

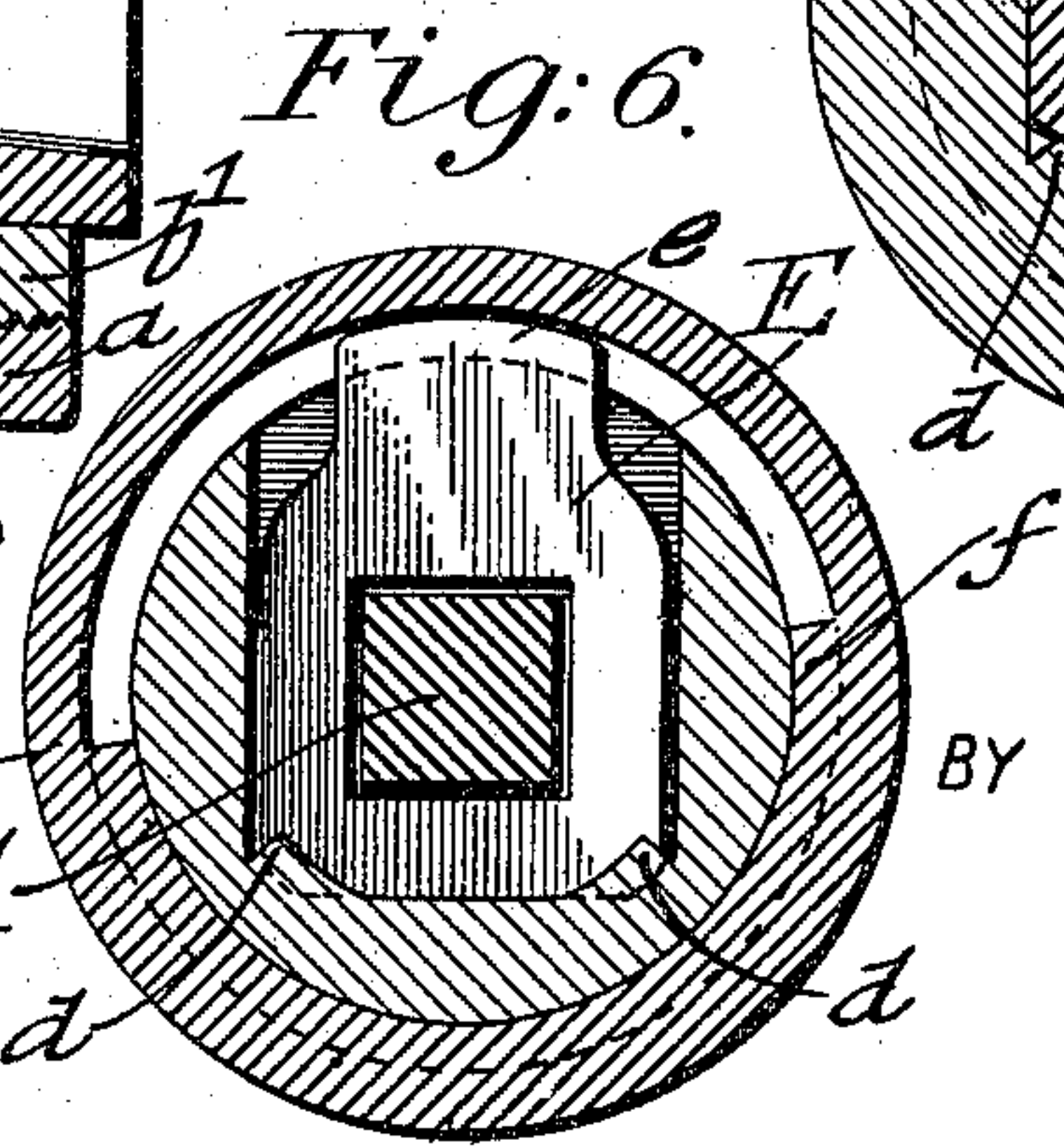
