

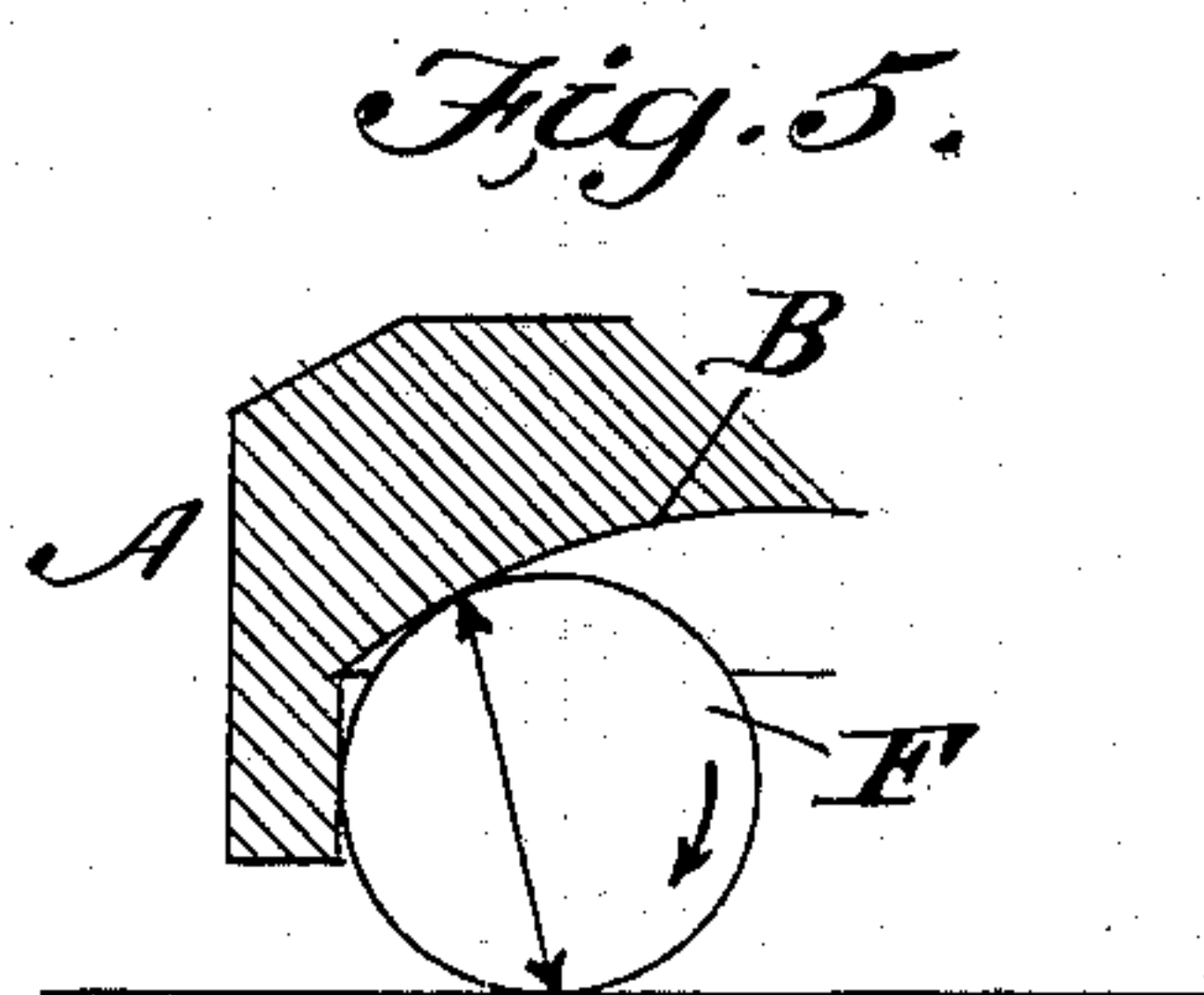
