

J. ROCHE.

DETACHABLE CYLINDER DESK LOCK.

(Application filed May 2, 1902.)

(No Model.)

Fig. 1

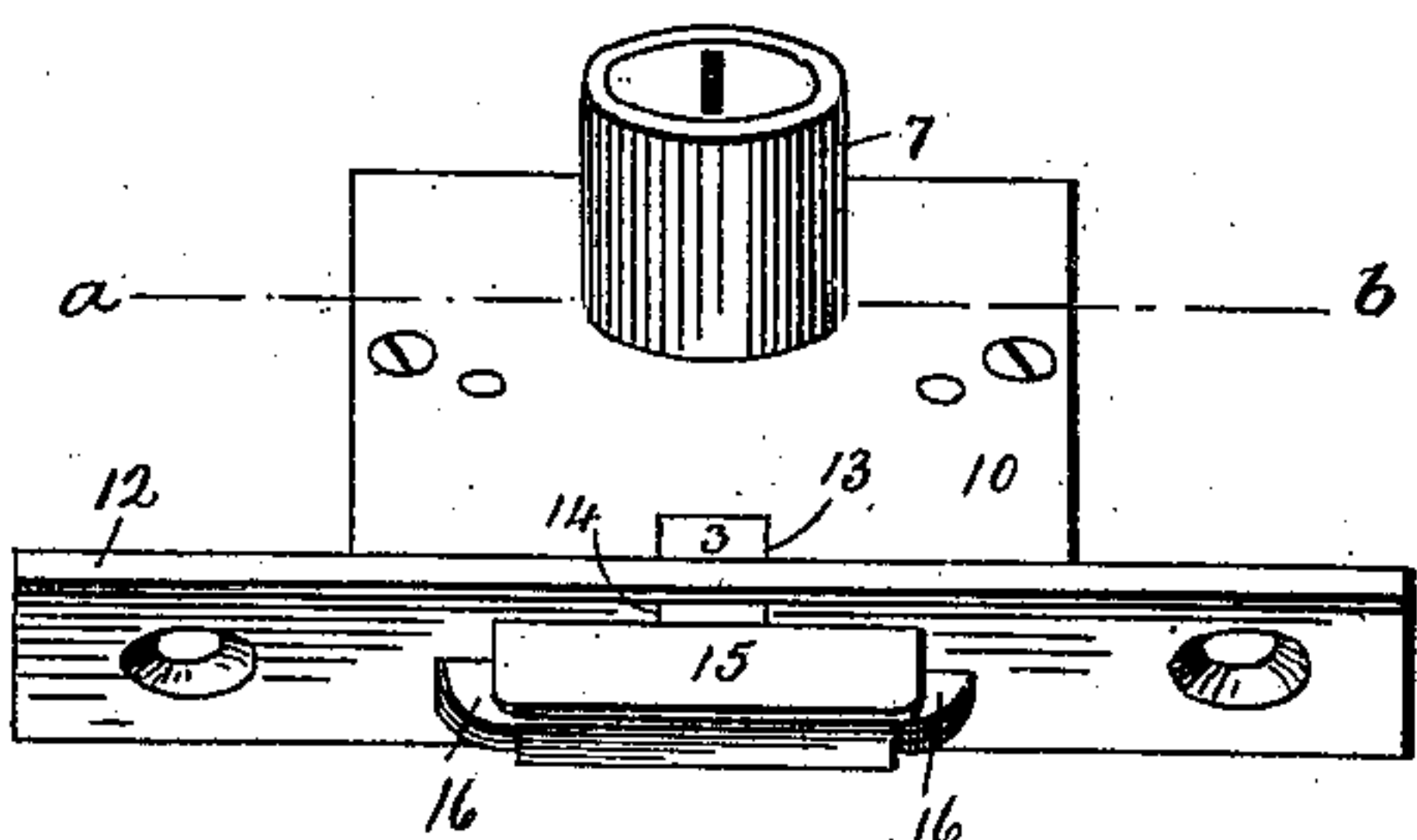


Fig. 2^a

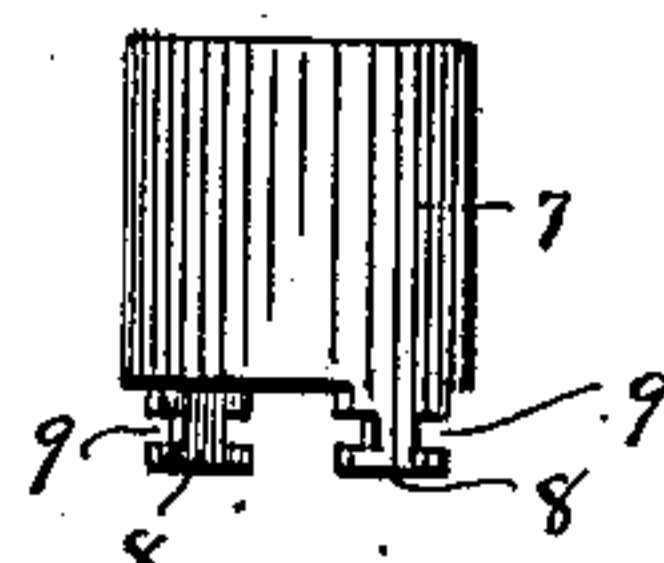


