

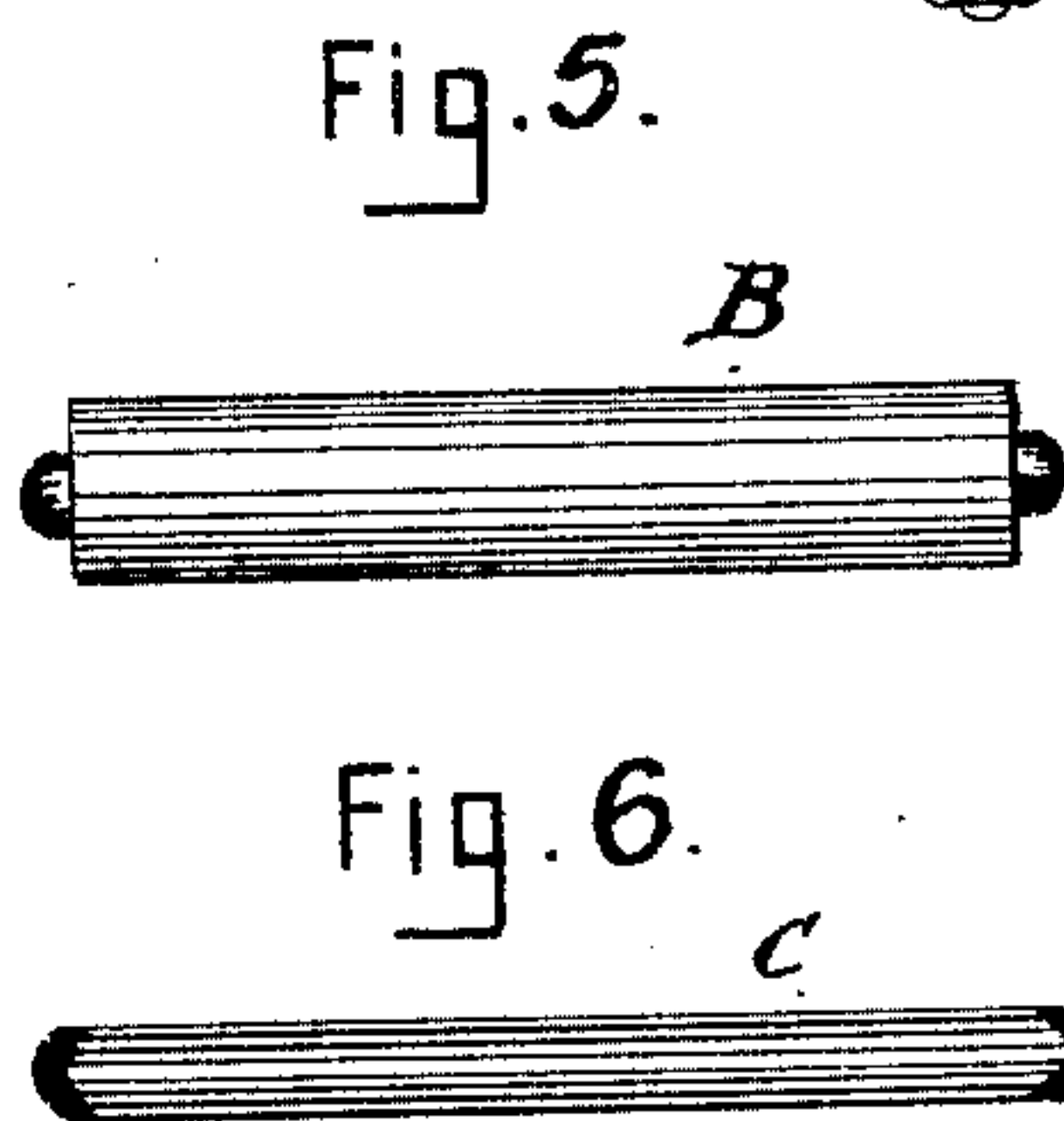
