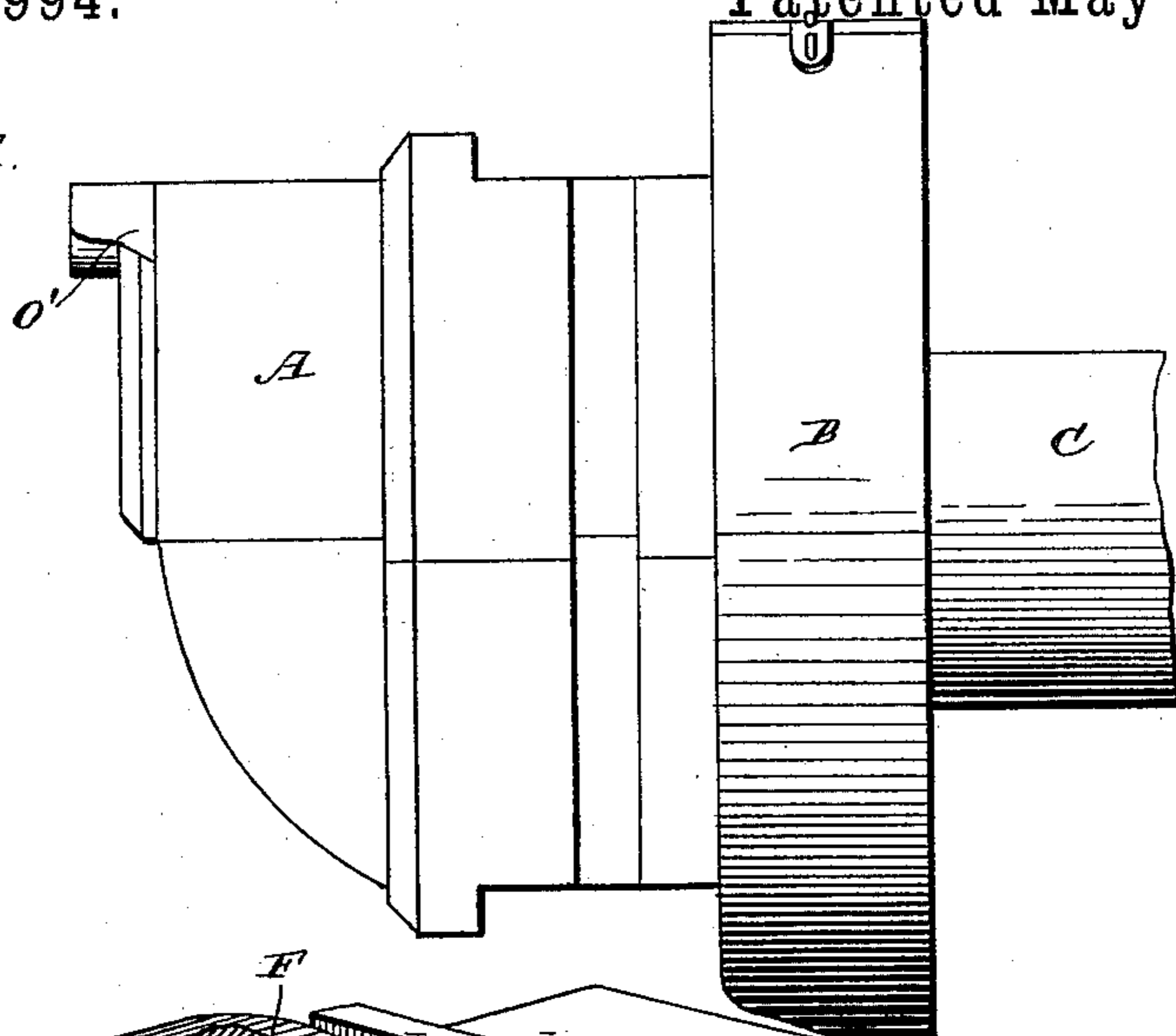
