

No. 756,839.

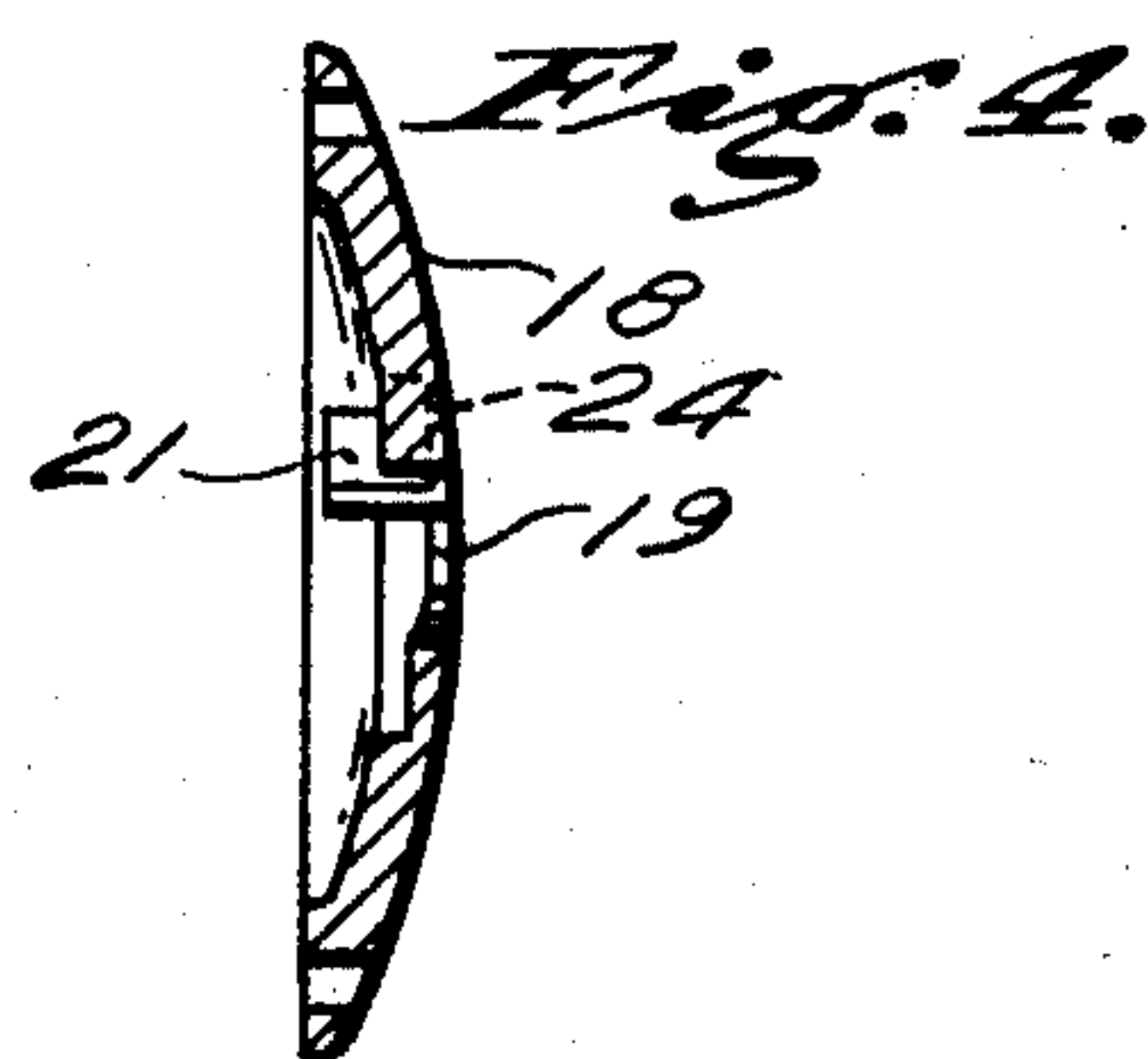