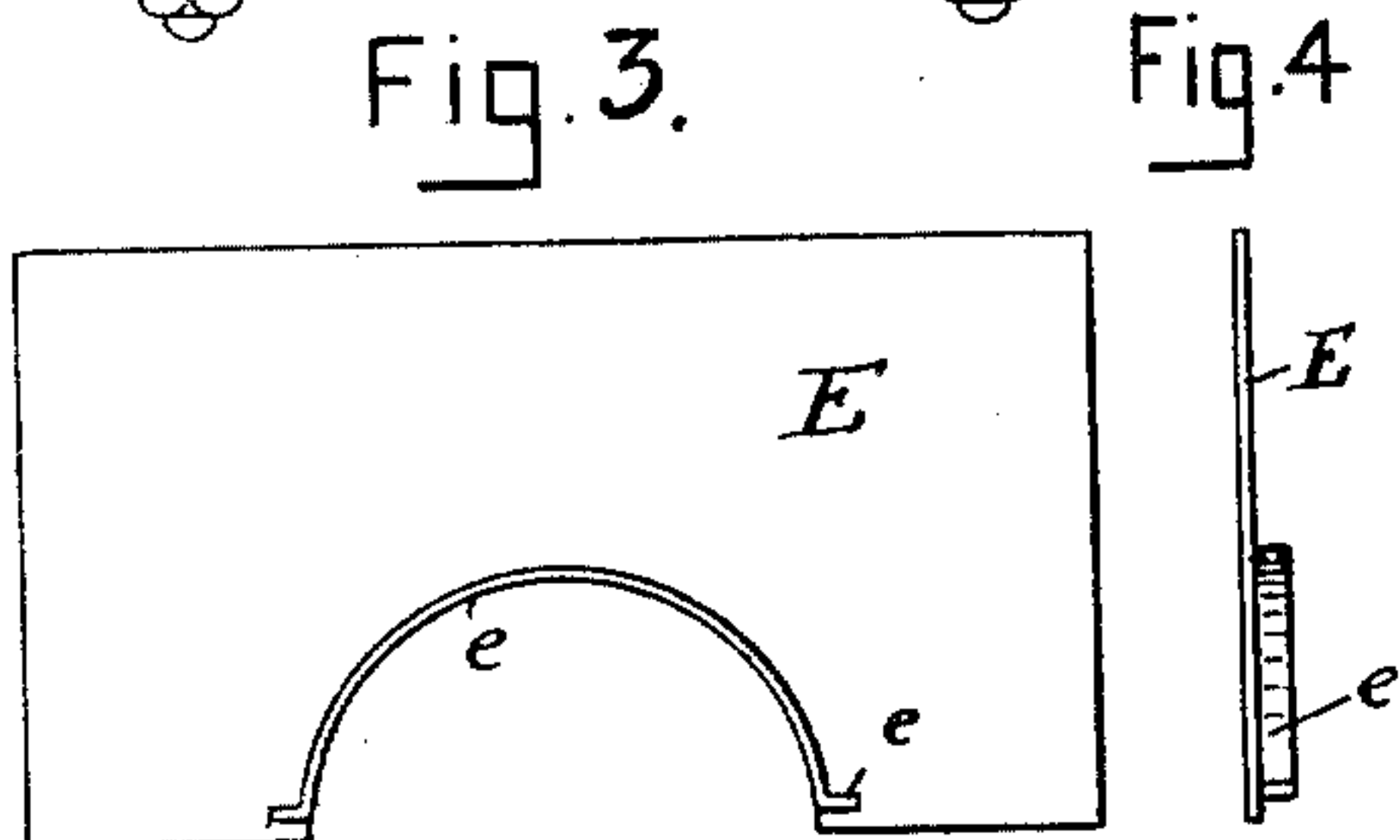
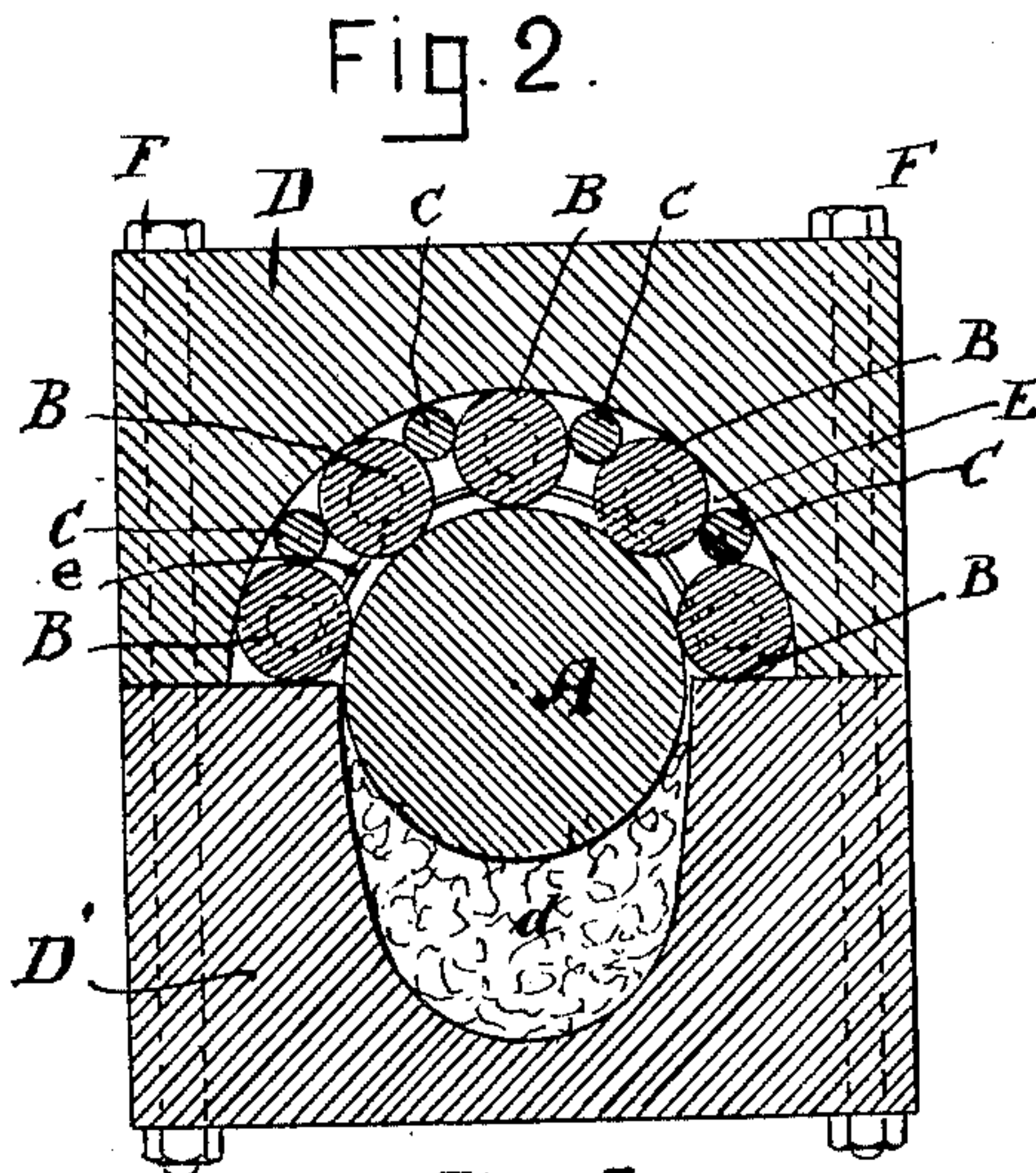