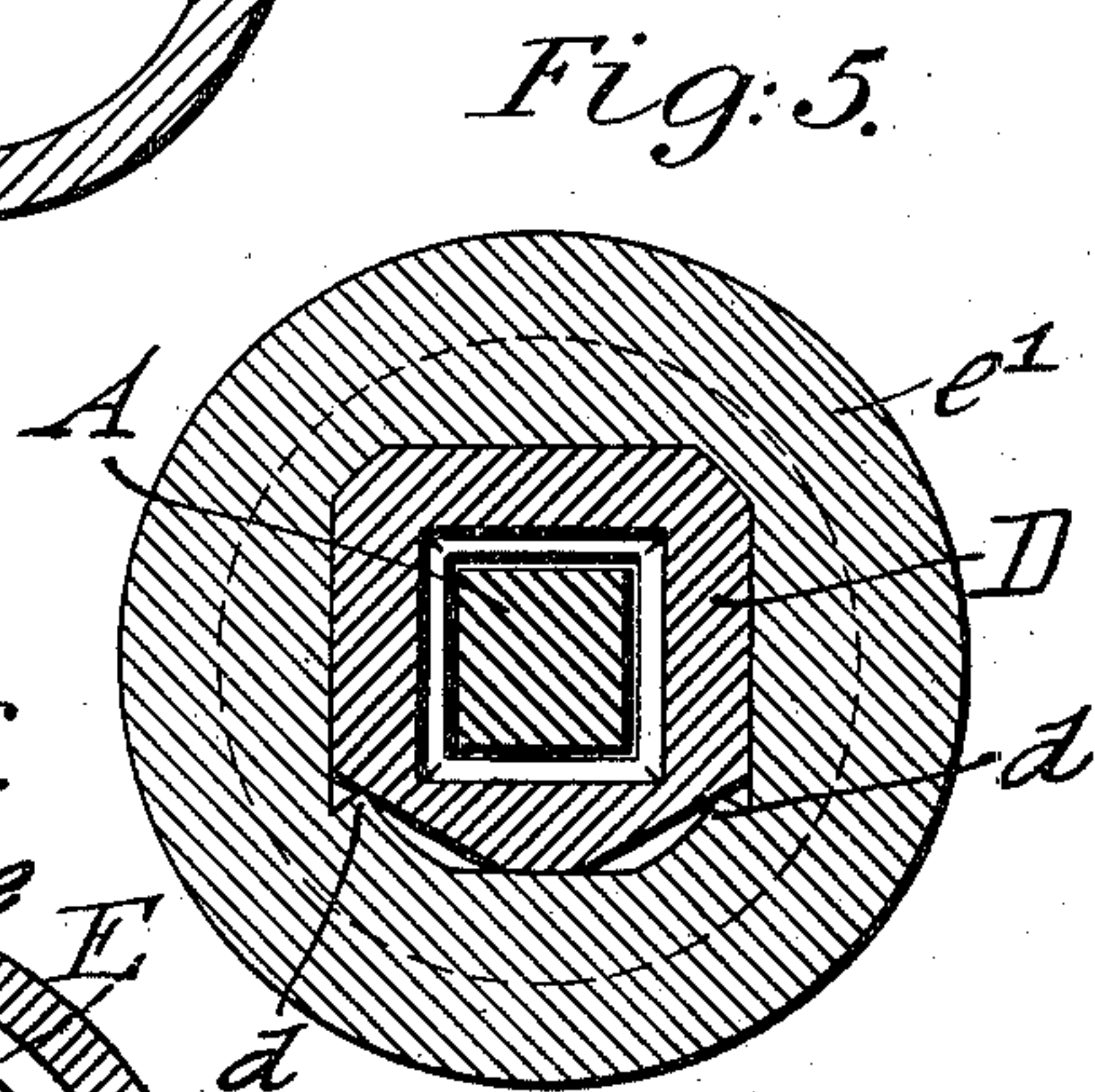
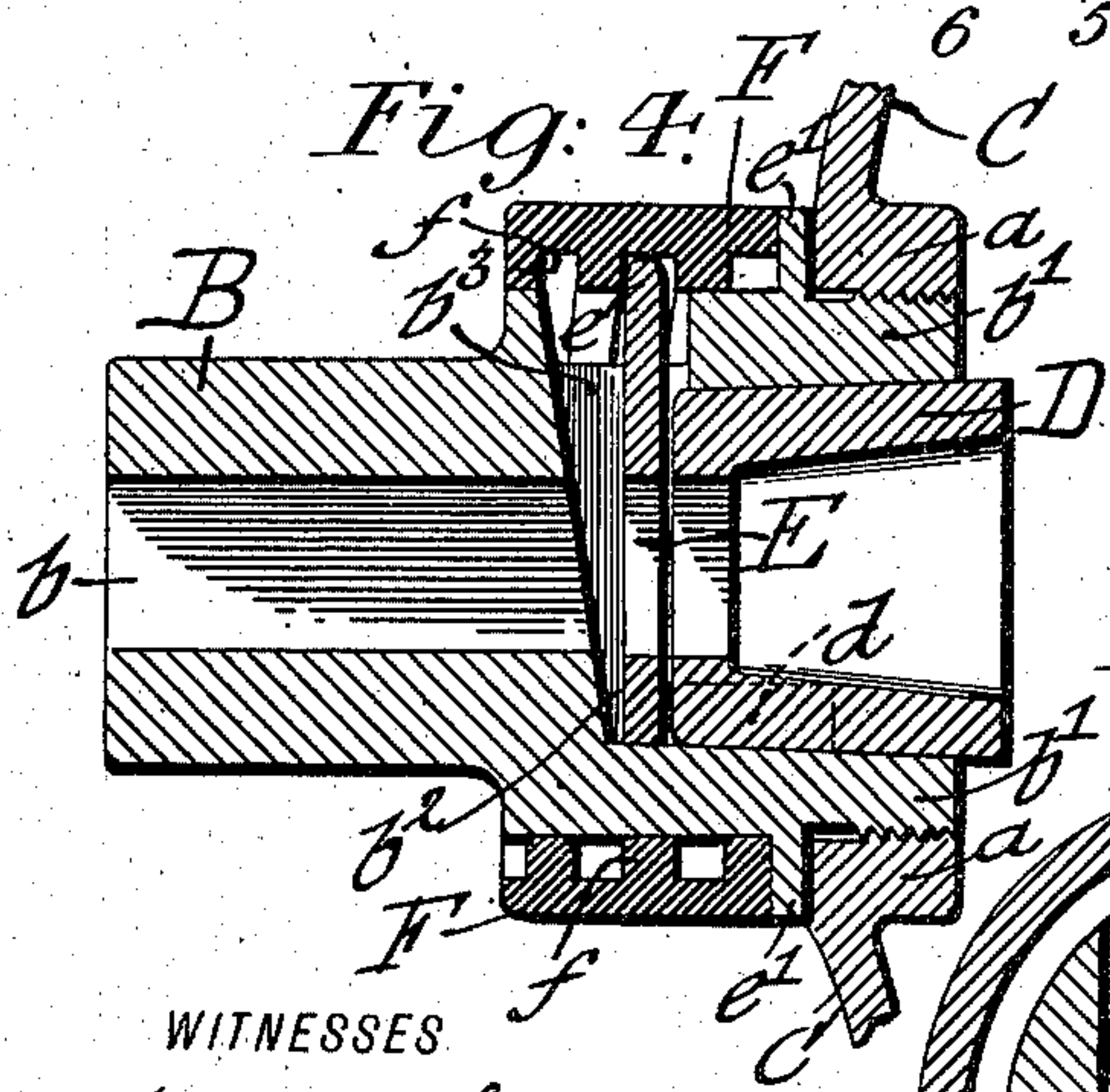