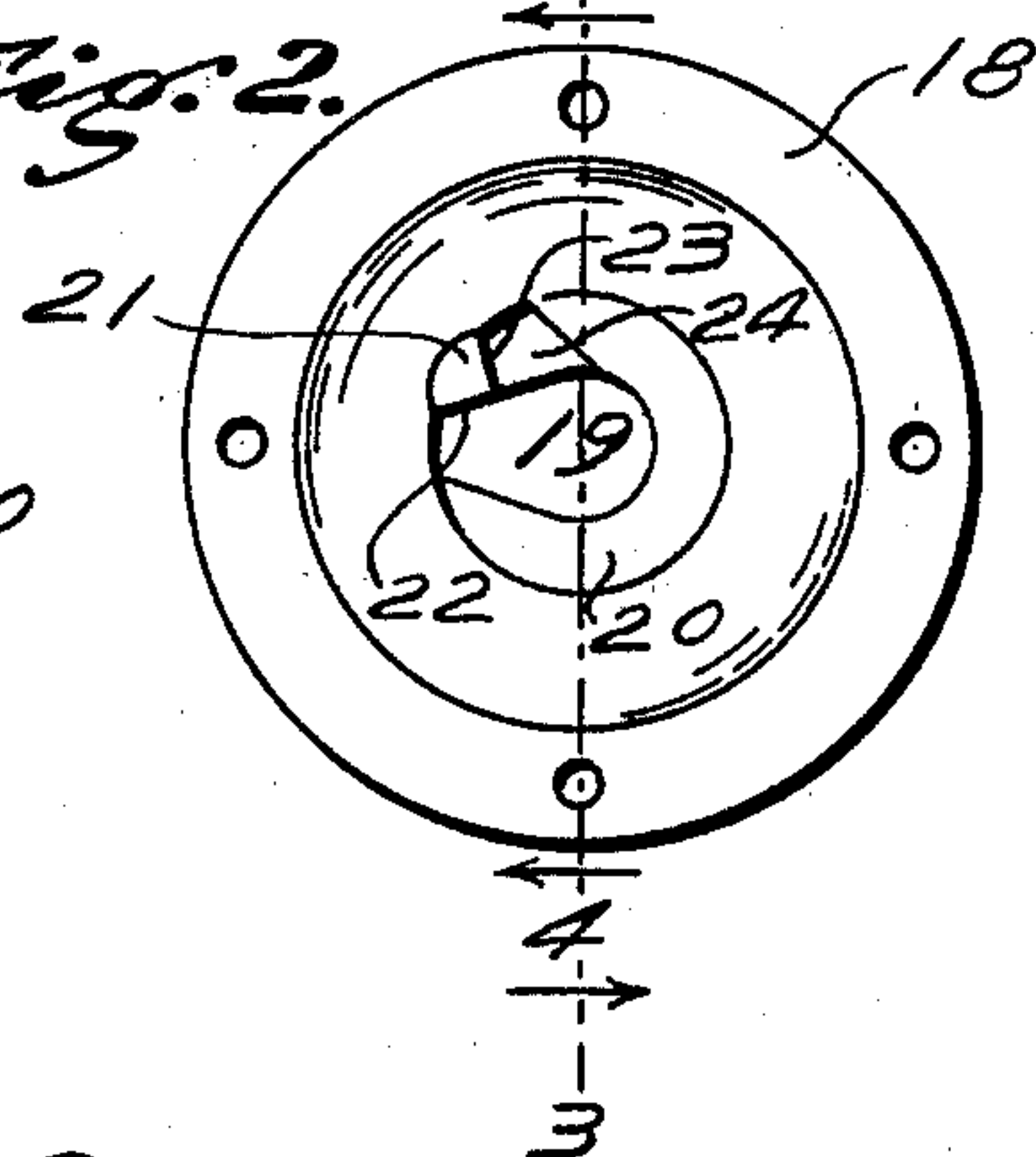
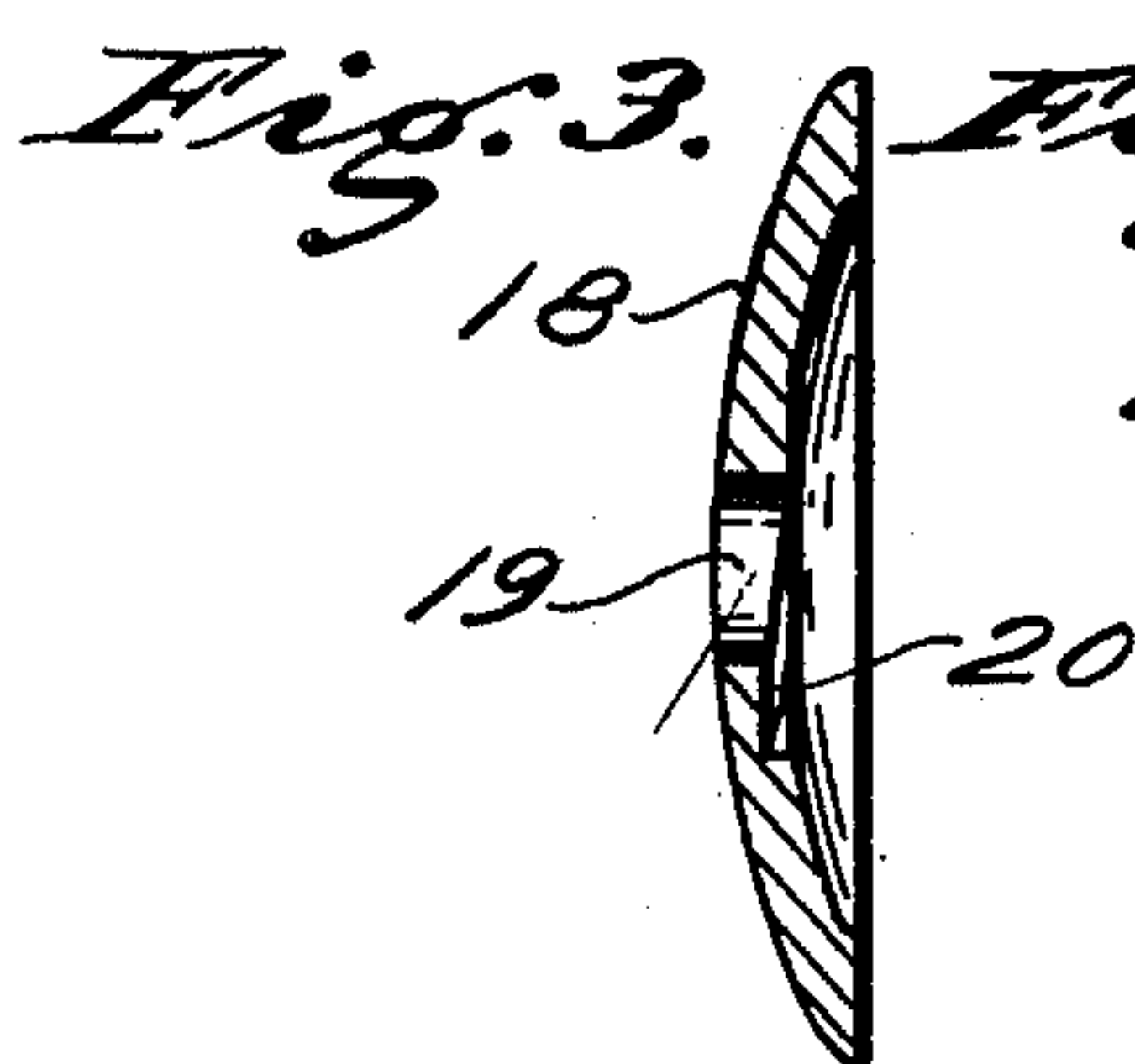