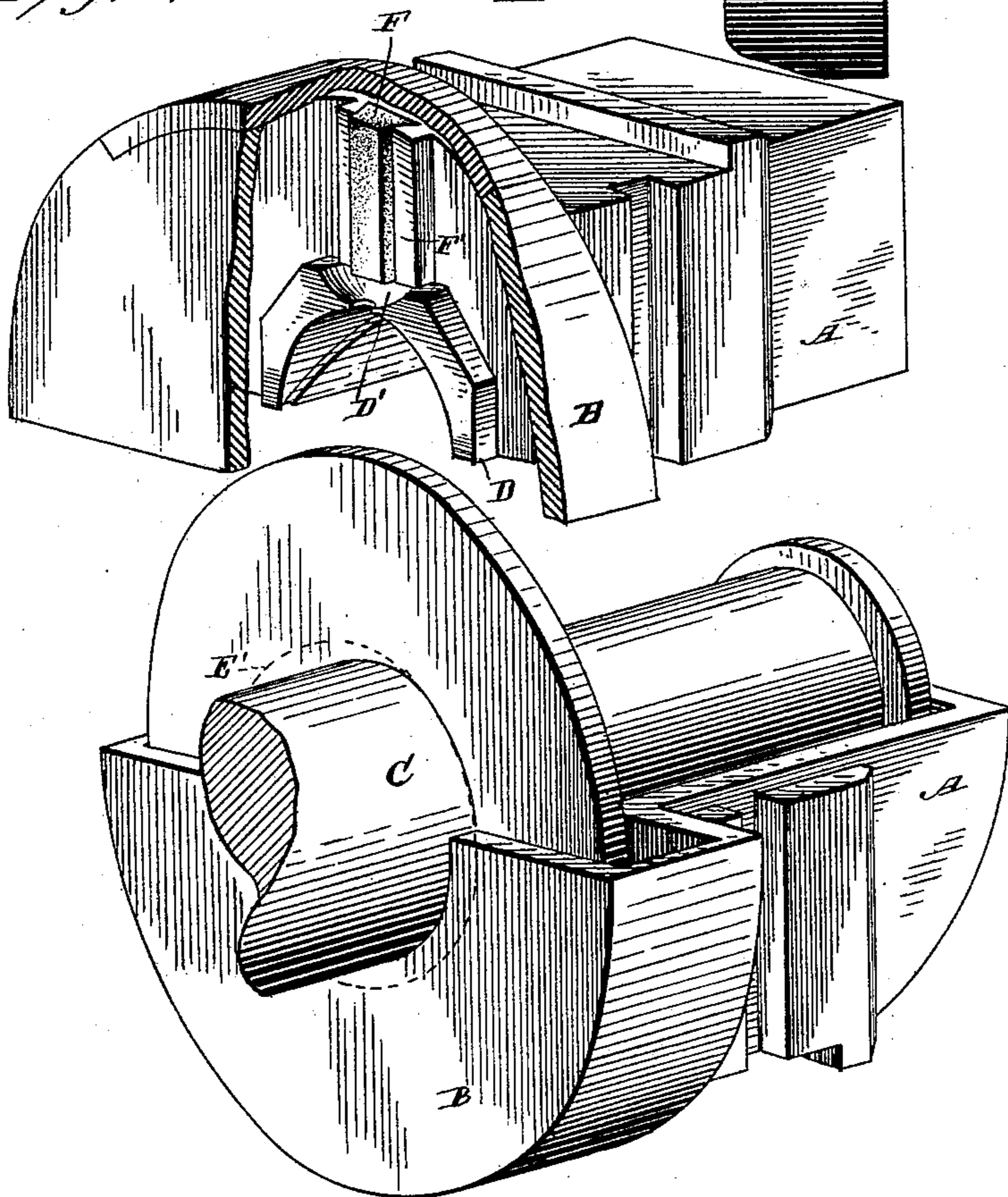