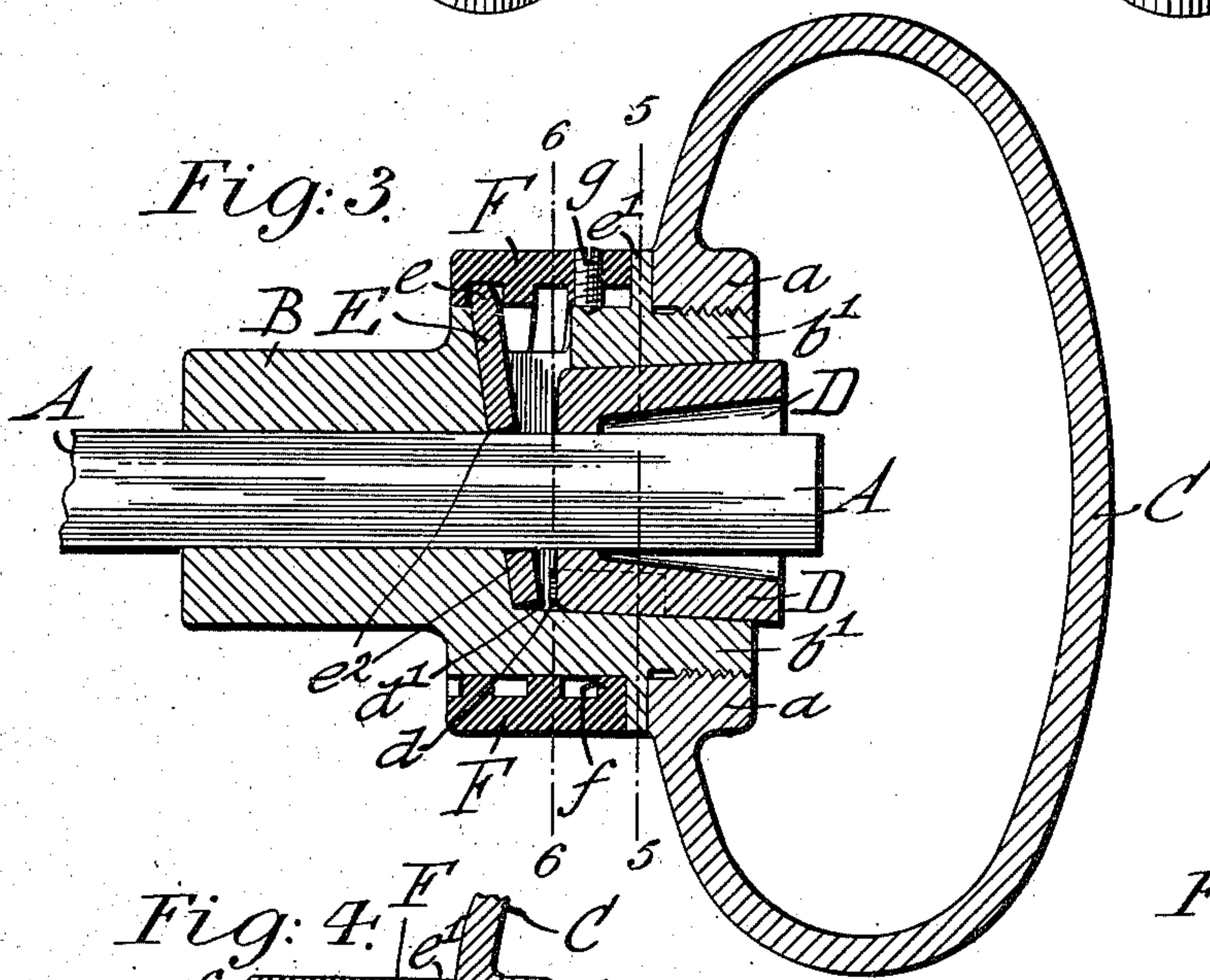