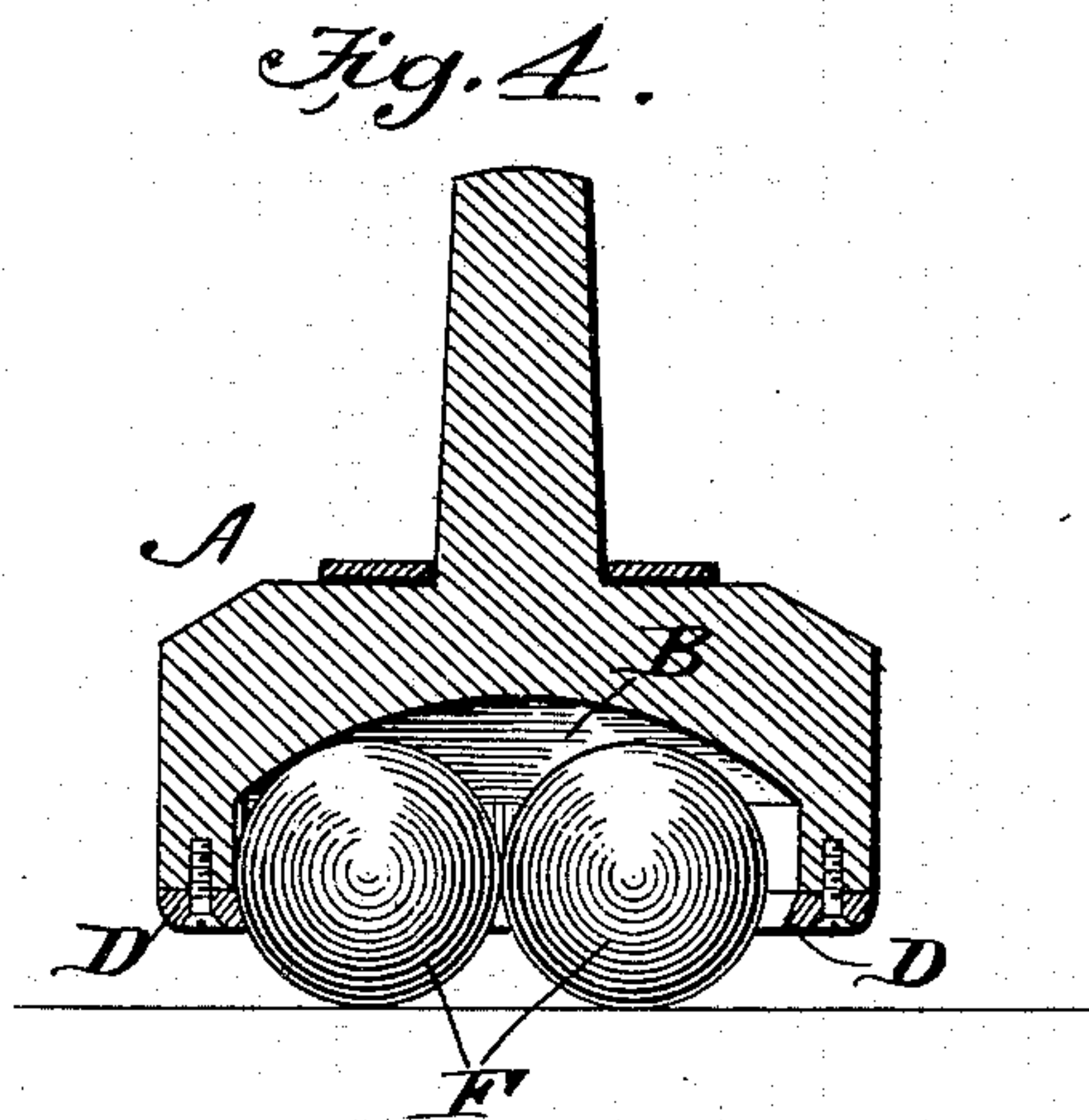