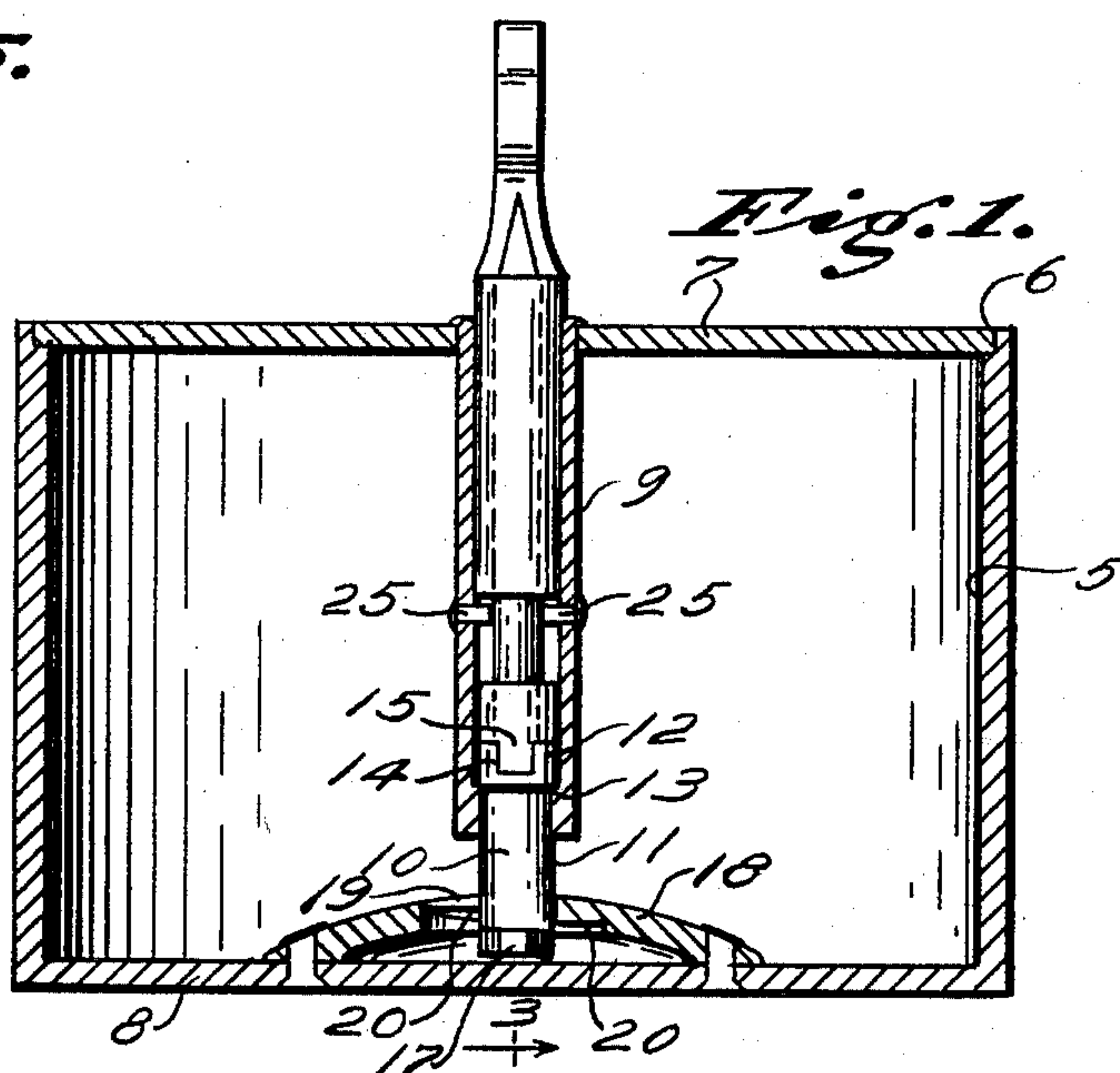
