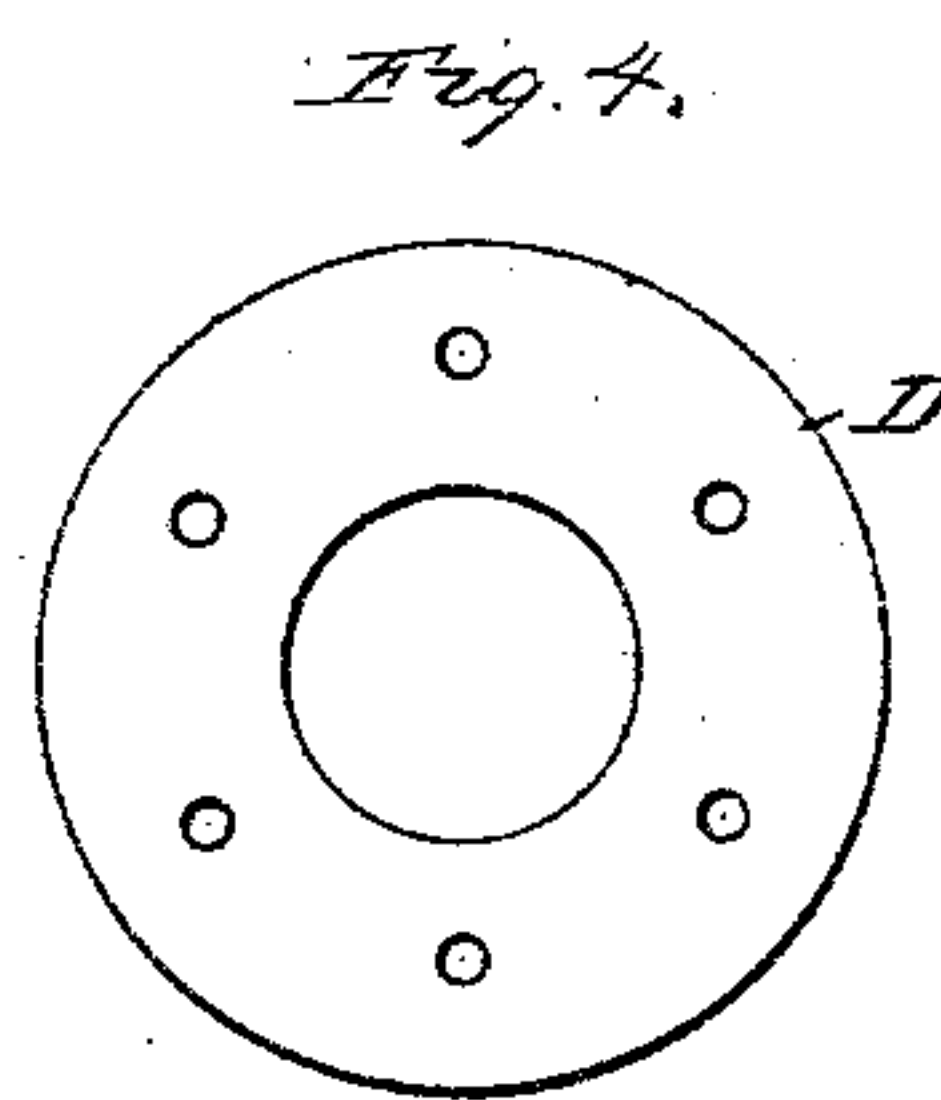