Fig. 2

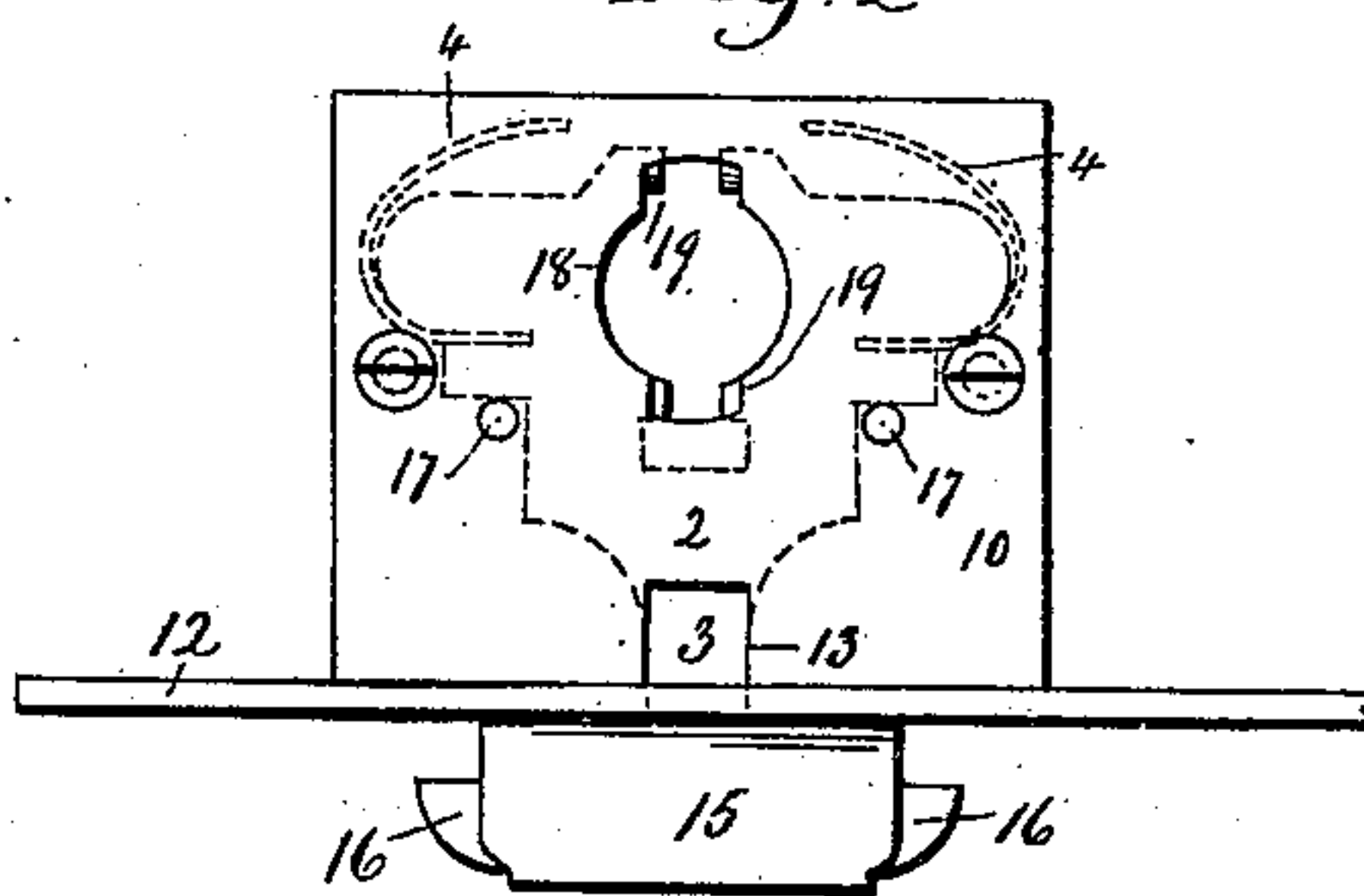


Fig. 3