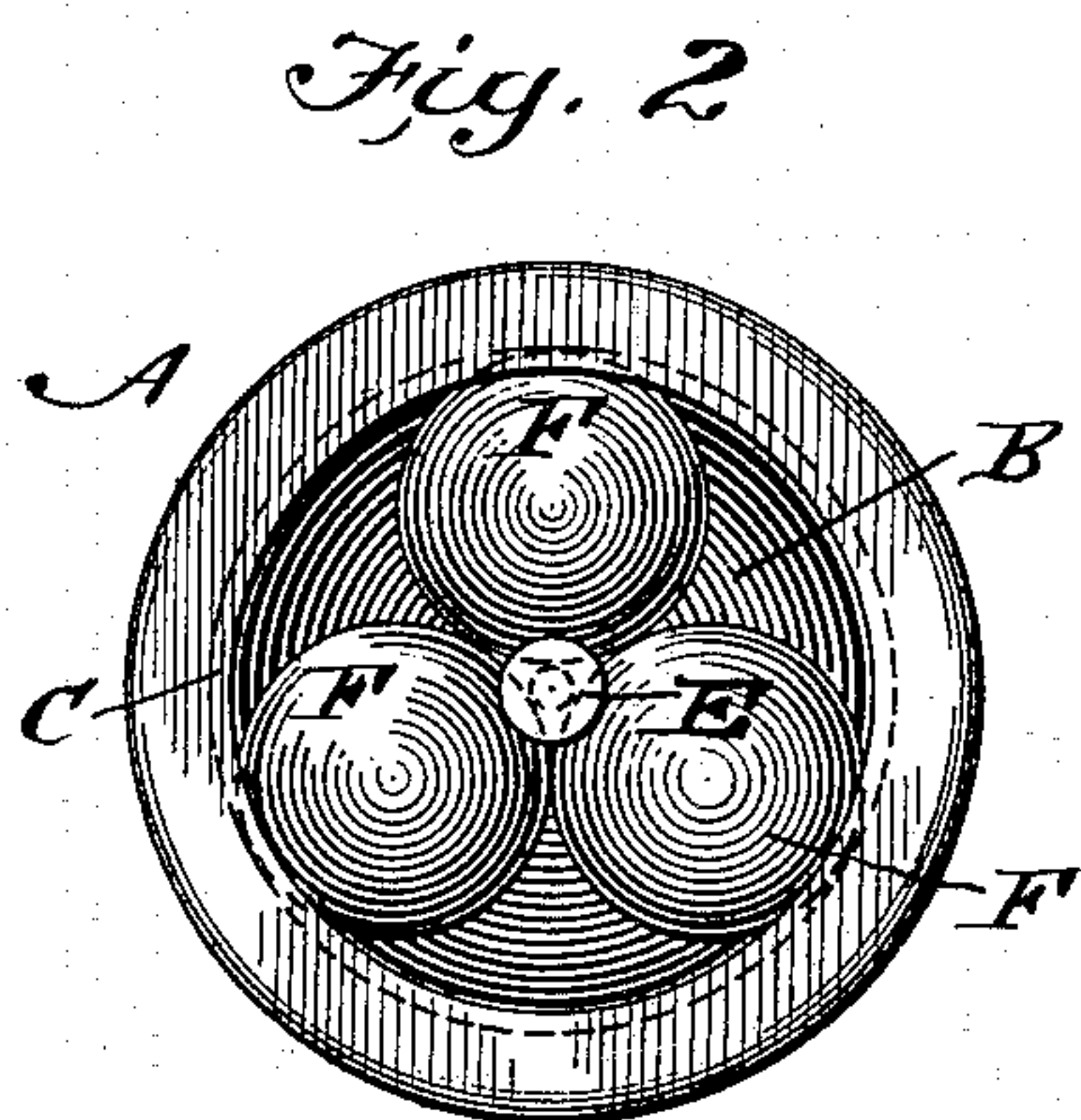