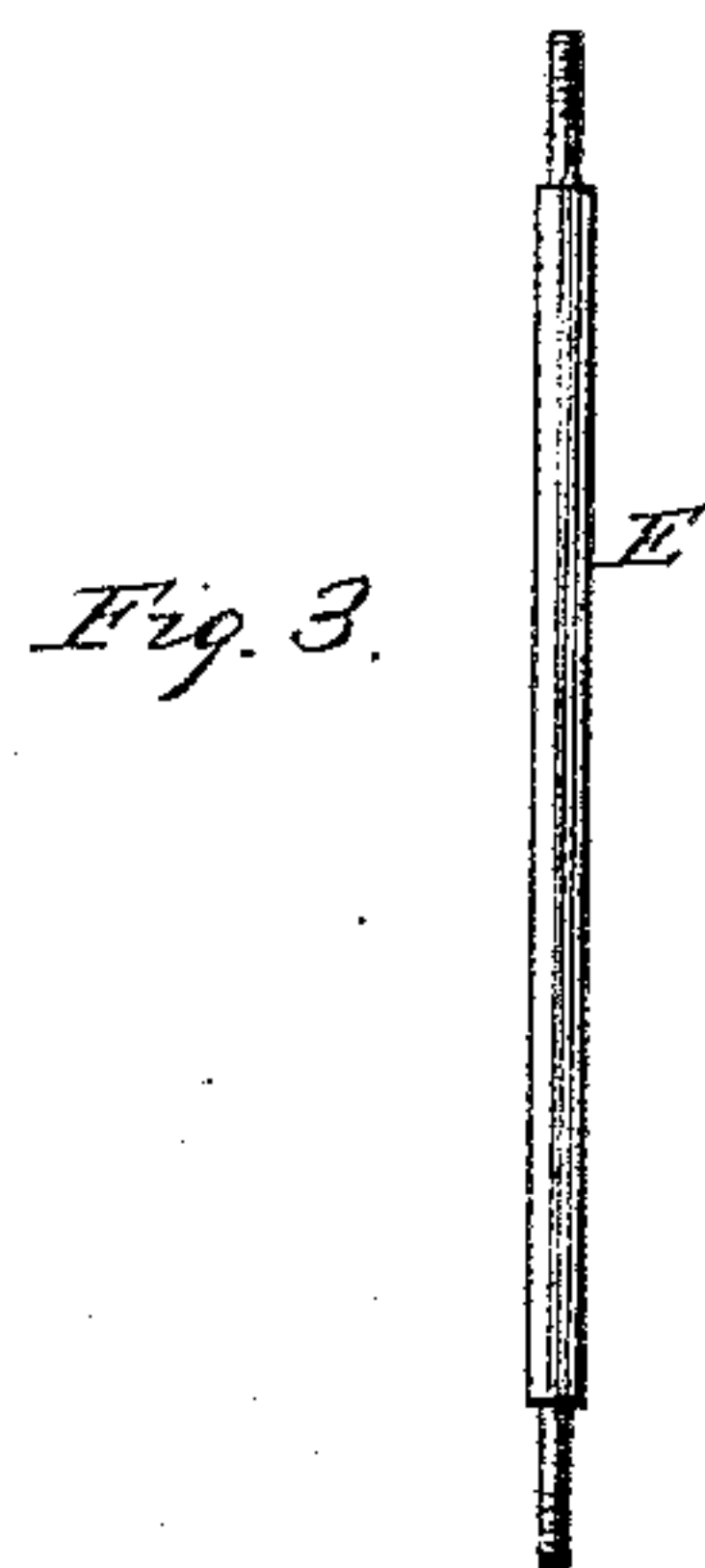
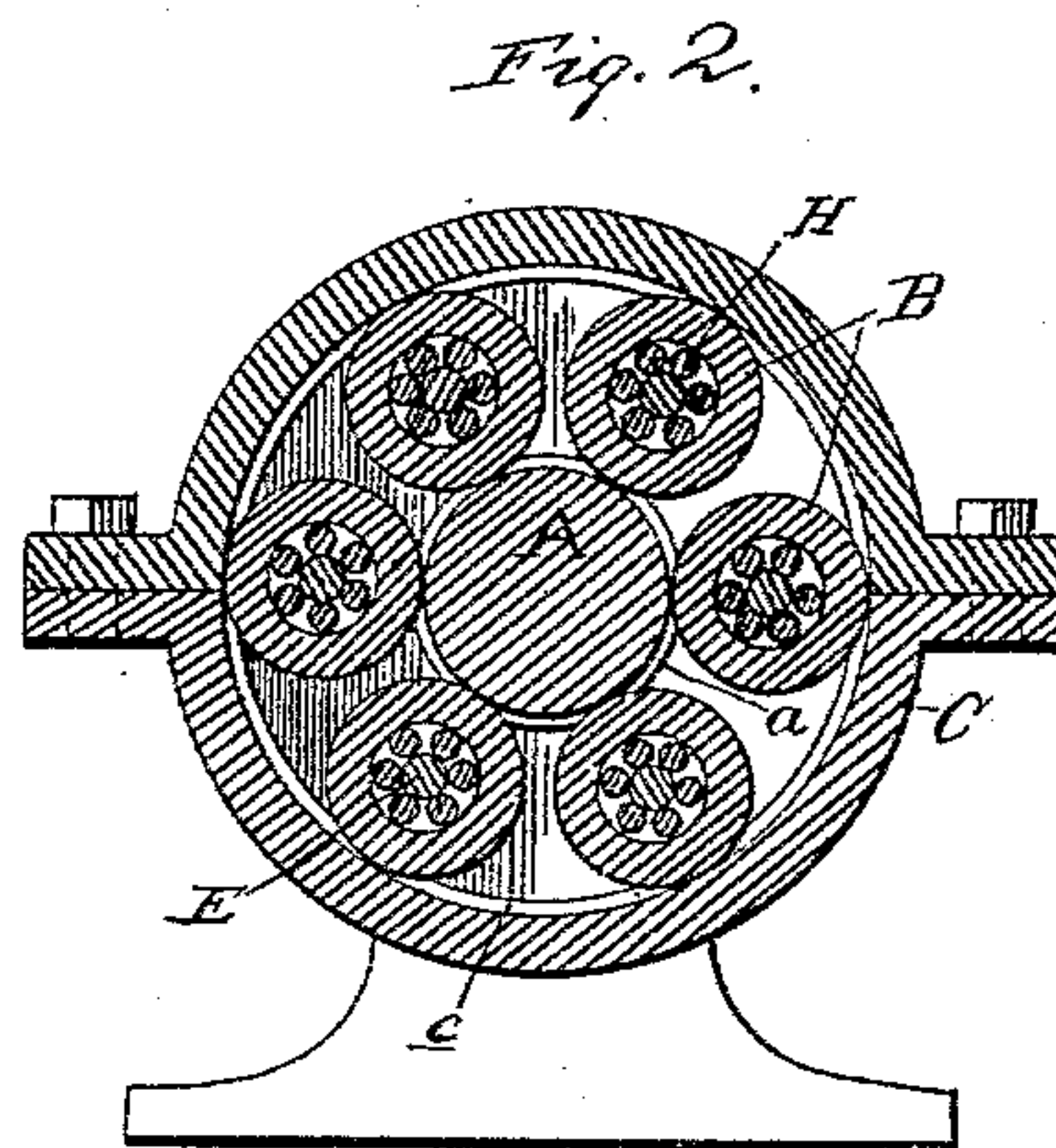