Fig. 2.



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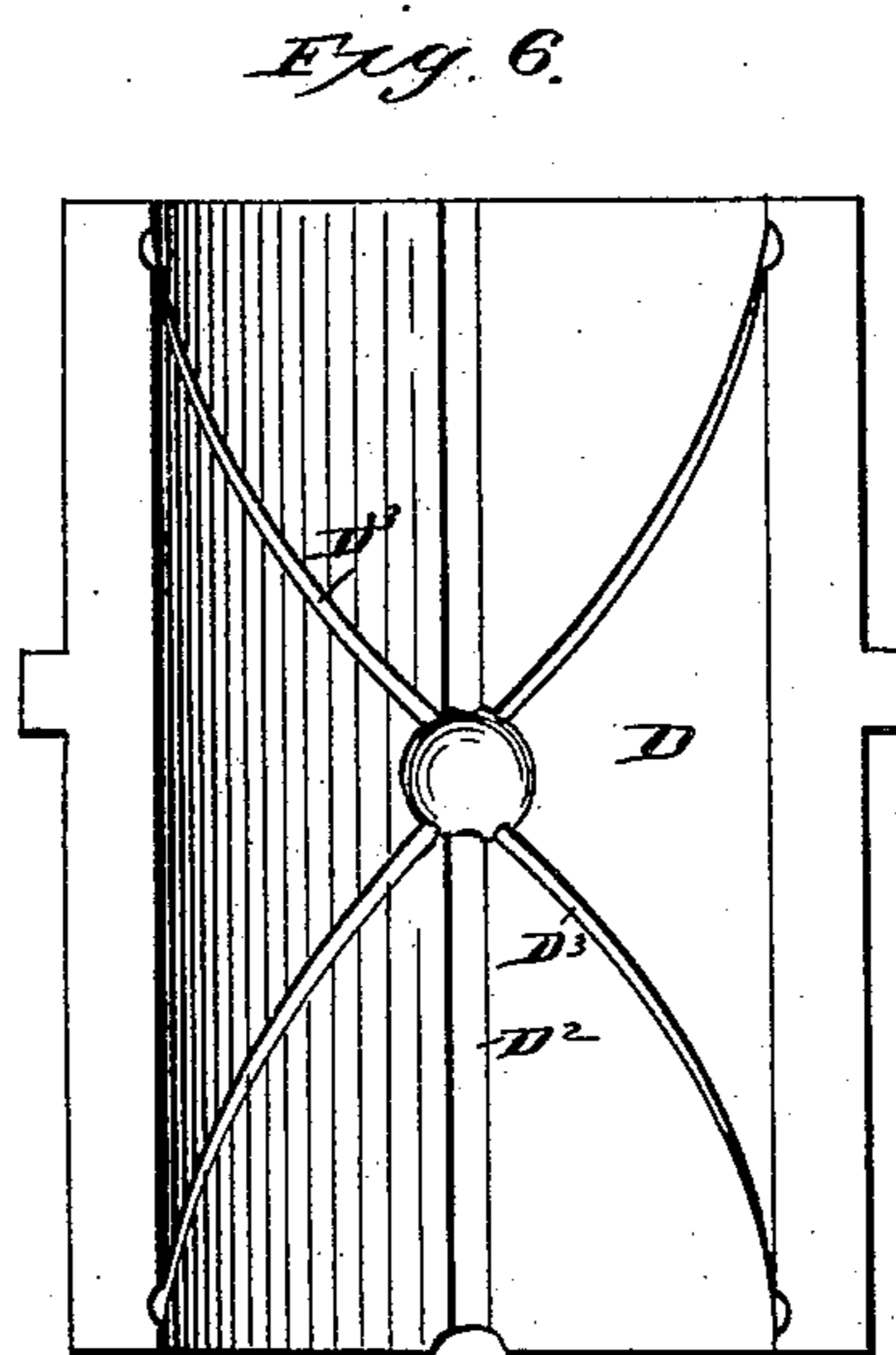
