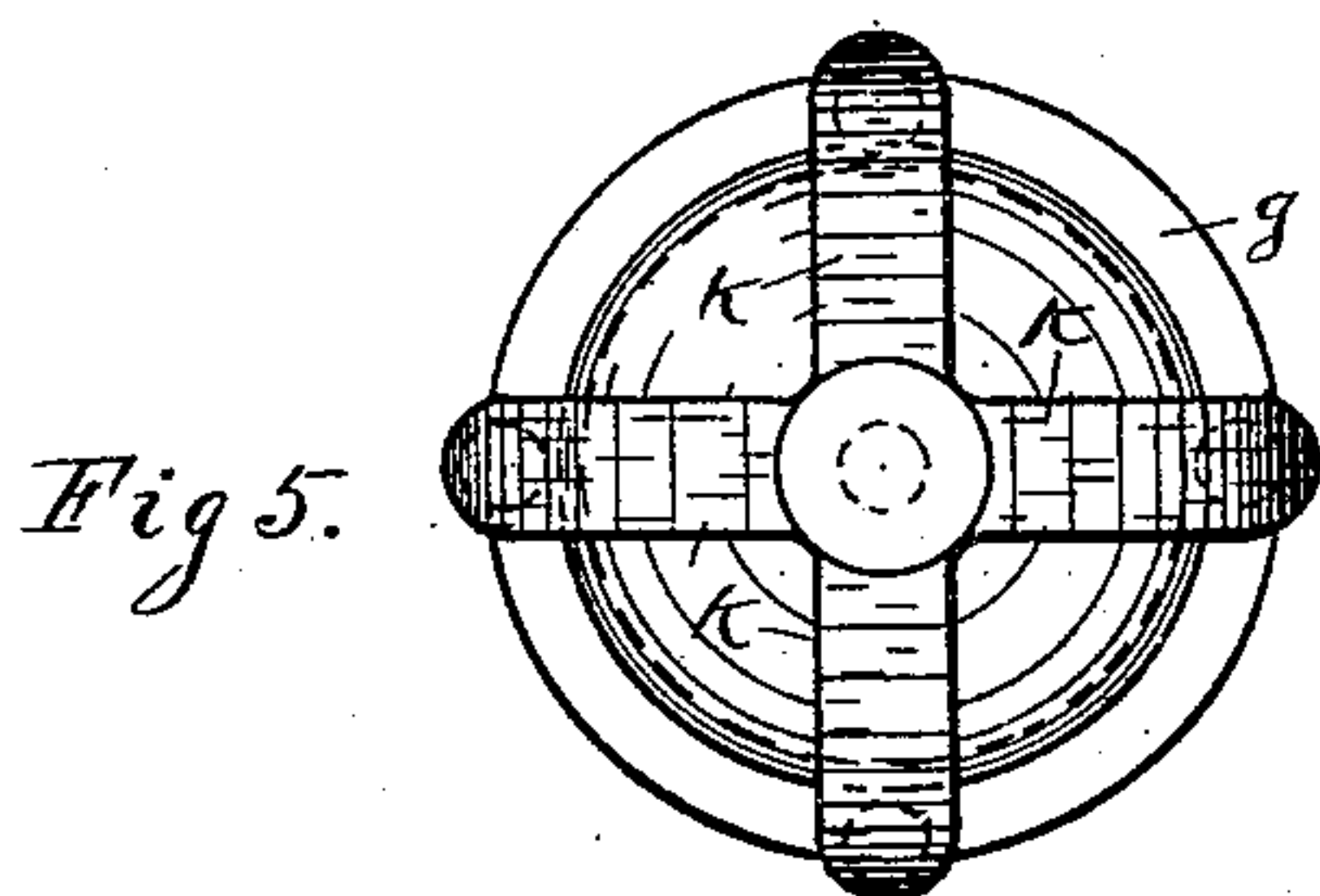