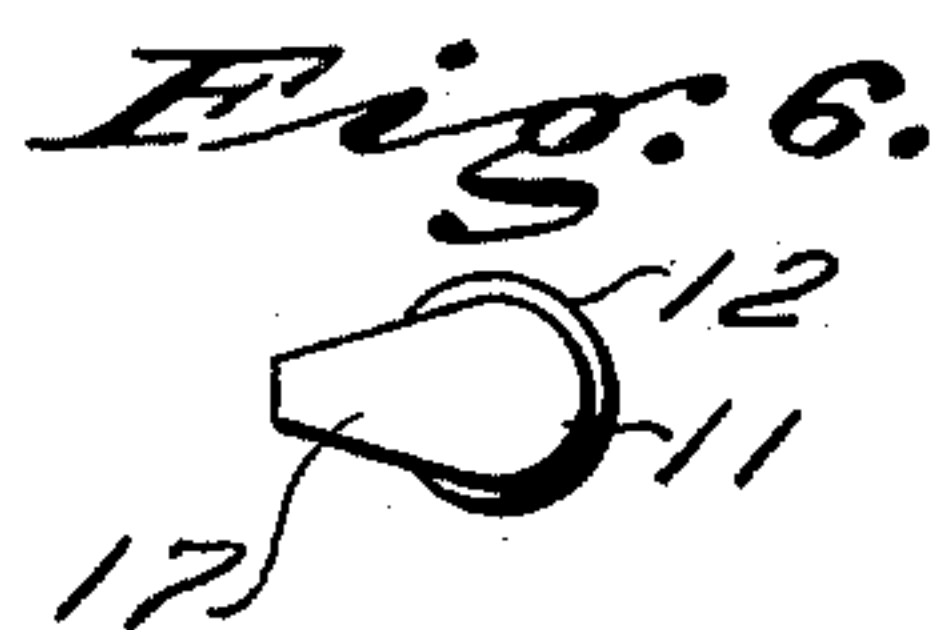
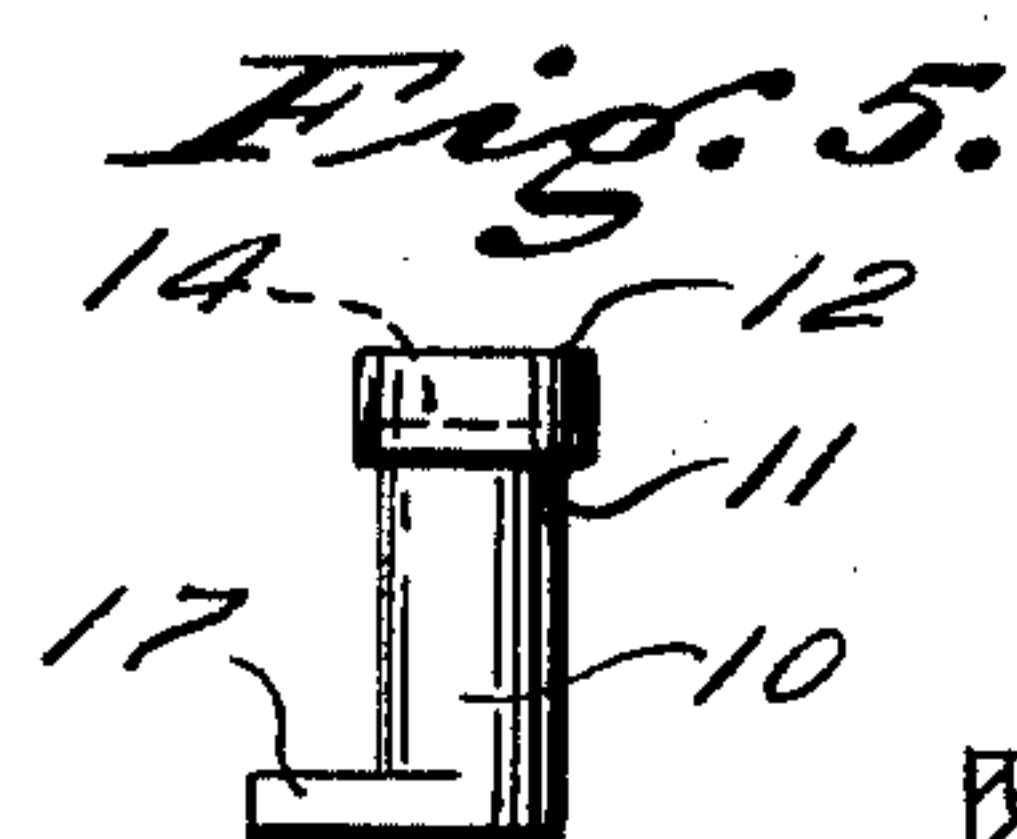