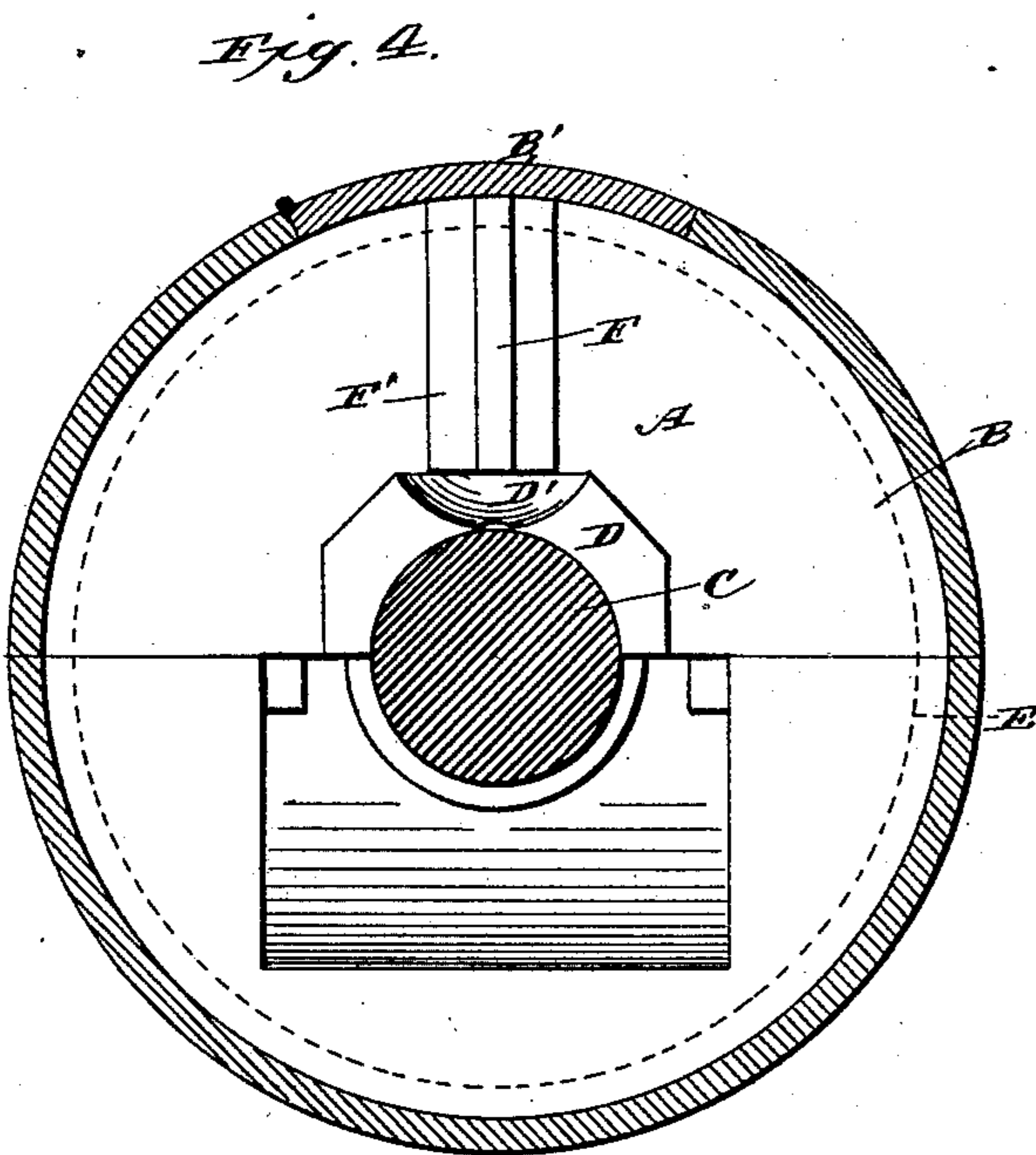
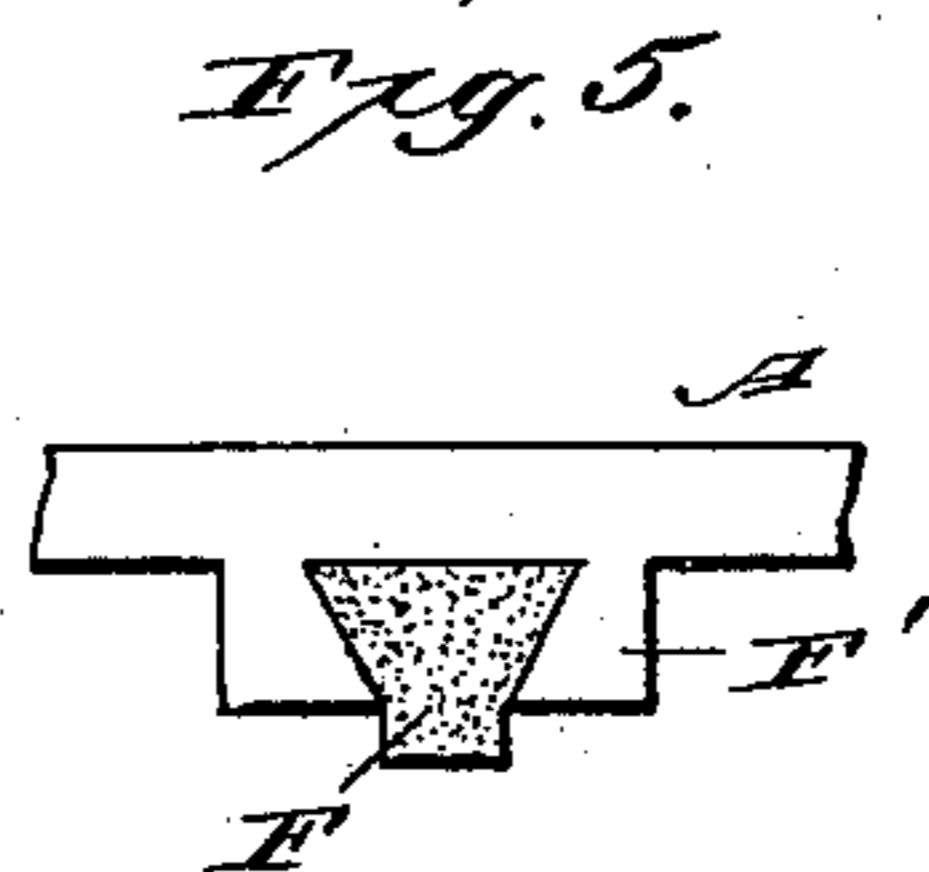