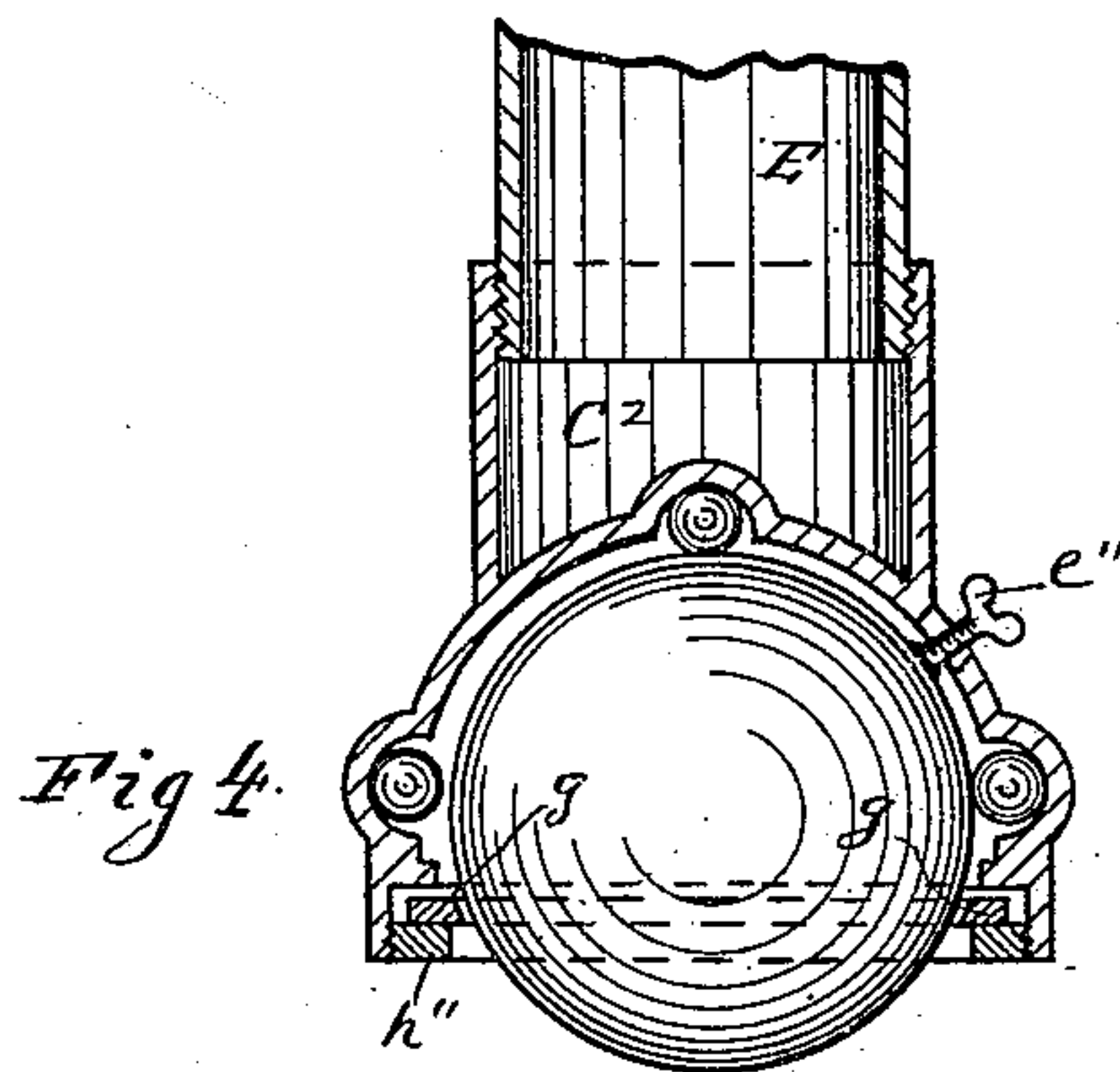