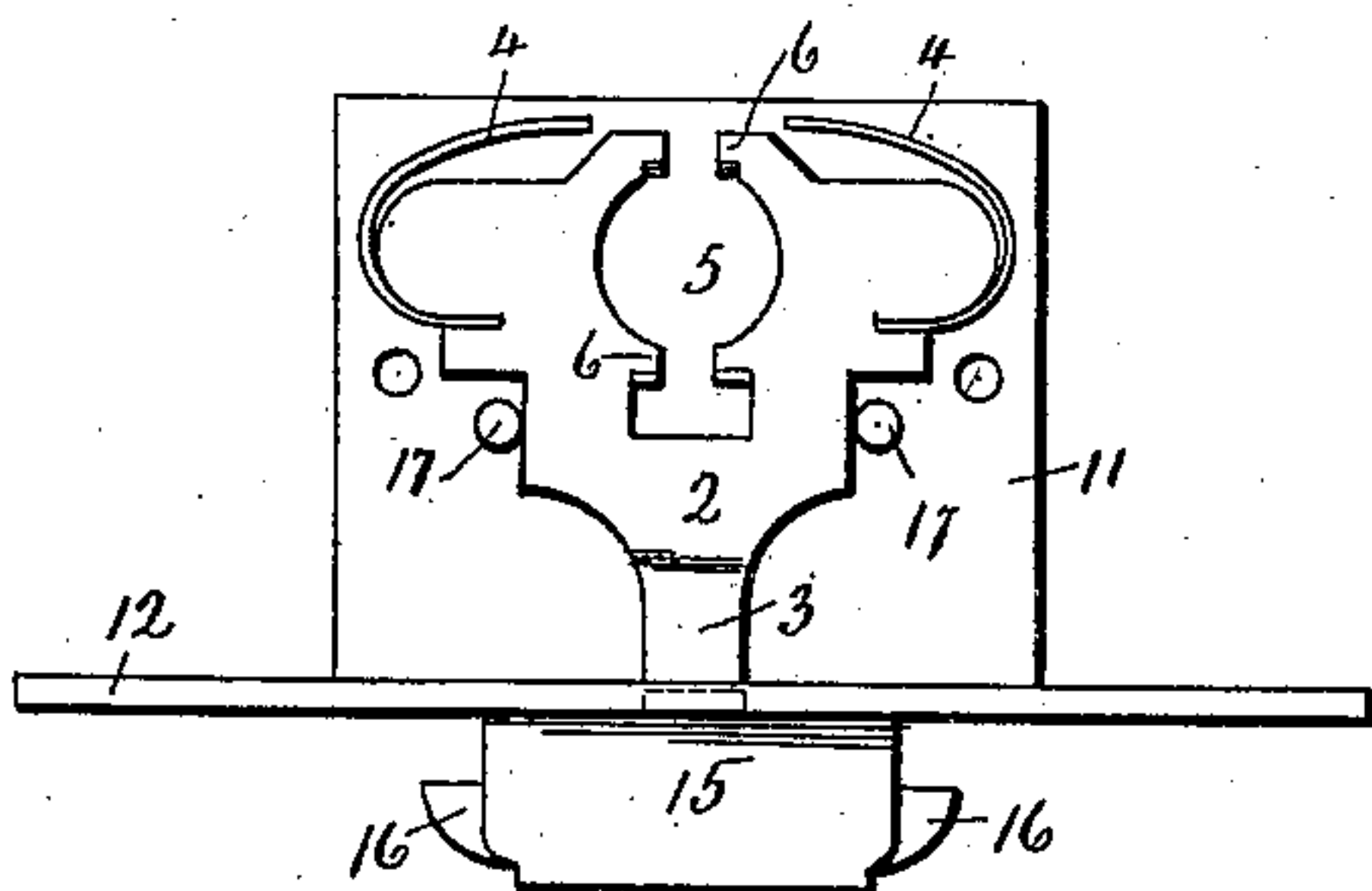


Fig. 4

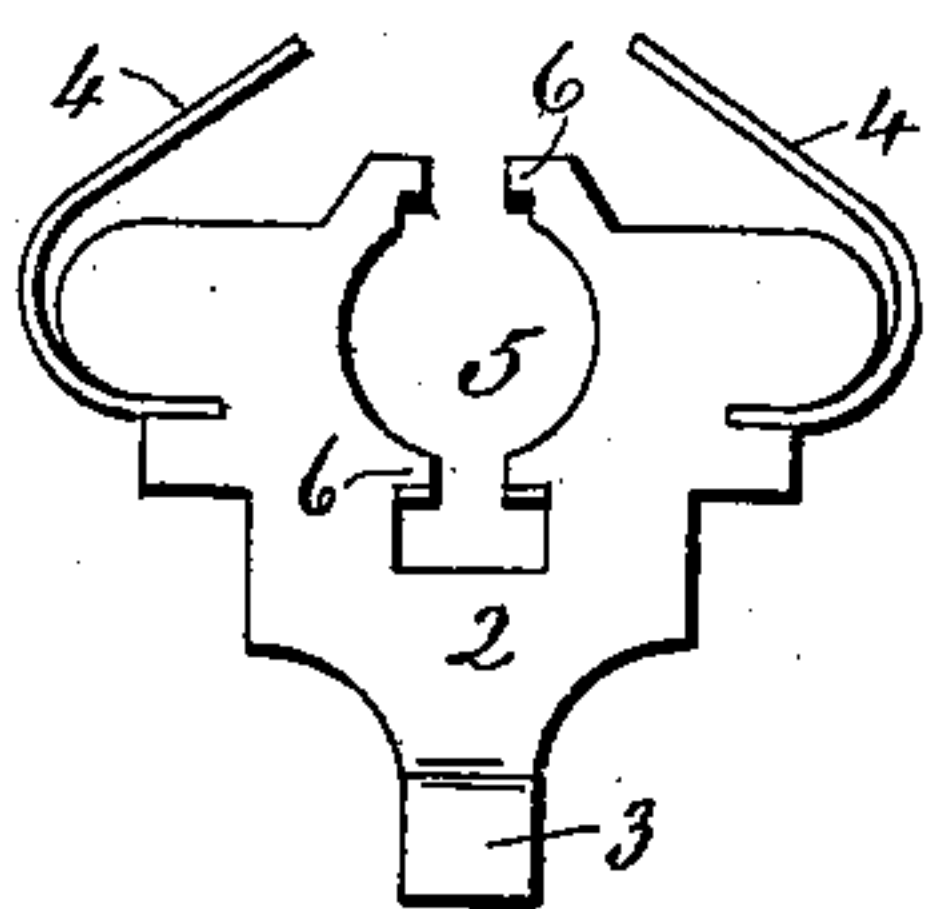