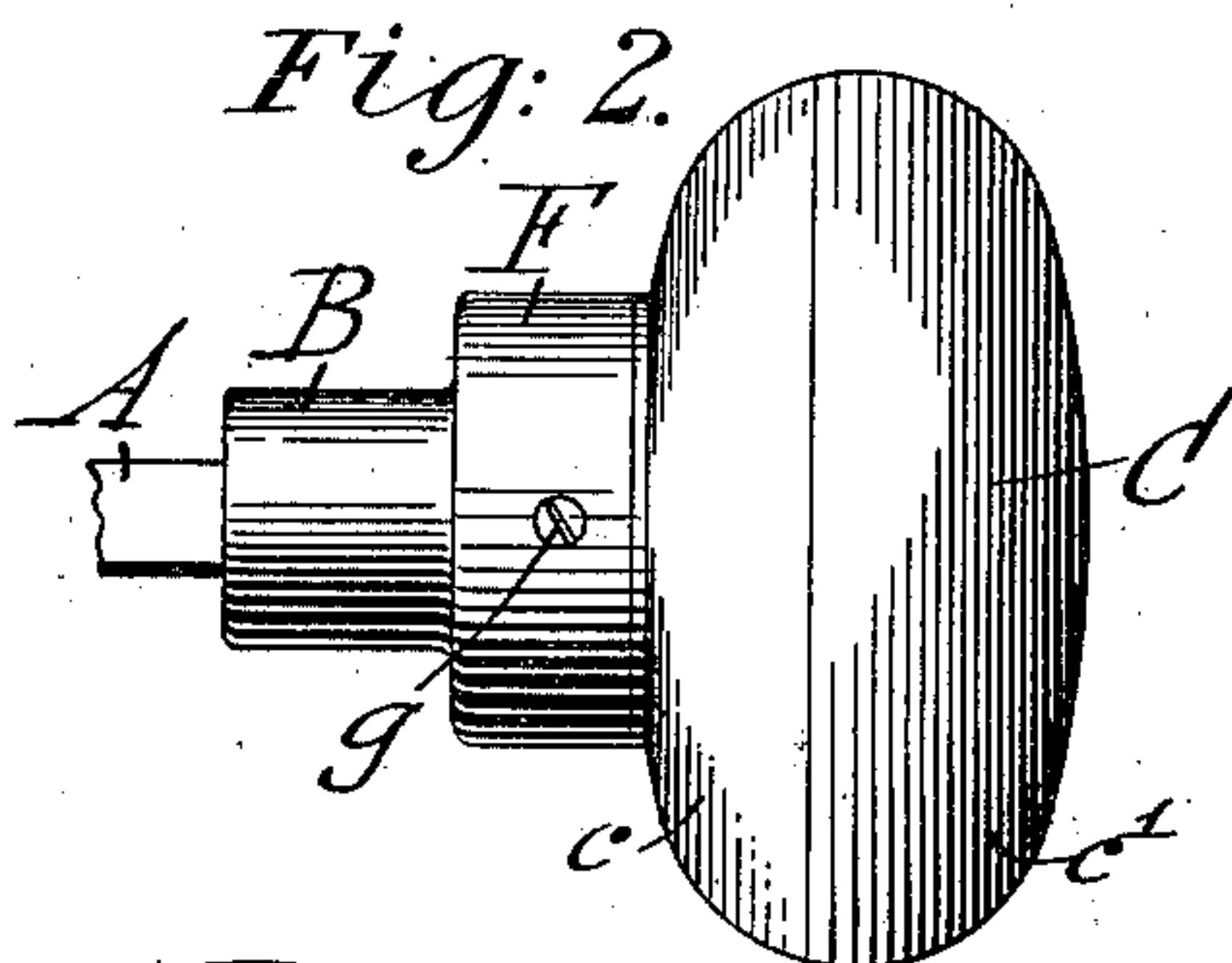