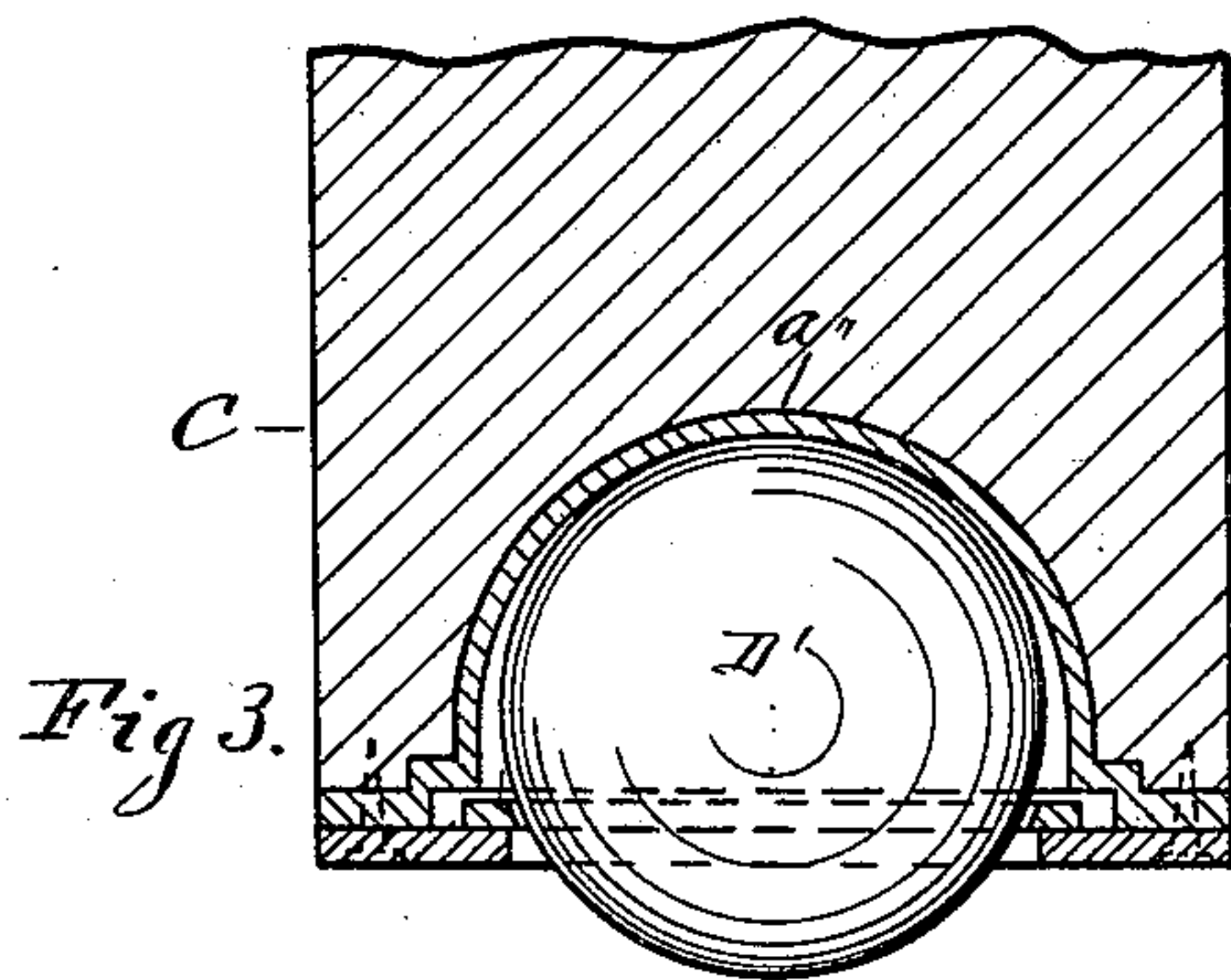