Fig. 5

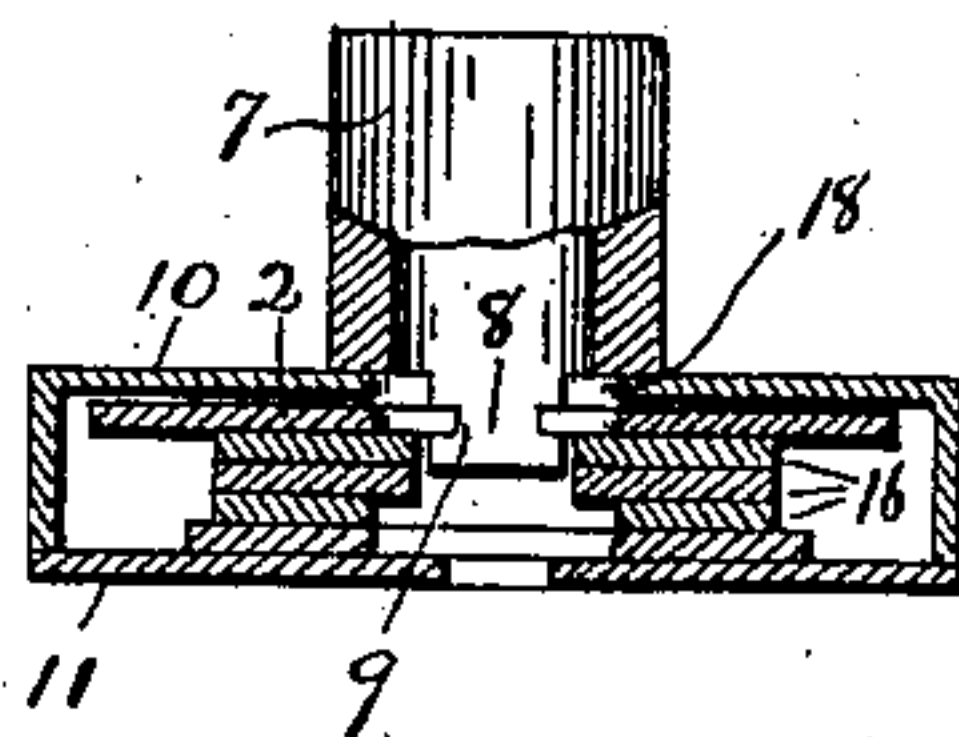
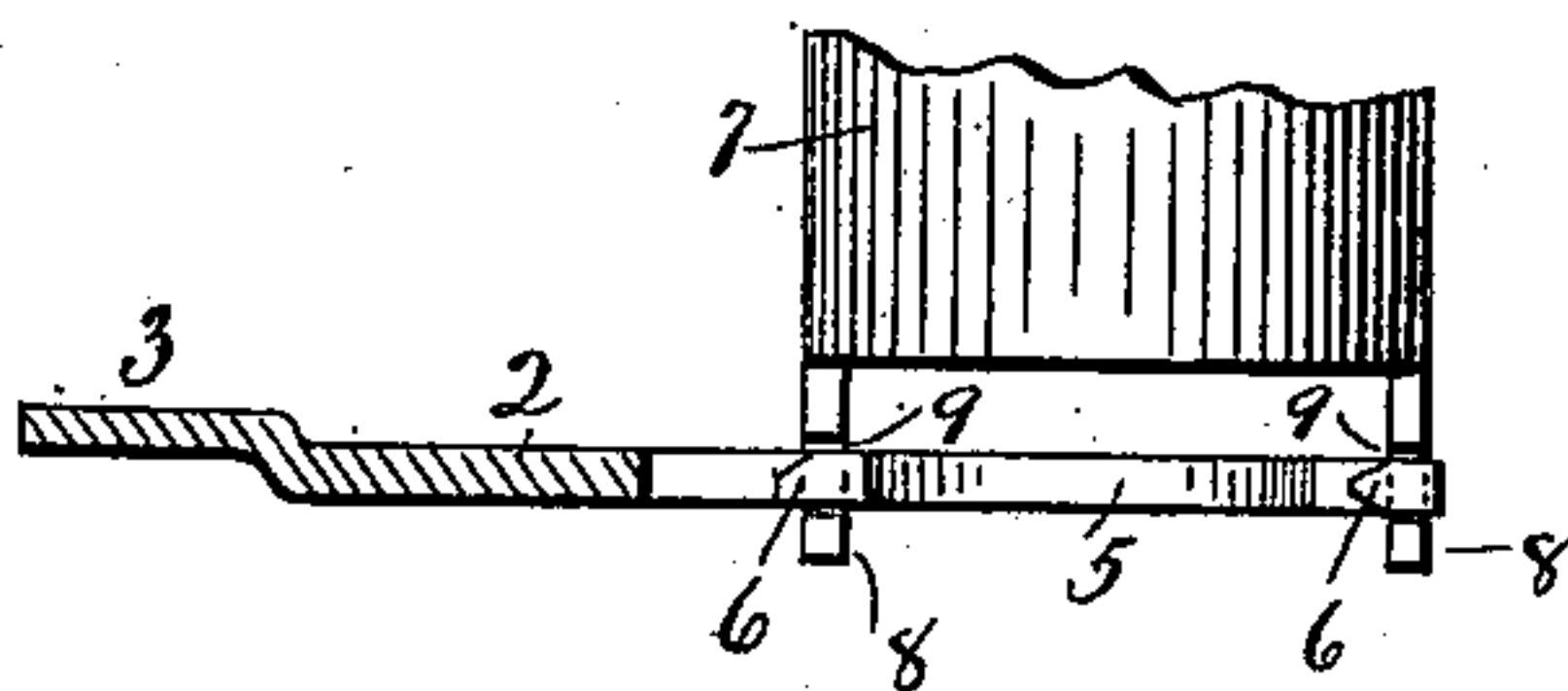