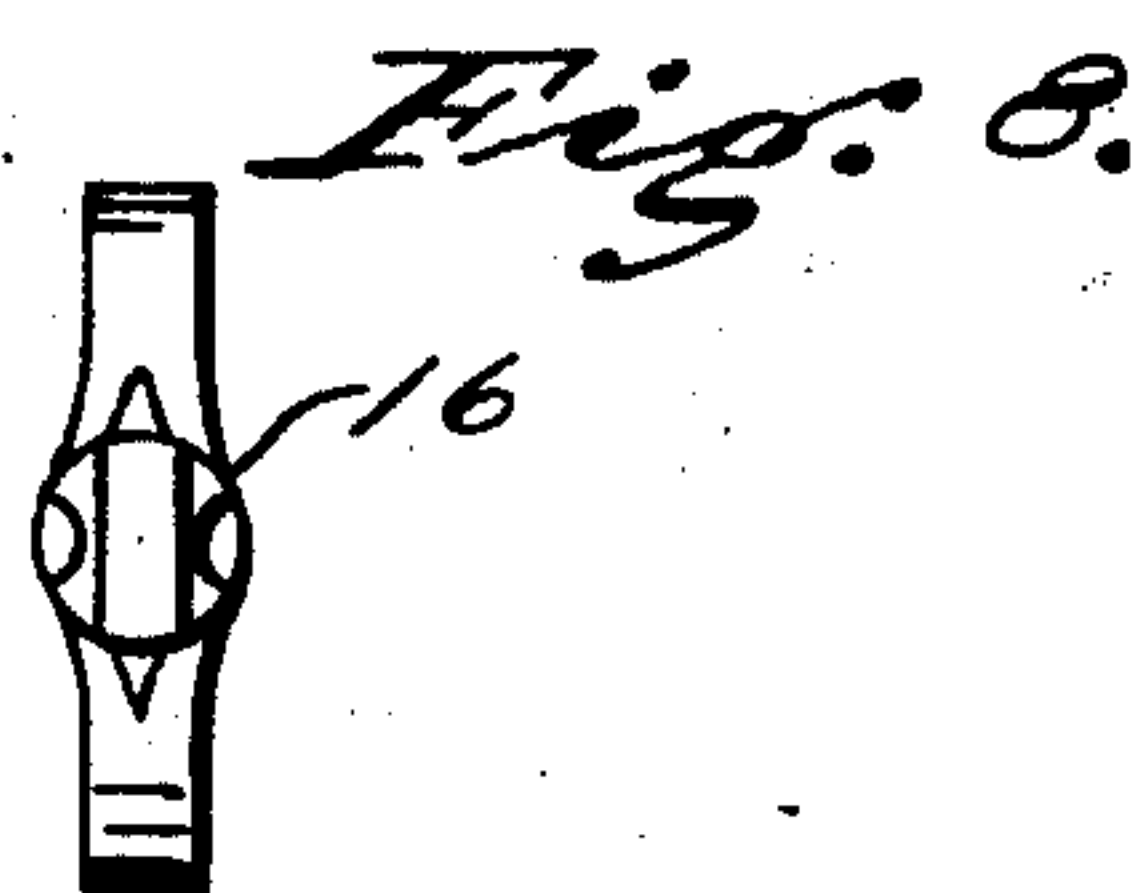