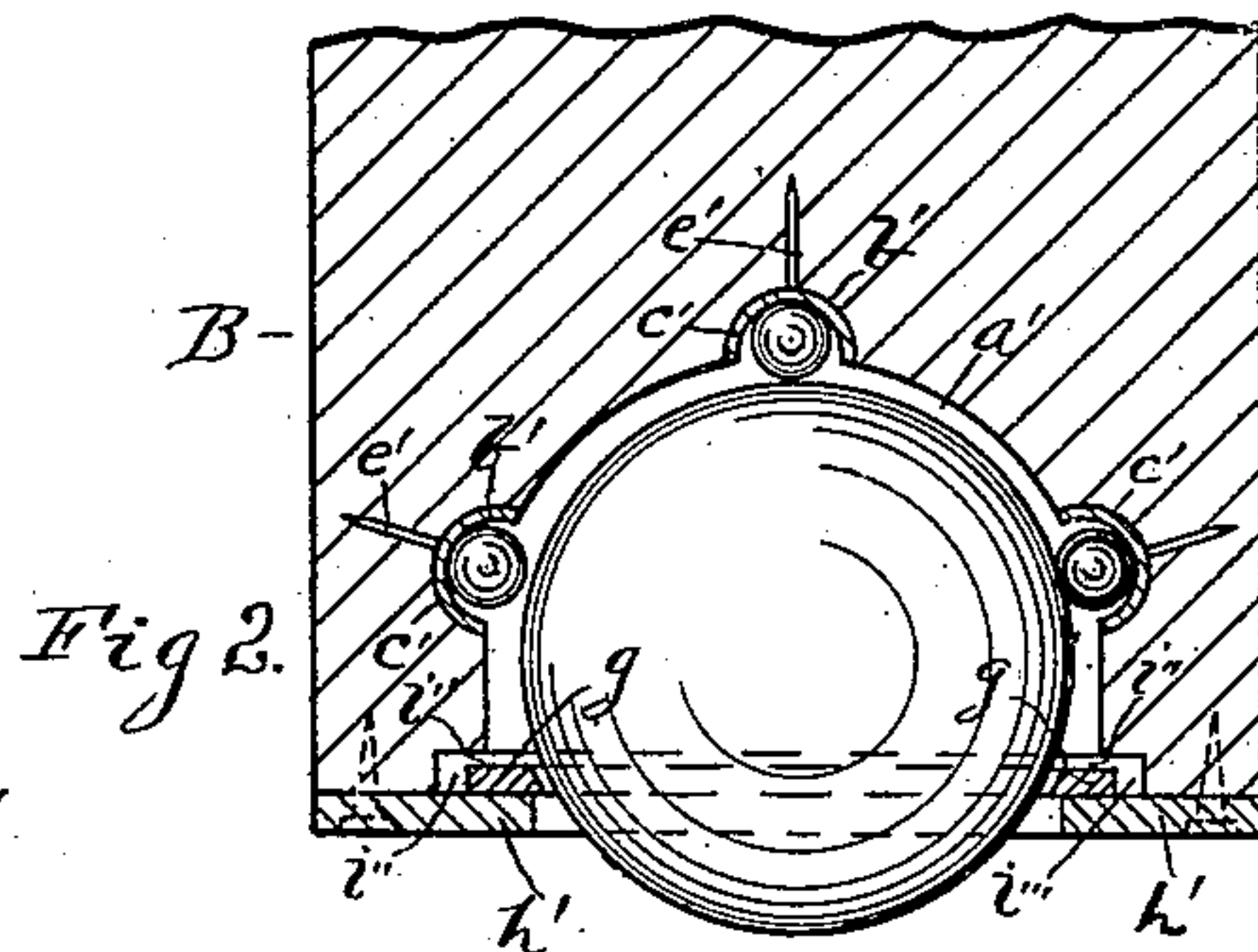