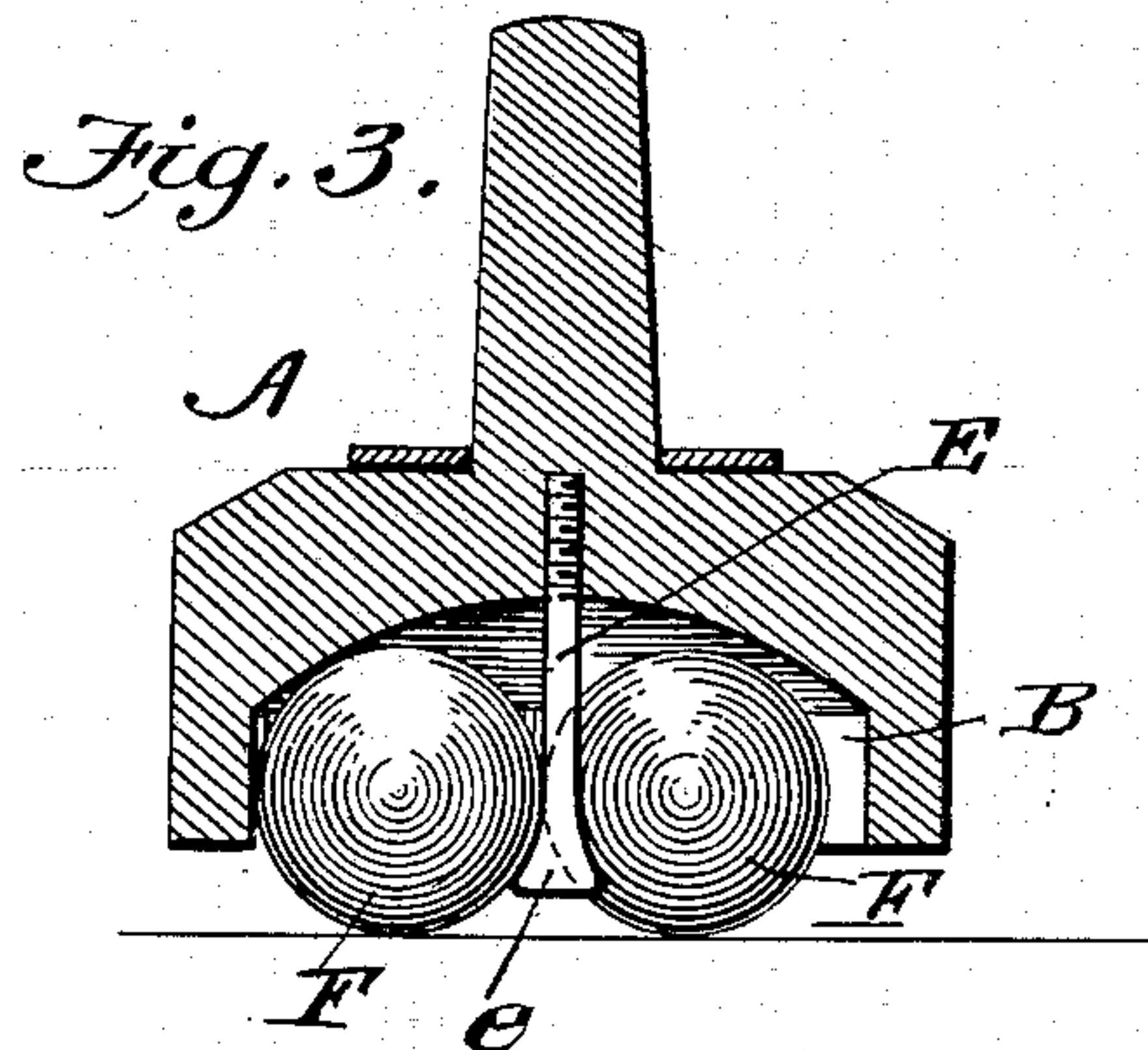