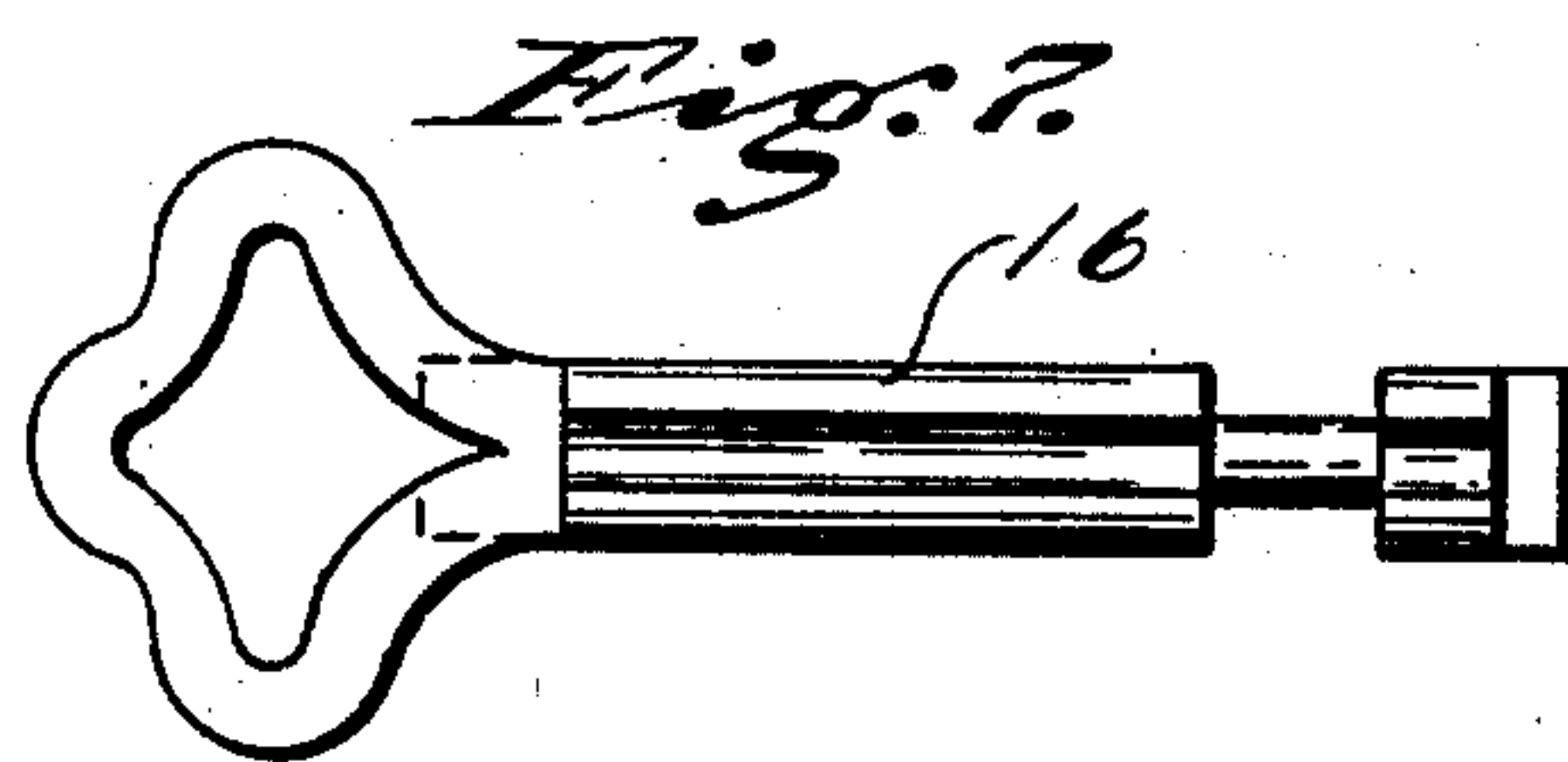
PATENTED APR. 12, 1904.

