

(Model.)

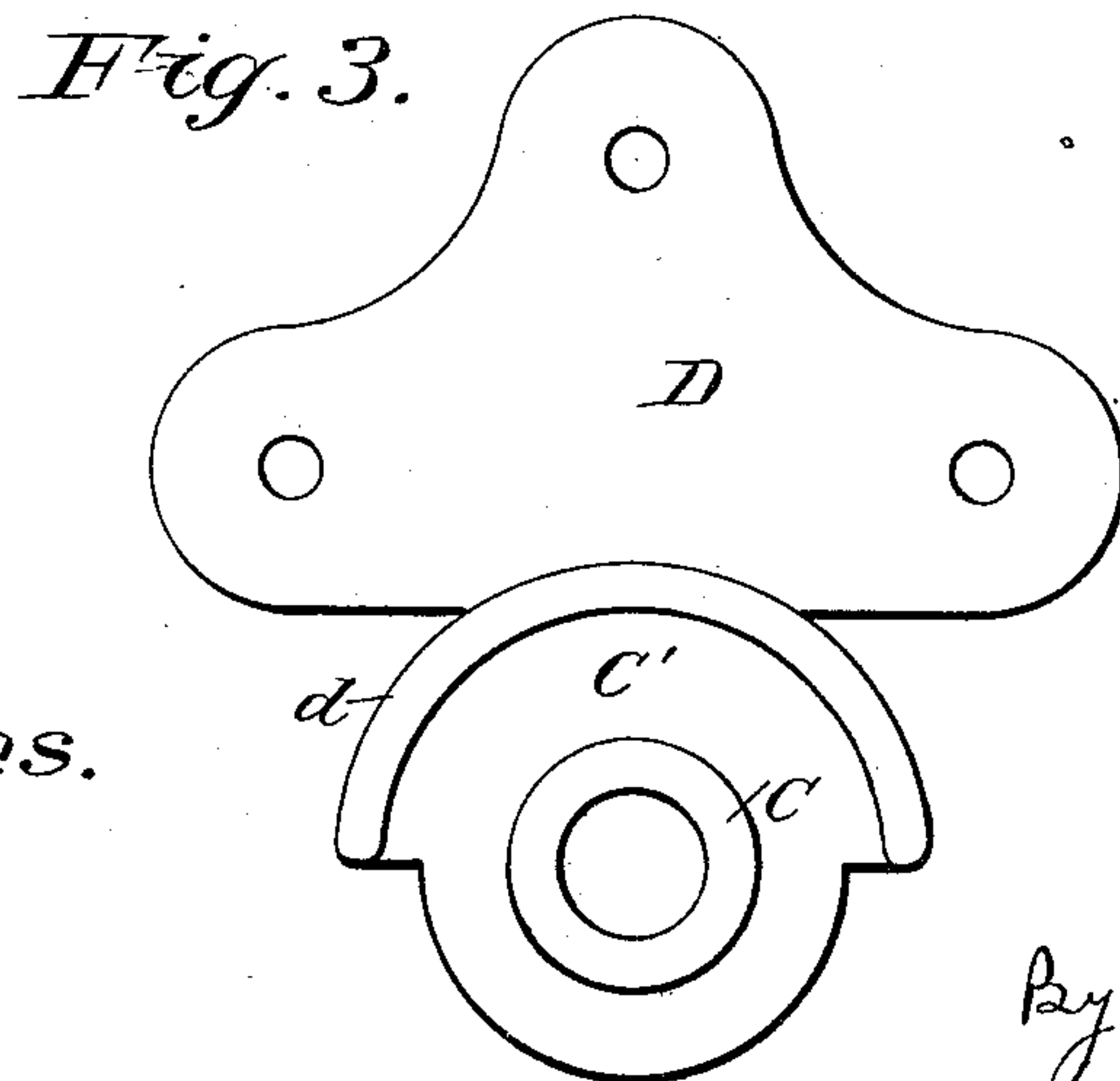