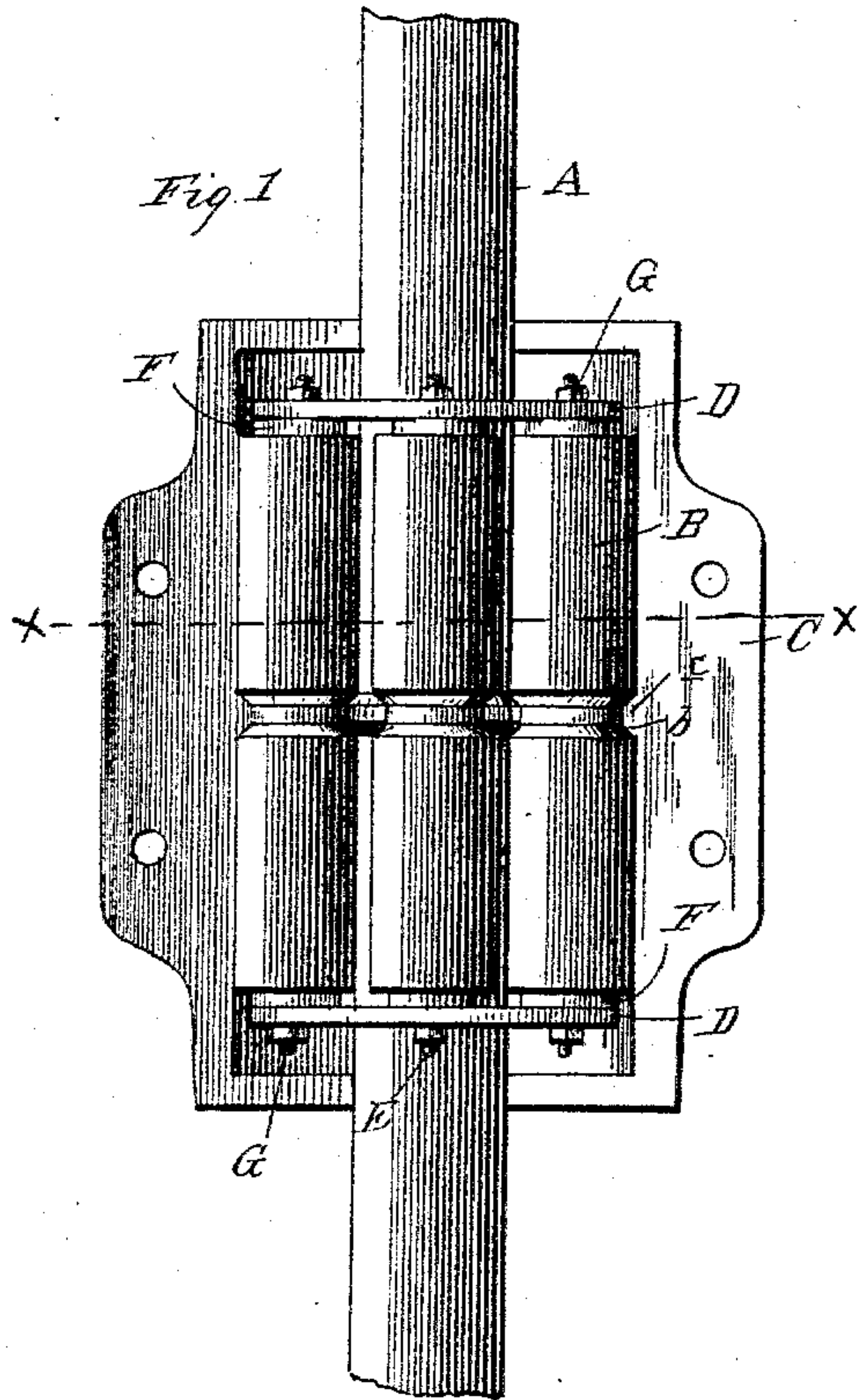