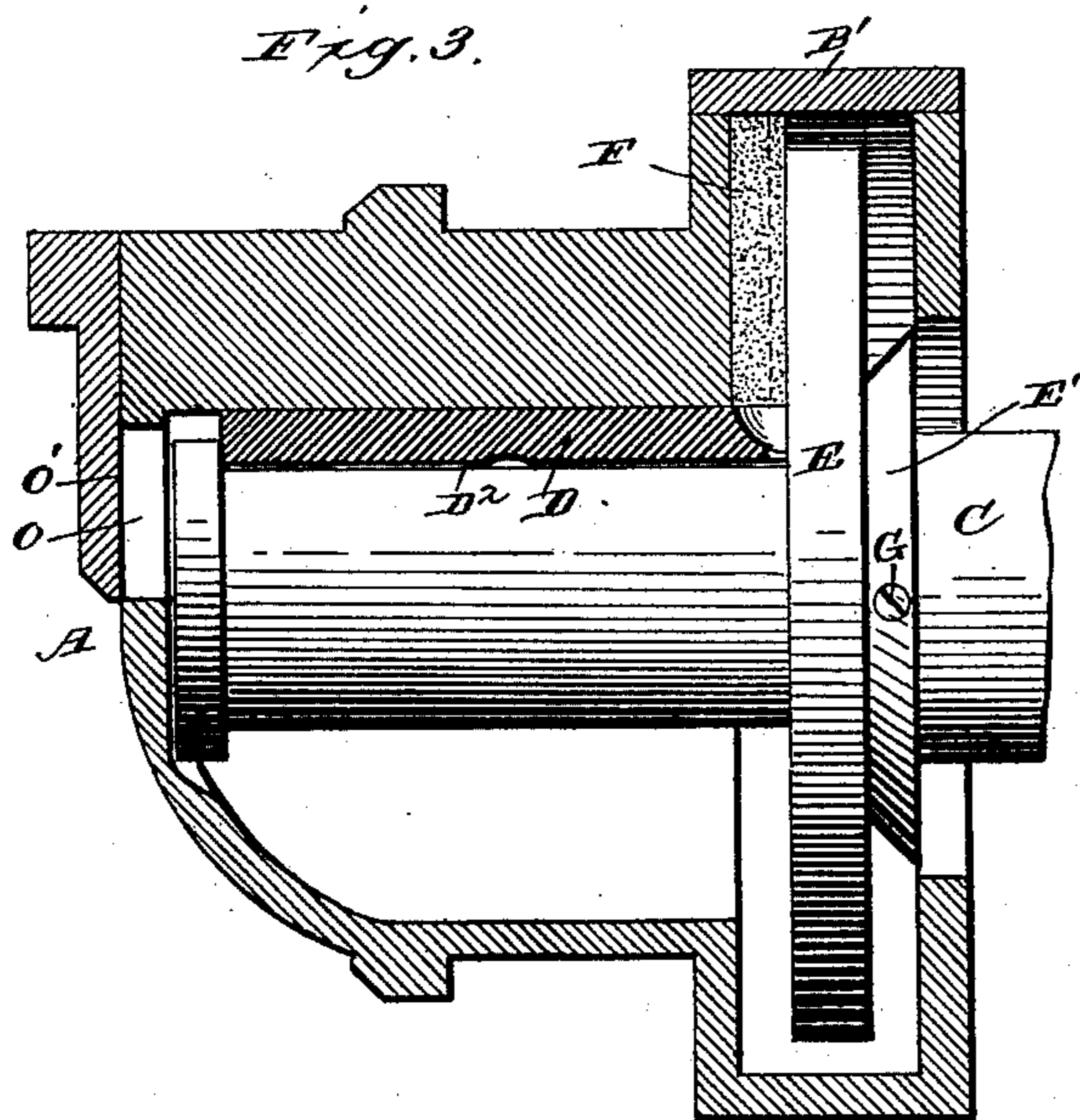
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UNITED STATES PATENT OFFICE.