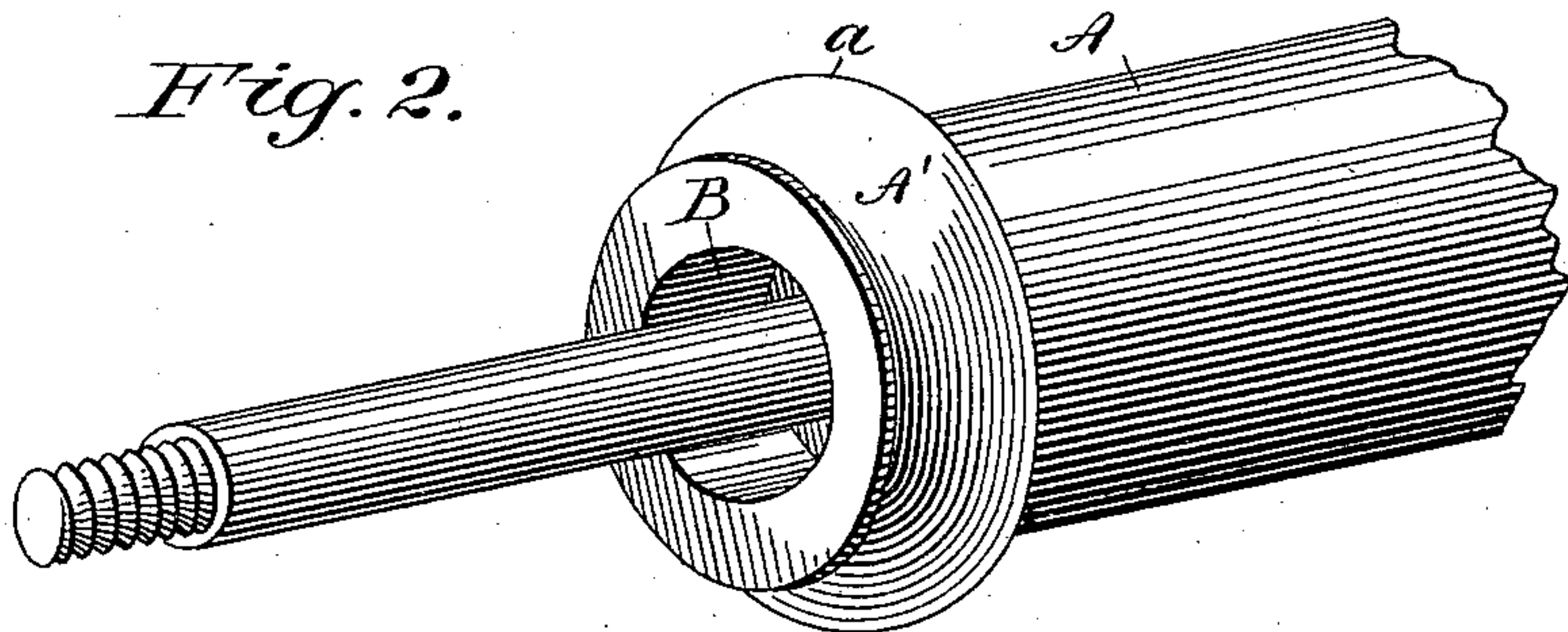