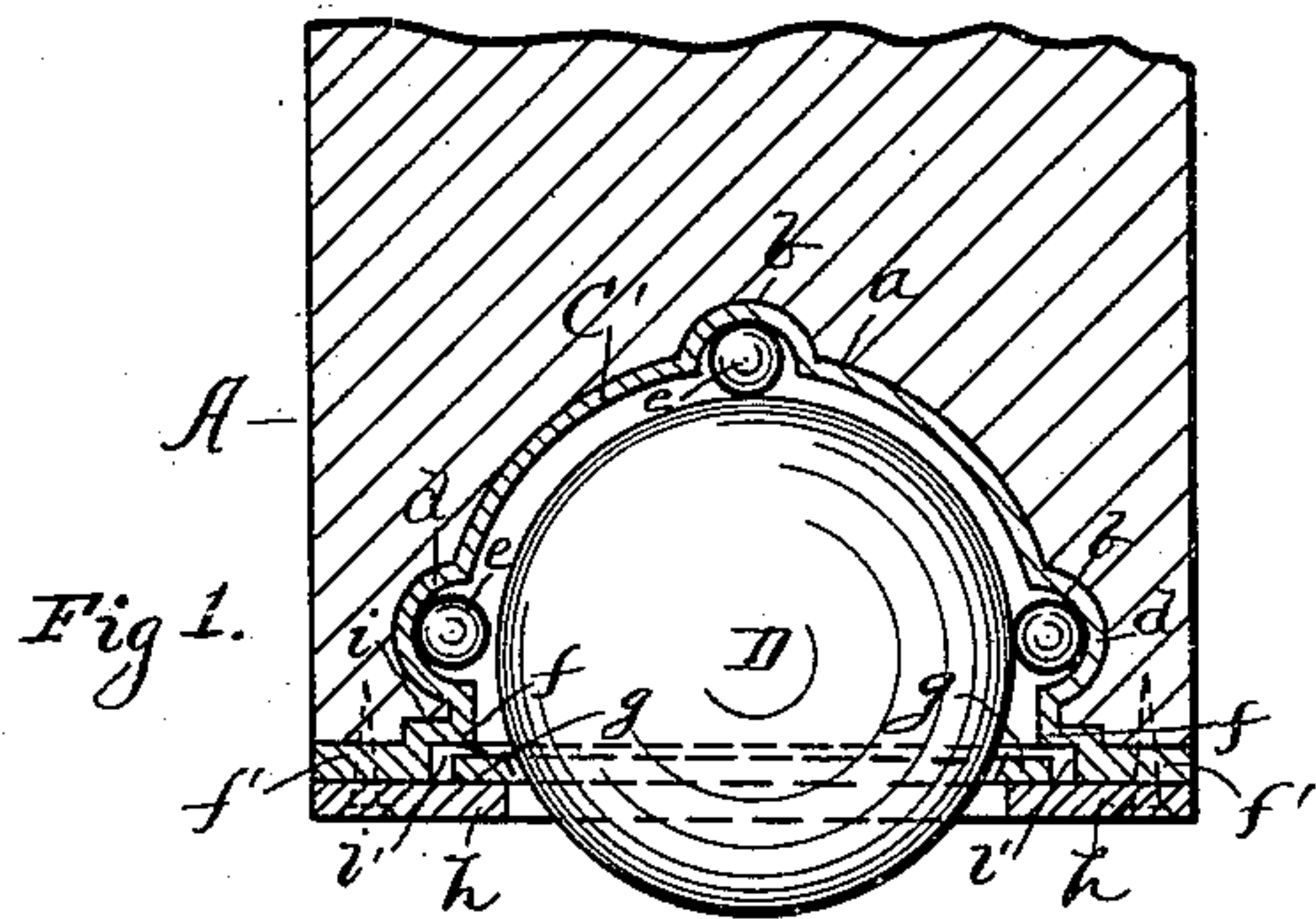