Fig. 6



Witness.

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DETACHABLE-CYLINDER DESK-LOCK.

SPECIFICATION forming part of Letters Patent No. 713,244, dated November 11, 1902.

Application filed May 2, 1902. Serial No. 105,582. (No model.)

To all whom it may concern:

Be it known that I, JAMES ROCHE, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Detachable-Cylinder Desk-Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the figures of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a detachable-cylinder desk-lock constructed in accordance with my invention; Fig. 2, a plan view of the lock with the cylinder or key-guide removed; Fig. 2^a, a view in elevation of the cylinder as it appears when detached from the lock; Fig. 3, a plan view of the lock with its cover removed, showing its cylinder-retainer pushed inward into its cylinder-releasing or clearance position; Fig. 4, a detached plan view of the cylinder-retainer; Fig. 5, a view in transverse section on the line *a b* of Fig. 1, showing the interlocking of the cylinder-retainer with the retaining-arms of the cylinder; Fig. 6, a broken detail view, partly in elevation and partly in longitudinal section, showing the beveled lugs of the cylinder-retainer in engagement with the retaining-arms of the cylinder.

My invention relates to an improvement in detachable-cylinder desk-locks, the object being to produce a simple, durable, secure, and convenient lock of this character.

With these ends in view my invention consists in a movable-cylinder retainer located within the lock-case and adapted to be engaged with the cylinder or key-guide for securing the same thereto.

My invention further consists in certain details of construction and combination of parts, as will be more fully hereinafter described, and particularly recited in the claims.

In carrying out my invention I employ a movable-cylinder or key-guide retainer in the form of a sliding plate 2, formed at its lower end with an upwardly-set operating-finger 3, provided at its upper end with two operating-springs 4 and having its central portion cut away to form an irregular clear-

ance-opening 5, "entered," so to speak, by two pairs of retaining-lugs 6, located on opposite sides of the main portion of the said opening, all as clearly shown in Fig. 4. To adapt the cylinder or key-guide 7 to coact with the said plate 2, it is provided at its inner end with two retaining members in the form of arms 8, located opposite each other and made integral with the cylinder, of which they form extensions, each edge of each of these arms being formed with a lug-receiving notch 9, making the arms T-shaped. The plate 2 is placed directly against and slides upon the inner face of the cover 10 of the lock-case, which also comprises a plate 11, secured in the usual manner to the face-plate 12 of the lock, the lower edge of the cover 10 being formed with a centrally-arranged deep notch 13 for the reception of the said upwardly-set operating-finger 3, which extends forwardly through a slot 14, formed in the face-plate 12 at a point close to the upper leaf of the housing 15, attached to the said face-plate and enclosing the upper ends of the usual spring-hook locking-bolts 16, the inner ends or tails of which form key-tumblers and which are mounted so as to swing upon studs 17, Figs. 2 and 3, which assist in guiding the plate 2 when it is moved for attaching or detaching the cylinder to or from the lock. The cover 10 is also formed with a circular clearance-opening 18, smaller in diameter than the diameter of the cylinder 7 and formed with locking-notches 19, leading out of its opposite sides for the reception of the locking-arms 8 of the cylinder, the inner end of which rests upon the cover at points adjacent to the edges of the opening 18. The engagement of the inner ends of the edges of the said arms 8 with the side walls of the locking-notches 19 locks the cylinder against rotation when in place.