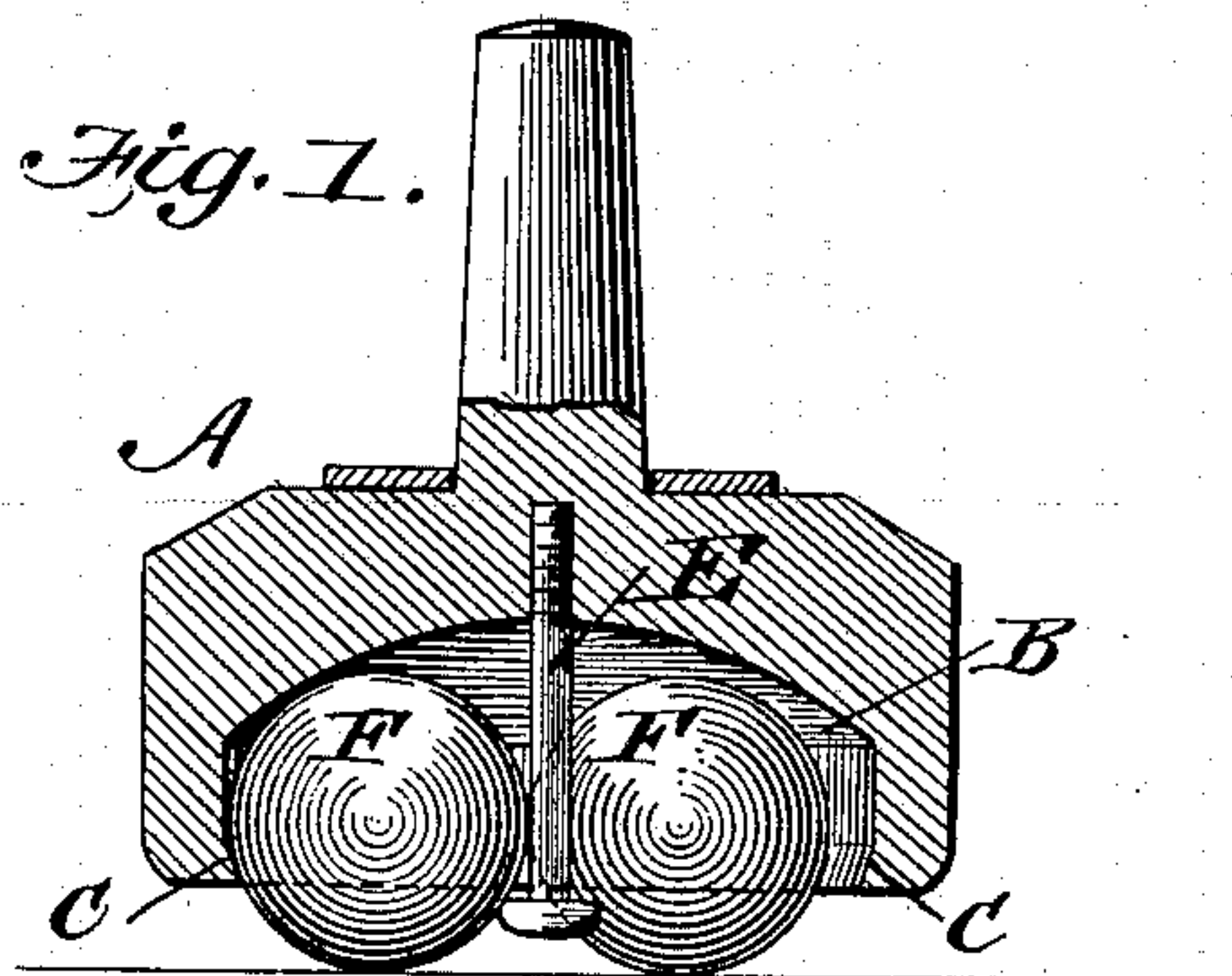
No. 615,529.