JOSHUA R. HOSIER, OF HAMPTON, VIRGINIA.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 427,994, dated May 13, 1890.

Application filed December 12, 1889. Serial No. 333,402. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA R. HOSIER, of Hampton, in the county of Elizabeth City and State of Virginia, have invented certain new and useful Improvements in Car-Axle Lubricators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

My invention relates to that class of car-axle lubricators in which a collar or disk secured to the axle is adapted to rotate in a body of oil contained in the lower part of the axle-box, so that its surface will be covered by said oil, and in which a scraper is employed to scrape the oil from the upper part of the collar or disk as the latter rotates, so that the oil will be caused to run onto the axle and become distributed along the axle beneath the brass or bearing; and it consists in certain novel improvements in the construction of such lubricators whereby their cheapness and efficiency are increased, all as will be hereinafter fully described, and pointed out particularly in the claims at the end of this specification.

In the accompanying drawings, Figure 1 represents a side elevation of a car-axle box provided with my improvements. Fig. 2 is a perspective view showing the parts of the box separated, a portion of the casing of the upper half being broken away to show particularly the location of the scraper with reference to the brass or bearing. Fig. 3 is a longitudinal section of the box; Fig. 4, a vertical cross-section showing the relative location of the axle, the oiling-collar, the scraper, and the upper brass, the oiling-collar being shown in dotted lines. Fig. 5 is a detail view showing particularly the construction of the scraper and the guides or support in which it is held. Fig. 6 is a view of the inner side of the brass or bearing.

Similar letters of reference in the several figures indicate the same parts.

Referring to said drawings, A represents the car-axle box proper, made in two halves or sections, as shown, and to all external appearances of the same form and dimensions

as the ordinary boxes at present in use, except in respect to an additional chamber or enlargement B, provided for the accommodation of the oiling collar or disk.