J. D. EDMONDS.

LOCK.

APPLICATION FILED SEPT. 2, 1903.

NO MODEL.



Witnesses:

Shadow Recorder
Glen C. Stephens

Inventor:

Jay D Edwards,
by Kummer & Kummer,
Attorneys.

UNITED STATES PATENT OFFICE.

JAY D. EDMONDS, OF CHICAGO, ILLINOIS, ASSIGNOR TO EDMONDS-METZEL MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

LOCK.

SPECIFICATION forming part of Letters Patent No. 756,839, dated April 12, 1904.

Application filed September 2, 1903. Serial No. 171,592. (No model.)

To all whom it may concern:

Be it known that I, JAY D. EDMONDS, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Locks, of which the following is a specification.

The main objects of my invention are to provide a simple, inexpensive, and durable form of lock for small receptacles, such as home savings-banks; to provide a lock of this character which connects the cover directly with the bottom of the receptacle, and thus avoids the necessity of having projections on the side walls of the receptacle, leaving such side walls entirely free from obstructions to the outward passage of the contents when the cover is removed; to provide a form of lock which is particularly adapted to cylindrical receptacles, since it will permit the cover for such receptacle to be locked into place without the necessity of paying any attention to the disposition of such cover about the axis of the cylinder, and to provide in locking devices of the character described means for preventing the lock from becoming disconnected through manipulation of the cover of the receptacle. I accomplish these objects by the device shown in the accompanying drawings, in which—

Figure 1 is a vertical section of a cylindrical savings-bank having its cover secured in position by a device constructed according to my invention. Fig. 2 is a bottom plan of the cam-plate which forms part of the locking means shown in Fig. 1. Fig. 3 is a section of the cam-plate on the line 3 4 of Fig. 2 looking toward the right of said figure. Fig. 4 is a section on the line 3 4 of Fig. 2 looking toward the left. Figs. 5 and 6 are respectively side elevation and bottom plan of the locking-dog. Figs. 7 and 8 are elevations showing the form of the key for operating the locking means.

In the construction shown the bank consists of a hollow cylindrical receptacle having cylindrical side walls 5 and having an annular recess 6 around its open end for receiving the

cover 7. The bottom 8 is preferably made integral with the side walls. Extending axially into the receptacle and through the cover 7 is a tube 9, which is rigidly secured to the cover and extends inwardly toward the bottom 8. The tube or keyway 9 is open at its upper end and has a contracted opening at its lower end for receiving the shank 10 of the dog 11. The dog 11 is provided with an enlarged head 12, which engages the inner annular shoulder 13 of the tube 9 to form a swivel connection between the dog 11 and the tube. The head 12 of the dog is provided with a slot 14 or is otherwise suitably formed to receive a reciprocally-formed part 15 of the key 16. The dog is also provided with a projecting lug 17 at its lower end. A cam-plate is rigidly secured to the bottom 8 of the receptacle and is provided with a central aperture 19 of suitable form to permit the passage through same of the lower end of the dog 11, together with the lug 17. The lower surface of the plate 18 is dished upwardly, as shown, and has a spirally-formed cam-surface around the edges of the aperture 19. The shank 10 of the dog is of suitable length to permit the lug 17 to engage the highest part of the cam-surface when the cover 7 is in its normal position in the recess 6 and flush with the upper end of the walls 5. The cover 7 is preferably made of resilient material, so that it will yield sufficiently to permit the lug 17 of the dog to follow the cam-surface 20 when the dog is rotated by means of the key 16. The cam-plate 18 is provided on its lower side with a downwardly-projecting lug 21, which serves as a stop for limiting the rotary movement of the dog 11 when same is in engagement with the cam-plate. One side, 22, of the lug 21 forms the stop which indicates to the operator when the dog is in a suitable position for permitting the removal of the cover 7, while another side, 23, prevents the dog from completing a revolution and again arriving into a position for being withdrawn from the cam-plate after having been turned to its locking position. Immediately adjacent to the side 23 of the lug 21 is a recess 24 in the cam-surface 20, into

which the lug 17 becomes seated when in its locked position.

The interior of the tube 9 is provided with projecting lugs 25, so as to necessitate the use of a special form of key. It is preferred to leave sufficient space between the lower end of the tube 9 and the cam-plate 18 to permit the rotation of the lug 17 above the cam-plate 18 when the cover 7 is in its normal position in the recess 6.