(No Model.)

W. S. SHARPNECK.
ANTI FRICTION JOURNAL BOX.

No. 373,756.

Patented Nov. 22, 1887.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM S. SHARPNECK, OF DENVER, COLORADO.

ANTI-FRICTION JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 373,756, dated November 22, 1887.

Application filed June 21, 1887. Serial No. 242,024. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. SHARPNECK, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Anti-Friction Journal-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 is a plan of my improvement with the top of the box removed. Fig. 2 is a transverse section through the line *xx* in Fig. 1. Figs. 3 and 4 are details of the pin and separating washer, which will be more fully hereinafter described.

15 This improvement relates more particularly to that class of anti-friction journal-boxes wherein a series of rollers revolve around the shaft and are held in a regulated position as respects each other around said shaft; and the invention consists in the peculiar construction, combination, and arrangement of parts, hereinafter more particularly described, and then definitely pointed out in the claims.

25 Referring, now, to the details of construction, A represents the shaft or journal, provided with a projecting rim, *a*, near the center of the box, around which are arranged several hollow rollers, B, preferably six; but this may be varied by changing the relative sizes of the rollers and journals. Each of these rollers is provided with an annular groove, *b*, fitting the rim *a* in the journal, and also fitting an annular rib, *c*, in the box C. At the opposite ends of the series of rings are separating-washers D, (see Fig. 4,) which washers are connected together by a series of pins, E, (see Fig. 3,) each of which passes through one of the rollers and through a separate hardened-steel washer, F, and all of them enter and pass through the separating-washers D and are secured by nuts G, so as to form a kind of cage

surrounding the journal A, and on the bars of which the rollers B turn. It will be seen on examining Fig. 2 that the pins E are considerably smaller than the bore of the rollers B, which leaves room for a set of smaller rollers, H, which nicely fit the space between the pins and the inner circumference of the large rollers, the object of which is to keep said large rollers B in their proper position around the pins E and to prevent friction between the rollers B and the pins E. By this construction a journal-box is formed in which all the bearing-rollers are kept in their proper positions, so that they cannot rub against each other, and said bearing-rollers are relieved from friction against the pins which keep them in place, whereby they revolve with comparatively little friction and will run a long time without oil and without "cutting."

What I claim as new is—

1. The combination, in a journal-box, of a series of hollow rollers, B, the separating-washers D, the pins E, passing through the rollers B and into the washers D, and a series of smaller rollers, H, between the rollers B and the pins on which they revolve, substantially as described.

2. The combination, in a journal-box, of a journal, A, having a rim, *a*, a series of hollow rollers, B, having grooves to fit the rim, separating-washers D at each end, a series of pins, E, passing through said rollers B and having their ends secured in the washers, and a series of small rollers inclosed in each large roller, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 31st day of May, 1887.

WILLIAM S. SHARPNECK.

Witnesses:

J. H. SMITH,

C. C. BABCOCK.