C is the axle, and D the brass or bearing, which rests upon the axle.

E is the oiling collar or disk, and F is the scraper by which the oil is removed from the collar as the latter rotates with the axle.

O is an opening at the front of the box, through which the oil is poured into the box, said opening being closed by a slide O'.

The collar E, it will be observed, is provided with a hub E', through which passes a set-screw G, by which the collar may be secured at the proper point on the axle. It will be observed that the hub G is sloped or inclined toward the collar E. This is for the purpose of causing the oil which may run down on the inside of the collar when the latter is in a state of rest to be conducted back into the box and prevented from escaping inward along the axle.

The scraper F is arranged immediately over the axle and extends from the periphery of the collar nearly to the axle, its lower end terminating within an inclined or beveled recess D' in the end of the brass D, as shown in Fig. 2, in order that the oil removed from the collar by means of the scraper may with certainty be conducted into said recess D', and be thence directed under the brass and along the top of the axle.

To facilitate the introduction of the oil under the brass, the latter is provided with a longitudinal channel D², which channel, in connection with communicating cross-channels D³ D³, operates to distribute the oil into the bearing in the most perfect manner.

I preferably make the scraper F of rubber, felt, or other elastic material, in order that it may closely hug the oiling-collar and accommodate itself to the slight lateral motions which the collar will have when the car is in motion. I also preferably make the scraper of polygonal form, and preferably wedge shape, and I provide a correspondingly-shaped guide or holder F' for it on the upper portion of the box, as shown in Figs. 2 and 5, in order that it may not be displaced laterally.

The face of the oiling-collar against which the scraper operates I preferably make smooth that it may not unduly wear the scraper; but when in the course of time the scraper, notwithstanding this provision, becomes so worn as to render it necessary to replace it by another, it may be drawn out longitudinally from its guide or support and another one inserted, the top portion B' of the casing B being hinged so as to permit of this being conveniently done.

In my improved axle-box there is no necessity whatever for stuffing the box with waste or other oil-absorbing substance in order to apply oil to the lower surface of the axle, the combined action of the wheel-scraper and brass being such as to deliver oil in sufficient quantity upon the top of the axle to keep the bearing properly lubricated so long as the axle continues in motion, thus preventing the evil of a "hot box."

I am aware that the broad idea of employing a rotating oiling-collar in connection with a scraper is not new in this class of devices, and I therefore do not desire to be understood as claiming such generic invention.

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the axle-box A, having the enlargement B, of the axle provided with the oiling-collar E, the brass or bearing D, having the recess D' at its end, and the scraper F in contact with the oiling-collar and extending from the periphery of said oiling-collar down within the recess D' at the end of the brass, all arranged and co-operating substantially as described.

2. The combination, with the axle-box A, having the enlargement B, of the axle provided with the oiling-collar E, the brass or

bearing D, and the elastic scraper extending from the periphery of the oiling-collar to the brass, substantially as described, so as to deliver oil scraped from the collar on the top of the axle, substantially as described.

3. The combination, with the axle-box and its brass or bearing, of the axle provided with the oiling-collar, the elastic polygonally-shaped scraper F, and the correspondingly-shaped guide or support F' for holding said scraper, substantially as described.

4. The combination, with the axle-box A, having the enlargement B and the brass or bearing, and the axle provided with the oiling-wheel E, of the guide or support F', arranged within the enlargement B above the axle, the elastic scraper F, and the hinged portion B' for permitting access to the scraper, substantially as described.

5. The combination, with the axle-box A, having enlargement B, of the axle provided with the oiling-collar E, the brass or bearing D, having the recess D' at its end and the channels in communication with said recess, and the scraper F in contact with the oiling-collar and extending from the periphery of said oiling-collar down within the recess D' at the end of the brass, substantially as described.

6. The combination, with a car-axle, its brass, and the scraper, of the axle having the oiling-collar E, provided with the hub E', having a sloping or inclined upper surface for directing the oil back into the box, substantially as described.

JOSHUA R. HOSIER.

Witnesses:

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THOMAS DURANT.