

No. 713,245.

Patented Nov. 11, 1902.

J. ROCHE.

DETACHABLE CYLINDER DESK LOCK.

(Application filed May 2, 1902.)

(No Model.)

Fig. 1

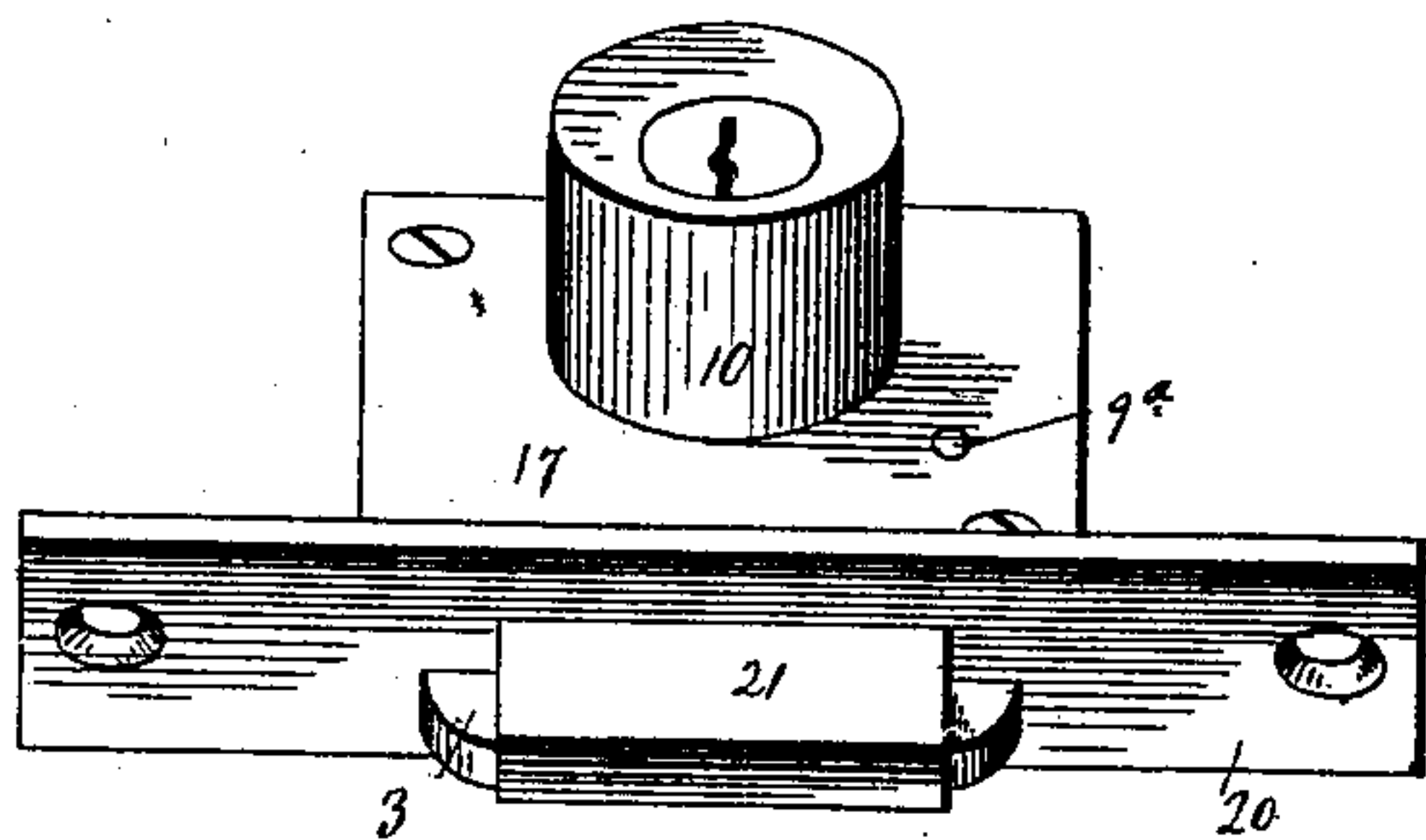


Fig. 2a

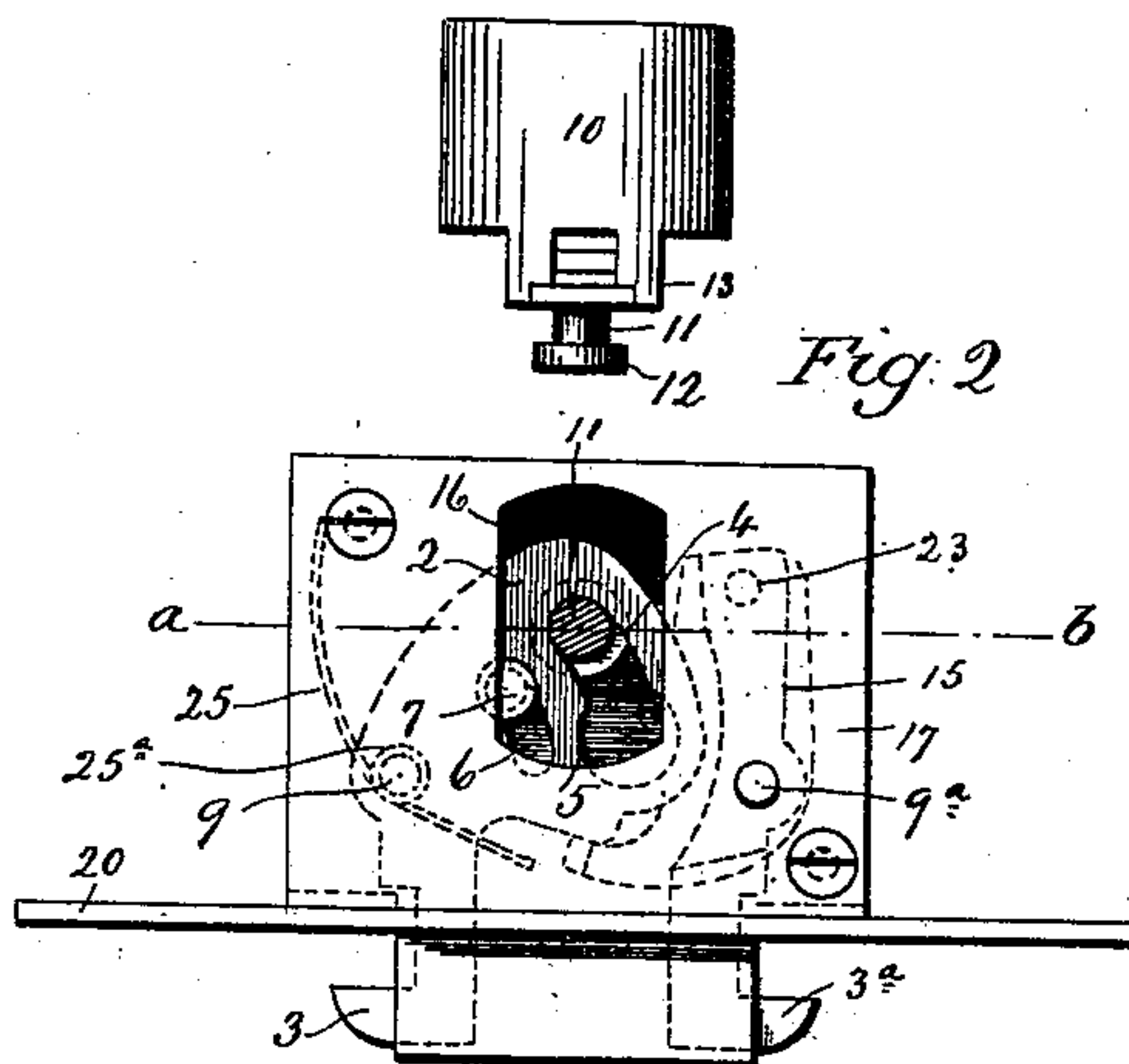