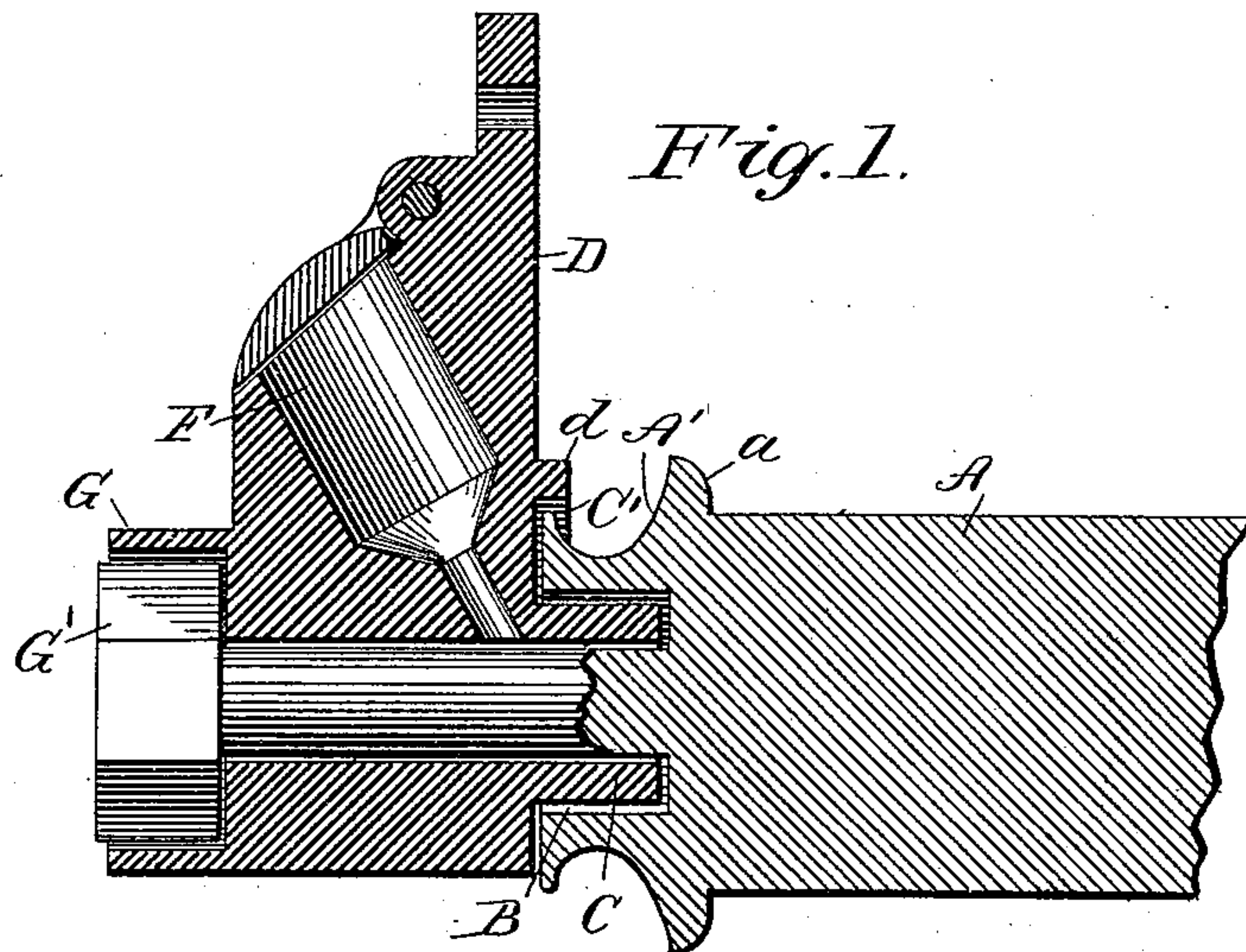
R. SELDON, Dec'd.