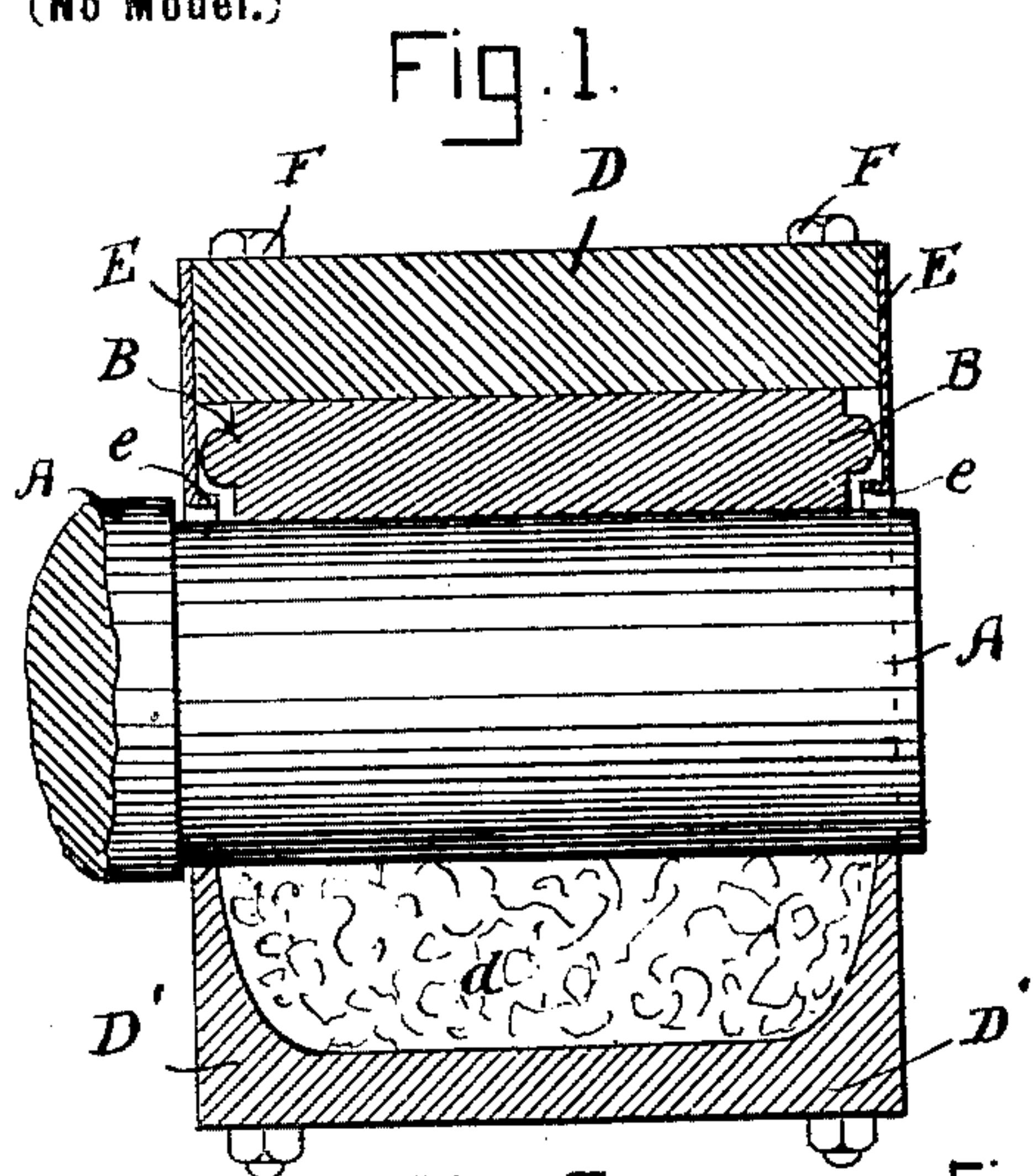
No. 679,509.