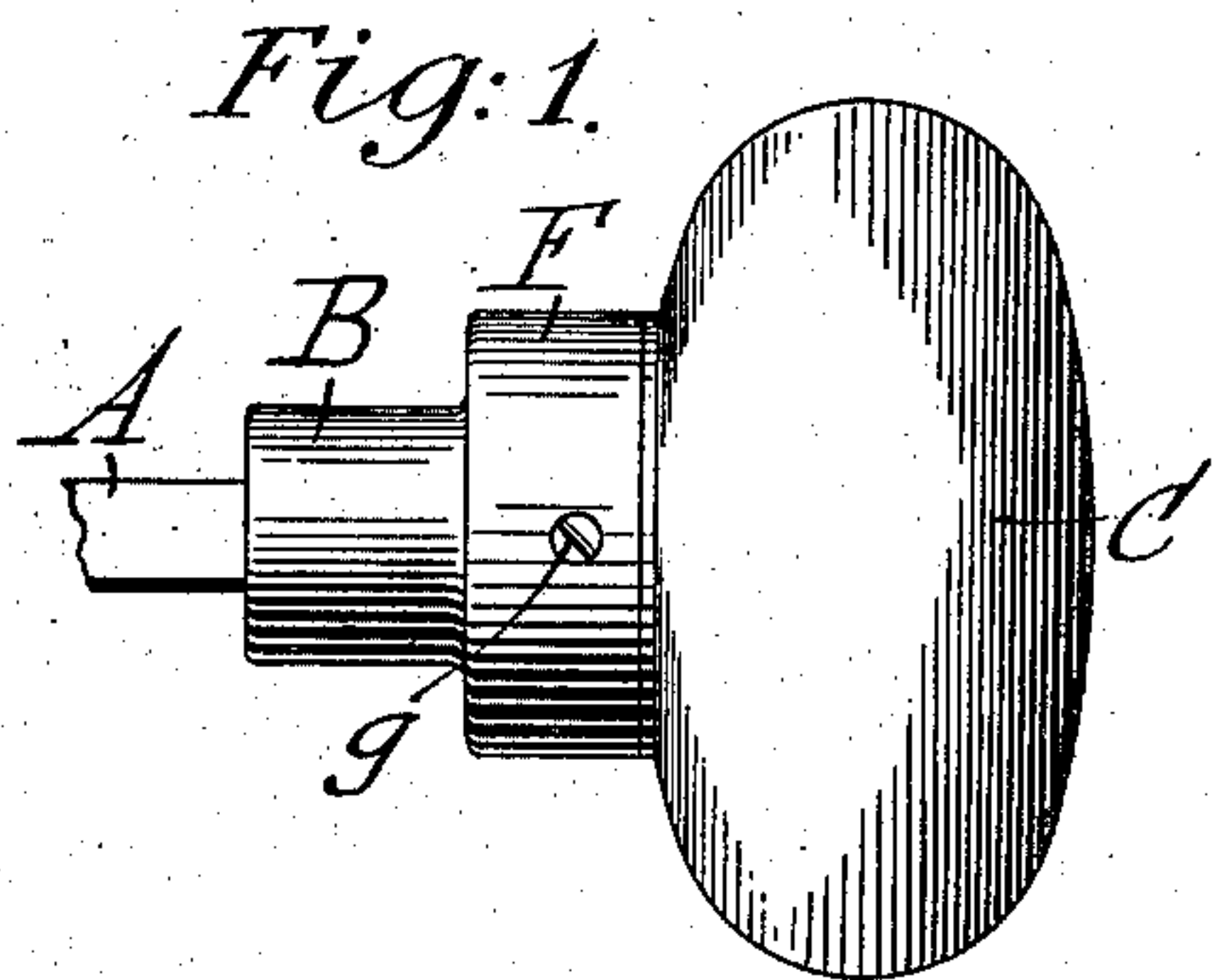
No. 736,290.