Patented Dec. 6, 1898.

A. H. COBB.
BALL CASTER.

(Application filed Mar. 20, 1897.)

(No Model.)



WITNESSES:

W. D. Blundell.
P. B. Turpin.

INVENTOR

Alphonso H. Cobb.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALPHONSO H. COBB, OF ASHEVILLE, NORTH CAROLINA.

BALL-CASTER.

SPECIFICATION forming part of Letters Patent No. 615,529, dated December 6, 1898.

Application filed March 20, 1897. Serial No. 628,465. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO H. COBB, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented a new and useful Improvement in Casters, of which the following is a specification.

My invention is an improvement in casters, and particularly in ball-casters, and seeks, among other objects, to furnish simple means whereby to secure the several balls in the body or holder; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a sectional view of a caster embodying my improvements, the body having an integral inwardly-projecting flange surrounding its outlet and a central stud being provided between the plurality of balls. Fig. 2 is a bottom plan view of such construction. Fig. 3 is a sectional view showing the body provided with a central stud, the flange or rib being omitted. Fig. 4 shows a somewhat different construction in which the central stud is omitted and the balls are retained by the flange surrounding the outlet of the socket in the holder, and Fig. 5 is a detail diagrammatic view.

In carrying out my invention I provide a body or holder A, which has a socket B, fitted to receive a plurality of balls side by side in such manner that said balls will protrude from the outlet of said socket and so form an antifriction-bearing to roll upon the floor or other support. By "plurality of balls" I mean two or more, preferably three, as shown, and in order to retain said balls in the socket I provide means by which to contract or reduce the area of the outlet of socket B. This may be effected by means of an inwardly-projecting flange surrounding the mouth of said outlet, as shown at C in Fig. 1 and at D in Fig. 4, or it may be effected by means of the head of a stud E, passed centrally between the balls and secured by threading or otherwise to the body, as shown in Fig. 3. It will also be understood that for greater security a central headed stud may be supplied to the construction shown in Fig. 4 and that to provide for greater play of the balls a flange may be supplied, as shown in connection with the stud in Fig. 1, and this construction shown

in Fig. 1 may for some reasons be preferred and will now be described more in detail. In the said construction the socket B has its roof or upper wall concaved, and such construction is preferred, but where desired the roof may be flat or of other form. The three balls F fit in the socket and are retained by the headed stud, the head of which serves as a means for reducing or contracting the area of the outlet from the socket and so serves to retain the balls in the body. Instead of reducing the area at the center by means of the stud it may be reduced at its circumference by means of the flange shown in Fig. 4, or, as before suggested, the area may be reduced by means of both the central stud and the circumferential flange.

In the construction shown in Fig. 1 I prefer in practice to make the casting in one piece, with the exterior opening or outlet of its socket of just sufficient size to admit the balls when the central stud is removed, the inner diameter of said socket above its outlet being larger than the outlet, so the balls may have a slight play when the stud is entered in position to lock them in place.

In wooden table-legs and the like the invention may be practiced by suitably forming the socket B in the ends of said legs, as will be readily understood.

In operation the bed, stand, or other article supplied with my casters being moved in any direction two of the balls will fall as soon as motion begins to the rear until they bring up upon the outer rim of the cavity or socket, when friction will begin, which can only be that exercised upon the walls, as per the diagram, Fig. 5, showing resolution of forces. The third ball works loosely because of space in front and overhead.

In practice the balls have a rotary effect—as, for instance, if the caster is tipped slightly the balls will roll about the circumference, that is if the stem which enters the bed-post is at a slight angle to the perpendicular.

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

1. A caster composed of a body or holder having a socket and provided at the lower end thereof with an inwardly-projected flange the balls fitting in said socket and the stud

passed between said balls and having a head overlapping the same substantially as shown and described.

2. A caster composed of a body or holder, 5 a plurality of balls fitted in and protruding from said holder, such balls being in contact with each other, and a retaining device having a portion which overlaps and engages the several said balls at one side thereof whereby 10 to secure them in the holder with their protruding portions in position to bear upon the floor substantially as described.

3. The combination in a caster of a holder 15 with each other and protruding from the

mouth of the holder and a pin or stud passed between and having a head overlapping the said balls substantially as described.

4. A caster composed of the holder having a socket, a plurality of balls in said socket in 20 contact with each other and protruding from the socket to bear against the floor or support, and means common to all said balls whereby to retain them in the socket of the holder substantially as described.

ALPHONSO H. COBB.

Witnesses:

GEO. F. SCOTT,

JOHN A. WAGNER.