To apply the cylinder to the lock, a screw-driver or some such instrument is engaged with the operating-finger 3 of the slide 2 and the same pushed inward against the tension of its springs 4 until its retaining-lugs 6 have been retired from their normal positions, in which they obstruct the entrance of the arms 8 of the cylinder 7 into the interior of the lock-case through the notches 19, leading out

of the opening 18 in the cover 10. Now while the plate is still held in its retired or releasing position the cylinder is applied to the lock-case, its arms 8 being entered thereinto through the notches 19. When the inner end of the cylinder has been squarely seated upon the cover 10, pressure upon the operating-finger 3 of the plate 2 is removed, whereupon the springs 4 reassert themselves and move the plate forward, whereby its retaining-lugs 6 will be entered into the slots 9 in the arms 8 of the cylinder, Figs. 5 and 6, which is thus firmly secured to the lock-case, from which it cannot be removed except by again pushing the sliding retaining-plate 2 inward into its retired position, whereby its lugs 6 are moved out of the notches 9, after which the cylinder may be removed. To replace it, it is only necessary to push the plate 2 inward to get the lugs 6 thereof out of the way for the free entrance of the arms 8 of the cylinder into the case.

It will thus be seen that by the addition of a single part—viz., that of the plate 2—I provide for the convenient attachment and detachment of the cylinder or key-guide to and from the lock. It is obvious, however, that the plate might be arranged to move in some other way and to be moved by some other means, as well as to be engaged in a different manner with the cylinder. I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such variations therefrom as fairly fall within the spirit and scope of my invention.

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

1. In a detachable-cylinder desk-lock, the combination with the case and the cylinder thereof, of a cylinder-retainer located within the said case, and a spring coacting with the said cylinder-retainer to normally maintain the same in engagement with the cylinder for securing the same in place, the said retainer being moved against the tension of the said spring, for the detachment of the cylinder from the lock.

2. In a desk-lock, the combination with a spring-actuated cylinder-retainer located within the lock, of a detachable cylinder or key-guide having one or more locking members projecting from its inner end and adapted to be entered into the lock and to be therein engaged by the said retainer by which it is detachably secured in place.

3. In a desk-lock, the combination with a spring-actuated cylinder-retainer located within the lock and having an operating-finger the end of which is exposed on the outside of the lock-case, of a cylinder or key-guide provided with one or more arms adapted to enter the case and to be engaged by the

said retainer which is pushed inward by its said finger for releasing the said cylinder.

4. In a detachable-cylinder desk-lock, the combination with a case having a face-plate formed with a slot, of a detachable cylinder provided with one or more arms projecting inwardly from its inner end, a sliding cylinder-retainer located within the lock-case and provided with an operating-finger extending into the said slot through which the said finger is exposed for the operation of the retainer, and a spring coacting with the retainer and normally maintaining the same in engagement with the inwardly-projecting arm or arms of the cylinder for the detachment of which from the lock the retainer is moved against the tension of the said spring.

5. In a detachable-cylinder desk-lock, the combination with the case thereof, of a cylinder having two retaining members forming longitudinal extensions of its inner end, a sliding cylinder-retainer adapted to be engaged with both of the said retaining members, and a spring coacting with the retainer to maintain it in engagement with the said retaining members.

6. In a detachable-cylinder desk-lock, the combination with the case thereof, of a cylinder having two notched arms projecting beyond its inner end, of a sliding cylinder-retainer formed with lugs or projections coacting with the said notched arms, and a spring coacting with the retainer for maintaining the lugs or projections thereof normally in the notches of the cylinder which is released for its detachment from the said case, by moving the retainer against the tension of the said spring.

7. In a desk-lock, the combination with a spring-actuated sliding cylinder-retaining plate located within the lock and formed with a clearance-opening entered by retaining-lugs, of a cylinder or key-guide having one or more arms projecting from its inner end and entering the lock and notched to receive the said lugs whereby the cylinder is detachably secured in place.

8. In a desk-lock, the combination with the cover thereof, of a sliding plate located within the said cover and adapted to be manually operated by means of a finger exposed on the outside of the lock, springs coacting with the said plate for holding it in its cylinder-retaining position, and a cylinder formed with one or more arms entering the lock-case and adapted to be engaged by the said plate by which it is detachably secured in place.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES ROCHE.

Witnesses:

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OTIS B. HOUGH.