PATENTED AUG. 11, 1903.

C. O. NOACK.
KNOB.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

CARL OTTO NOACK, OF STAMFORD, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO NEW YORK LOCK COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

KNOB.

SPECIFICATION forming part of Letters Patent No. 736,290, dated August 11, 1903.

Application filed February 24, 1903. Serial No. 144,691. (No model.)

To all whom it may concern:

Be it known that I, CARL OTTO NOACK, a citizen of the United States, residing in Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Knobs, of which the following is a specification.

This invention relates to improvements in knobs provided with detachable spindles, such as are commonly employed; and the object of the invention is to provide a simple and effective means for connecting the knob portion proper with the spindle.

For this purpose the invention consists of a knob adapted to receive a suitable spindle, a movable locking-plate adapted to engage the spindle, and a rotary sleeve connected with said locking-plate and adapted to positively move the same into and out of spindle-engaging position.

The invention consists, further, of certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 are side elevations of a knob and spindle provided with my improved means of attachment. Fig. 3 is a section of the new knob, showing a spindle inserted in the same. Fig. 4 is a detail section of the knob-shank, showing the parts in position for releasing the spindle from the knob; and Figs. 5 and 6 are vertical transverse sections on lines 5-5 and 6-6, Fig. 3.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates the spindle of a door-knob, which is made of the usual size and of square cross-section, but which is not necessarily provided with the usual screw-holes commonly located in the end of the spindle. To the end of the spindle A is applied the knob-shank B. Said shank is provided with a longitudinal opening *b* for receiving the spindle, said opening being made of similar cross-section to the spindle. The shank is provided at its inner or larger end with an enlarged portion *b'*, which is screwed into a bushing *a* at an inner central portion of the knob-head C, as shown in Fig.

3. It is obvious that in place of using a head having a central screw-threaded bushing a head made in two sections may be employed, as shown in Fig. 2, one section, *c*, being made integral with the knob-shank B, while the other, the front portion, *C'*, is sprung over the edge of the rear section, or any other suitable head of glass or other suitable material may be used. The enlarged portion *b'* of the shank B is provided with an interior cavity *b²* of approximately square cross-section. An opening *b³* is arranged in the enlarged portion *B'* of the shank and communicates with the cavity within the same. At the larger side of the opening *b³* is located in the cavity a retaining-sleeve D, which serves, by reason of its square cross-section, as an additional means of security against torsional movement between the spindle and knob and as a means of support at the inner portion of the spindle. Said opening *b³* and inner portion of the cavity *b²* form a recess adapted to receive the locking-plate E, which is provided with a square opening adapted to register with the opening in the knob-shank B and retaining-sleeve D. The lower end of the locking-plate E is secured against movement longitudinally of the knob by being located in a suitable recess *d'* of the shank formed between the inwardly-projecting shoulders or lugs *d* at the interior of the cavity and the forward wall of the cavity, which latter is formed by the more contracted portion of the shank. The locking-plate is provided with an outwardly-projecting ear *e*, which extends beyond the surface of the enlarged portion *b'* of the shank.