Patented July 30, 1901.

H. MONK.
ROLLER BEARING.

(Application filed Sept. 20, 1900.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY MONK, OF CAMBRIDGE, MASSACHUSETTS.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 679,509, dated July 30, 1901.

Application filed September 20, 1900. Serial No. 30,570. (No model.)

To all whom it may concern:

Be it known that I, HENRY MONK, a citizen of the United States, and a resident of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Roller-Bearings, of which the following is a specification.

My invention relates to certain improvements in roller-bearings.

Referring to the accompanying drawings, Figure 1 represents a longitudinal section of a box for a car-axle fitted with antifriction-rollers embodying my invention. Fig. 2 is a transverse section of same. Fig. 3 is a view of the inner side of the plate for retaining the rollers in place when the bearing is raised off the axle. Fig. 4 is an edge view of same. Fig. 5 is a view of one of the large antifriction-rollers. Fig. 6 is a view of one of the small spacer-rollers.

When applied to a car-axle A, the large rollers B and the small spacer-rollers C are arranged in the upper portion D of the box, as shown, so that only the large rollers B come in contact with the axle. Each of these rollers is turned down at each end to a smaller diameter, and the ends are rounded, as shown, and they are held in place by means of caps or plates E, secured to each end of the upper half D of the box, each of said plates being formed with a small lip or flange e, that projects under the small ends of the roller B, so that when the bearing is raised from the axle the lip or flange e will come in contact with the small ends of the rollers B and prevent them from falling out of the box. The lower half D' of the box is supported against the upper half D by means of bolts F, the two halves meeting in a plane on a level with the axis of the car-axle. The recess d for the car-axle in the lower half D' of the box is just wide enough to permit the axle to rotate freely therein, so that a flat surface is presented on opposite sides of the axle on which the lowest roller on each side of the axle rests. It will therefore be seen that when the axle is slipped out of the box or the box itself is removed from the axle the rolls will still be held in place by the lower box D' and flanged plates E. This

feature renders the application and removal of the bearing-box very convenient. The recess d extends below the axle, as shown in Figs. 1 and 2, so as to form a lubricating-chamber therefor. This chamber is filled with a suitable packing, and oil is supplied thereto in any convenient and well-known manner. By this means the bearing will be kept lubricated for a long time without attention, and I am thus enabled to combine the advantageous means of lubrication now generally employed with an ordinary journal-bearing with the advantages of a roller-bearing.

The rolls may be removed by removing one of the end plates, and they are most conveniently placed in position in the bearing by placing the upper box on its top side, the end plates being secured in place and the bottom box removed, and then dropping the rolls into the bearing.

It will be seen that the large rollers only come into contact with the axle or shaft, and the small or spacer-rollers are employed to keep the large rollers out of contact with each other, and as the large rollers all rotate in one direction and the small or spacer rollers being in contact with the large rollers also rotate in sympathy with them in the opposite direction. Thus all friction is practically avoided.

What I claim is—

A roller-bearing comprising an upper box and a lower box, a series of rolls placed in said upper box, a plate secured to each end of said upper box, there being a semicircular inwardly-projecting flange on each plate which is adapted and arranged to engage the opposite ends of said rolls and support the same, the upper surface of the lower box extending under and engaging the lowest rolls on each side of the axle, and means for securing the two parts of the bearing together.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY MONK.

Witnesses:

NEWELL D. ATWOOD,
EDWIN PLANTA.