(No Model.)

F. S. RECHTSTEINER.
BALL CASTER.

No 600,172.

Patented Mar. 8, 1898.



WITNESSES:

L. L. Allen.
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UNITED STATES PATENT OFFICE.

FRANK S. RECHTSTEINER, OF DAYTON, OHIO.

BALL-CASTER.

SPECIFICATION forming part of Letters Patent No. 600,172, dated March 8, 1898.

Application filed June 14, 1897. Serial No. 640,643. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. RECHTSTEINER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Casters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in furniture-casters.

The object of the invention is to provide an easy-moving caster and one that will not stick or refuse to move at any time or in any direction with comparatively little effort.

To this end the invention comprises a ball-bearing caster having the structural features hereinafter fully described in connection with the accompanying drawings, of which—

Figure 1 is a sectional view showing my caster applied to an ordinary wooden table-leg. Fig. 2 is a similar view showing a modification. Fig. 3 is a similar view showing still another modification. Fig. 4 is a sectional elevation showing my improvement adapted to an attachment with a metal leg. Fig. 5 is a top plan view of a caster constructed in accordance with my invention somewhat modified and adapted to an attachment with a metal or wooden leg.

A, B, and C designate legs of any article of furniture. Referring to Figs. 1, 2, and 3, *a*, *a'*, and *a''* designate semicircular cavities formed in the lower ends of said legs. In Figs. 1 and 2 these cavities have each a series of small cavities or pockets *b* and *b'*.

Referring to Fig. 1, *C'* designates a concave plate or cup secured within the cavity *a* and having a series of ball-pockets *d*, that fit into the cavities *b* and are adapted to receive balls *e*, that afford bearings for a large caster-ball *D*, which is inclosed in the concave plate *C'*. The lower edge of said plate is provided with an annular shoulder *f*, which abuts an annular rabbet formed in the end of the leg, and the lower edge of said concave plate terminates in an annular flange *f'*, that rests against the lower horizontal surface of the leg.

g designates a shifting plate or ring that surrounds the lower portion of the large ball *D* and maintains it in an operative position. This plate or ring *g* is supported on an annular washer *h*, through which the ball *D* also protrudes. The washer *h* is fixed to the lower end of the leg. The screws that secure it also pass through the flange *f'* of the concave plate *C'*. The diameter of the shifting plate *g* is essentially smaller than the space in which it is mounted, so as to give it room to freely move in when the ball *D* comes in contact with the edge thereof. This moving space for said plate *g* is indicated by *i* and *i'*. The object of said plate is to provide a support for the ball *D*, that will not interfere with a free movement of said ball and that will prevent the ball from dropping out of its seat when the leg is raised. As shown in Fig. 2, the cup *C'* is omitted. A series of nails *e'*, provided with heads *c'*, are driven into the small cavities *b'* and provide seats for the balls. In this application of my invention the shifting plate *g* is the same as shown in Fig. 1, is provided with a similar seat in the end of the leg, and moving spaces *i''* and *i'''*. A plate *h'* is secured to the lower end of the leg and supports the shifting plate *g*.

The construction shown in Fig. 3 is similar to that shown in Fig. 1, with the exception of the small balls, which are omitted; the shifting plate *g* being the leading characteristic in all the views. The cup or concave affords a direct bearing for the large caster-ball *D'* and is constructed large enough to allow some space around said caster-ball.

In Fig. 4 the cup or concave has an integral tubular extension *C''*, which is provided with interior screw-threads for securing the metal leg *E*. The said cup is similar in other respects, with the exception of the construction of its lower end, which terminates in an annular vertical plane and is provided with interior screw-threads for securing the washer *h''*, that supports the shifting plate *g*.

In Fig. 5 the cup or concave is displaced by four downwardly-curved arms *k*, the inner sides of which have pockets similar to those in the large cups for the reception of the small balls. The shifting plate *g* incloses the large ball and is itself maintained in position as before described. These shifting plates, as

hereinbefore stated, are the same throughout and have the same function to perform, and there is no variation in the manner of their support.

- 5 In Fig. 4 I have shown a thumb-screw *e''*, that penetrates an opening in the cup. This screw may be turned against the caster-ball to lock it against any movement when it is not desired to move the article of furniture.
- 10 The inner end of said screw is flat and has a piece of elastic material or felt applied to it to prevent any indentations being made in the ball. Two or more of the casters may be fitted with these screws.
- 15 It is of course understood that the cups or concaves may be varied in their shape without departing from the invention. For example, they may be made in rectangular form or round, as shown in the drawings. The
- 20 large ball may be constructed of various materials—for example, of glass, wood, metal, &c.
- Having described my invention, I claim—
1. In a caster for furniture-legs, the combi-

nation with a leg, having a cavity in its lower end, and a caster-ball seated in said cavity, 25 of a shifting plate inclosing said ball below the horizontal axis thereof, and means for loosely supporting said plate in a shifting position, substantially as and for the purposes specified. 30

2. In a furniture-caster, the combination with a leg having a concavity in its lower end, a cup fitting within said concavity and provided with an annular shoulder or flange adjacent to its lower edge for securing it to the 35 leg, a ball seated within said cup, of a shifting plate to retain said ball in its place, and means for supporting said shifting plate in an operative position, substantially as and for the purpose specified. 40

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

FRANK S. RECHTSTEINER.

Witnesses:

FRANK E. RECHTSTEINER,
R. J. McCARTY.