F indicates an exterior locking-sleeve which is adapted to fit upon the shank at the enlarged portion of the same, so as to engage the projecting portion of the locking-plate. The sleeve F is provided with an internal screw-thread *f*, in which the said projecting ear engages.

The sleeve F is capable of a sliding motion on the knob and of an independent rotary motion thereon. The locking-plate may be moved by imparting to the sleeve either of these two motions. The position of the plate is by this construction controllable with great facility.

The parts being in the position shown in Fig. 4, the spindle is inserted. The sleeve F is now turned as if to screw the same toward the knob. By this act the sleeve F is brought to abut against a flange e' on the enlarged portion of the shank, which serves thereby as an abutment for the same. The turning of the locking-sleeve is continued, and as the sleeve cannot advance farther owing to its abutment against said flange the ear e is forced in the opposite direction into the position shown in Fig. 3, whereby the inner edges e^2 of the locking-plate at the opening through the same bite the spindle A, holding thereby the knob-shank and knob firmly secured thereto. A locking-screw g is arranged in the sleeve F and extends through the same into engagement with the shank of the knob, so as to secure the sleeve in the position to which it is set. When it is desired to release the knob from the spindle, the locking-sleeve F is rotated in opposite direction, thereby removing the pressure from the locking-plate and permitting the same to stand perpendicular, or approximately so, to the sleeve, as in Fig. 4, so that the edges e^2 of the plate do not bite the spindle. The spindle is thereby released and may be withdrawn from the shank of the knob.

Engagement of the locking-plate with the spindle may be obtained by moving the sleeve without rotation outwardly upon the shank from the position shown in Fig. 4 when setting the knob. The sleeve is then screwed back until it arrives at the abutment e' . The sleeve F is connected positively by its thread f with the plate E and is adapted to positively move the same into and out of spindle-engaging position. By means of the screw g the sleeve F may be locked in any desired position upon the knob—i. e., so as to retain the locking-plate in engagement with the spindle, as in Fig. 3, or so as to retain said plate out of engagement with said spindle, which position is shown in Fig. 4.

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

1. A knob adapted to receive a spindle, a locking-plate adapted to engage said spindle, and plate-shifting means capable of a sliding and of an independent rotary motion, substantially as set forth.

2. A knob adapted to receive a spindle, a locking-plate adapted to engage said spindle, plate-shifting means capable of a sliding and of an independent rotary motion, and means for locking said plate-shifting means, substantially as set forth.

3. A knob adapted to receive a spindle, a locking-plate adapted to engage said spindle, and a plate-shifting sleeve positively connected with said locking-plate, substantially as set forth.

4. A knob adapted to receive a spindle, a locking-plate adapted to engage said spindle, plate-shifting means loosely movable longitudinally of said knob, and means for locking said plate-shifting means, substantially as set forth.

5. A knob adapted to receive a spindle, a locking-plate adapted to engage said spindle, movable plate-shifting means, and means for locking said plate-shifting means, substantially as set forth.

6. A knob adapted to receive a spindle, a movable locking-plate adapted to engage said spindle, and plate-shifting means movable with and in the same direction as said plate and positively connected therewith against independent movement in said direction, substantially as set forth.

7. A knob adapted to receive a spindle, a movable locking-plate adapted to engage said spindle, and plate-shifting means movable with and in the same direction as said plate, positively connected therewith against independent movement in said direction, and movable transversely thereto, substantially as set forth.

8. A knob adapted to receive a spindle, a movable locking-plate adapted to engage said spindle, and a rotary sleeve provided with a transverse screw-thread engaging said locking-plate, substantially as set forth.

9. A knob adapted to receive a spindle, a movable locking-plate adapted to engage the spindle, a rotary sleeve connected with said locking-plate and adapted to move the same into and out of spindle-engaging position, and means for locking said sleeve, substantially as set forth.

10. A knob adapted to receive a spindle, a movable locking-plate adapted to engage the spindle, a rotary loosely-movable sleeve provided with a transverse screw-thread engaging said locking-plate and adapted to positively move the same into and out of spindle-engaging position, and an abutment for said sleeve, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CARL OTTO NOACK.

Witnesses:

HENRY J. SUHRBIER,
JOSEPH H. NILES.