The key and keyway herein described are not part of my invention, but constitute the subject-matter of the copending application of William E. Metzel, filed September 2, 1903, Serial No. 171,590, and are shown merely to illustrate the operation of my device.

The operation of the device shown is as follows: To lock the bank, the cover 7 is placed upon the open end of the receptacle, with the tube extending downwardly into same. No attention need be paid to the disposition of said cover further than seating same in the groove 6. The key 16 is now inserted into the tube 9 and turned until the tongue 15 becomes seated in the groove 14 in the head of the dog. The key is now turned, being at the same time pressed downwardly, causing the dog 11 to rotate until its lower end falls through the aperture 19. Continued right-handed rotation of the key will cause the lug 17 to move along the cam-surface 20 and draw the cover 7 tightly upon its seat. The cover 7 will be sprung downwardly through the action of the cam, and will therefore cause the lug 17 to become seated in the recess 24 after striking the stop 21. This structure effectually prevents the lug 17 from becoming disconnected from the cam-plate 18 by turning or otherwise manipulating the cover 7 except when the dog 10 is turned in a left-handed direction by means of the key 16.

It will be seen that some of the details of the construction shown may be altered without departing from the spirit of my invention. I therefore do not confine myself to such details except as hereinafter limited in the claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination of a receptacle open at one end; a cover fitting said open end; a tube rigidly secured to said cover, extending through same and into said receptacle; a cam-plate secured within the receptacle; a dog rotatably secured to the lower end of said tube; a key adapted to be inserted into said tube and to engage said dog for the purpose of rotating same; and a lug on the dog adapted to engage said cam-plate and through the rotation of said dog, lock said cover in position, substantially as described.

2. In a device of the class described, the combination of a hollow receptacle open at one end; a cover fitting said open end and having a tube

extending through same and into said receptacle; a cam-plate secured to the bottom of said receptacle and having a downwardly-disposed spiral cam-surface; a dog rotatably secured to the lower end of said tube; and a lug on said dog adapted to engage said cam-surface and through rotation of said dog lock said cover in position, substantially as described.

3. In a device of the class described, the combination of a hollow receptacle open at one end; a cover fitting said open end and having a tube extending through same and into said receptacle; a cam-plate secured to the bottom of said receptacle and having a downwardly-disposed spiral cam-surface; a dog rotatably secured to the lower end of said tube; a lug on said dog adapted to engage said cam-surface and through rotation of said dog lock said cover in position, and a stop on said cam-plate adapted to limit the rotation of said dog when in engagement with said cam-surface.

4. In a device of the class described, the combination of a hollow receptacle open at one end; a cover fitting said open end and having a tube extending through same and into said receptacle; a cam-plate secured to the bottom of said receptacle and having a downwardly-disposed spiral cam-surface; a dog rotatably secured to the lower end of said tube; and a lug on said dog adapted to engage said cam-surface and through rotation of said dog lock said cover in position, said cam-surface having therein a recess adapted to confine said lug when said dog is turned to its locking position and to resist the unlocking movement of said dog, substantially as described.

5. In a device of the class described, the combination of a hollow receptacle open at one end; a cover fitting said open end and having a tube extending through same and into said receptacle; a cam-plate secured to the bottom of said receptacle and having a downwardly-disposed spiral cam-surface; a dog rotatably secured to the lower end of said tube; and a lug on said dog adapted to engage said cam-surface and through rotation of said dog lock said cover in position; said cam-surface having therein a recess adapted to confine said lug when said dog is turned to its locking position and to resist the unlocking movement of said dog, one of the ends of said receptacle being of resilient material and serving as a spring for drawing said dog into said recess, substantially as described.

6. In a device of the class described, the combination of a receptacle open at one end; a cover fitting said open end; a tube extending through said cover and into said receptacle, and having an inner annular shoulder extending around the lower end of said tube; a dog extending through the lower end of said tube and having an enlarged head adapted to engage said shoulder and prevent said head from being drawn downwardly out of said tube; a

key adapted to be inserted into said tube and
to engage said head for the purpose of rotat-
ing same; a cam-plate secured to the bottom
of said receptacle and having a downwardly-
5 disposed spiral cam-surface; a dog rotatably
secured to the lower end of said tube; and a
lug on said dog adapted to engage said cam-
surface and through rotation of said dog lock

said cover in position, substantially as de-
scribed.

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Signed at Chicago this 28th day of August,
1903.

JAY D. EDMONDS.

Witnesses:

WM. R. RUMMLER,
GLEN C. STEPHENS.