M. SELDON, Administratrix.

FRICTION ROLLER AND BOX.

No. 277,070.

Patented May 8, 1883.



Witnesses.

W. H. & Co.
M. H. King

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Robert Seldon
By J. W. Ford Atty

UNITED STATES PATENT OFFICE.

ROBERT SELDON, OF STAFFORD, NEW YORK; MIRA SELDON ADMINISTRATRIX
OF SAID SELDON, DECEASED.

FRICTION ROLLER AND BOX.

SPECIFICATION forming part of Letters Patent No. 277,070, dated May 8, 1883.

Application filed March 2, 1883. (Model.)

To all whom it may concern:

Be it known that I, ROBERT SELDON, a citizen of the United States, residing at Stafford, in the county of Genesee and State of New York, have invented a new and useful Frictional Roller and Box, of which the following is a specification.

My invention relates to improvements in friction-rollers and the box or hanger by which the roller is suspended, to be used more particularly in conjunction with carrier-belts such as are used upon excavators, thrashers, platforms to tread horse-powers, &c., which from the nature of their work require the use of friction-rollers that come in close contact with the soil or other extraneous matter and are liable to get within the bearings, and thus cause undue friction; and the object is to provide a roller that shall exclude the deleterious matter and not allow it to come in contact with the bearing-journal that supports the roller in its revolution. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the roller and its bearing-box when connected and in working position. Fig. 2 is a perspective view of the roller detached from the box, and showing the annular recess about the bearing-journal; and Fig. 3 is a face view of the box, showing the semicircular recess and the shield for covering the end of the roller, and the stud that comes in frictional contact with the roller.

Similar letters refer to similar parts throughout the several views.

A is the roller, and *a* is the flange upon the same for preventing the lateral displacement of the revolving carrier or platform that may be placed upon it.

A' is a concave circumferential groove, diametrically smaller than the other parts of the roller and upon the end that comes in frictional contact with the box, which will be more fully explained hereinafter.

B is an annular recess in the rear end of the roller, which encircles a stud, C, on the face side of the box D, and forms a part of the box, and through which the roller-journal passes. This stud enters within the annular recess in the end of the roller and abuts against the shoul-

der at the bottom, and while lengthening the bearing in the box it also, by being diametrically smaller, lessens the frictional contact of the stationary box and the revolving roller.

Within the face of the box, and about the stud C, is a semicircular recess, C', which, in connection with the rib *d*, forms a covering over the joint between the box and roller. This rib is beveled upon its upper side toward the edge for the purpose of conveying any dirt or foreign matter that may fall upon it and depositing it within the concavity upon the roller, so that it will be thrown off by the revolution of the said roller. By this arrangement of box and roller, in connection with the annular recess within the roller, which revolves about the stud that is joined to the box, the shoulder-bearings are fully protected from any dirt that may fall directly upon the box; but in many places where carrier-belts are used, and especially in excavators and diggers in the soil, and where the carrier-rollers are in continual contact with the earth, the dirt will lodge upon and work over the end of the roller and upon the journal, and thus cause the bearings to cut and very soon to become inoperative. To obviate this difficulty I have made the circumferential concave groove upon the inner end of the roller diametrically smaller than the roller proper, so that any extraneous matter that comes in circumferential contact with the roller and tending toward the end will be checked by the groove in its advance, and, instead of passing over the concaved incline and into the joint, will seek the lower level found in the center of the groove, and by the revolution of the roller be thrown entirely off.

An oil-receptacle, F, is provided upon the box, so that the journal is self-lubricating. A hinged cover keeps the inclosed oil in its natural state and free from dirt. A rib, G, forms a recess upon the outer end of the box and covers the nut G', which is screw-threaded upon the roller-journal, thus protecting the free end of the journal from any vertical fall of dirt.

The journal, nut, and roller being joined together and all revolving in the same direction, and the tendency in revolving bodies being to throw off from the center, while the thrown-off matter seeks the lower level, prevent any dirt

from working within the bearings from the nut end of the journal.

5 The screw-threads upon the journal and nut are made either right or left hand, as the nature of the work requires. The box is fastened to the frame-work of the machine in any well-known manner.

10 Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The roller permanently secured to the journal and revolving with it, having a bearing-surface for supporting a carrying belt or chain, a concave circumferential groove upon 15 the end next to the bearing-box, and the annular recess within the diametrical center of the concave groove, round about and remote

from the bearing-journal, substantially as described.

2. The combination of the roller having the 20 annular recess next to the box, the concave circumferential groove without the diametrical center of the recess, the box having the semi-circular recess, which, with the rib, partially covers the concave groove in the roller, and 25 the cylindrical stud secured to the box, entering within the recess in the roller and forming a part of the bearing of the roller-journal, all arranged and operating substantially as described.

ROBERT SELDON.

Witnesses:

WM. S. COE,
O. J. DE WOLF.