Fig. 3

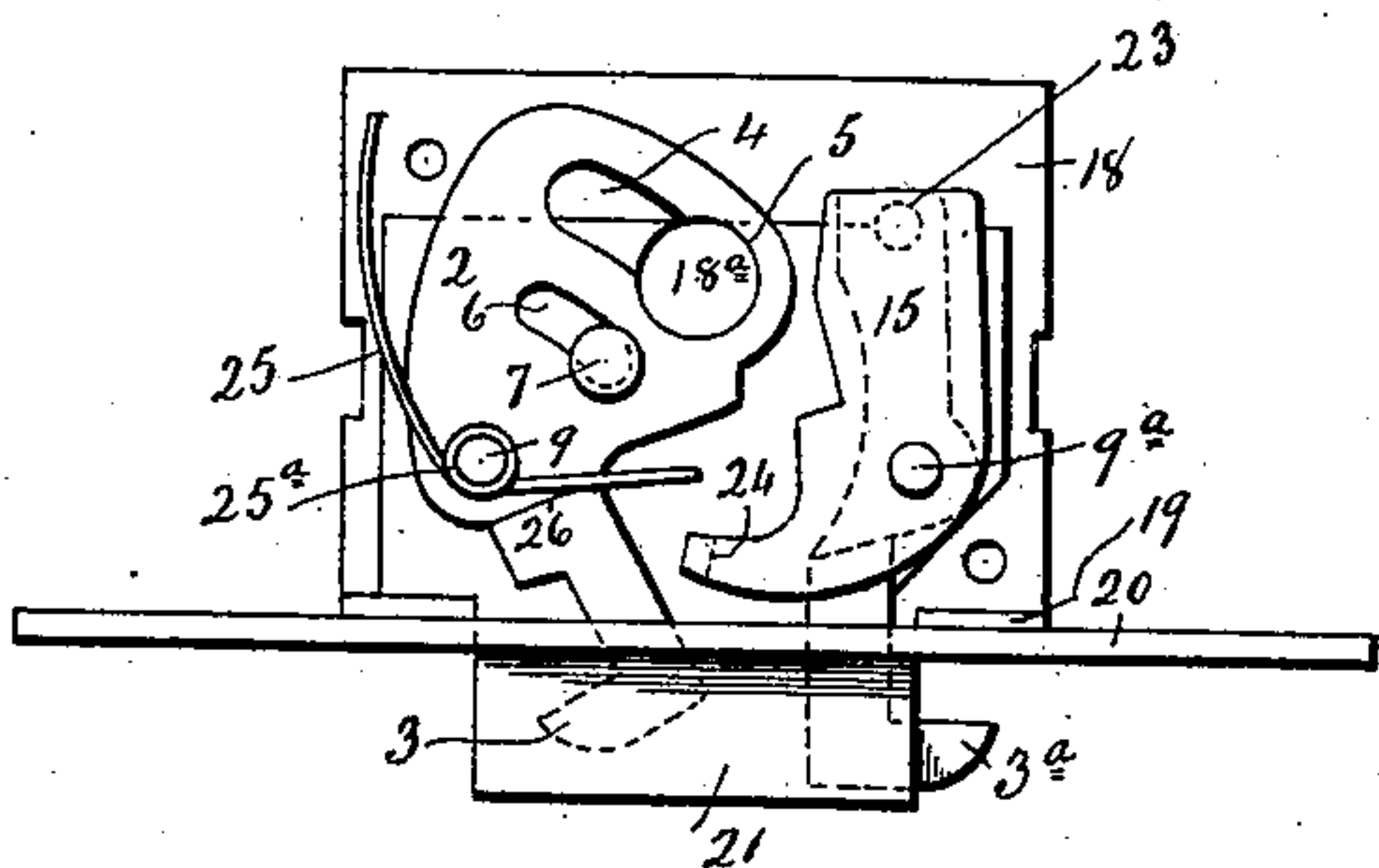


Fig. 5

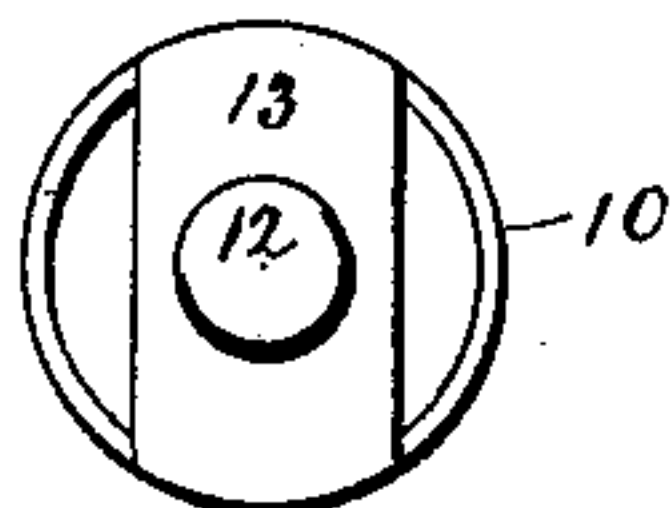


Fig. 4

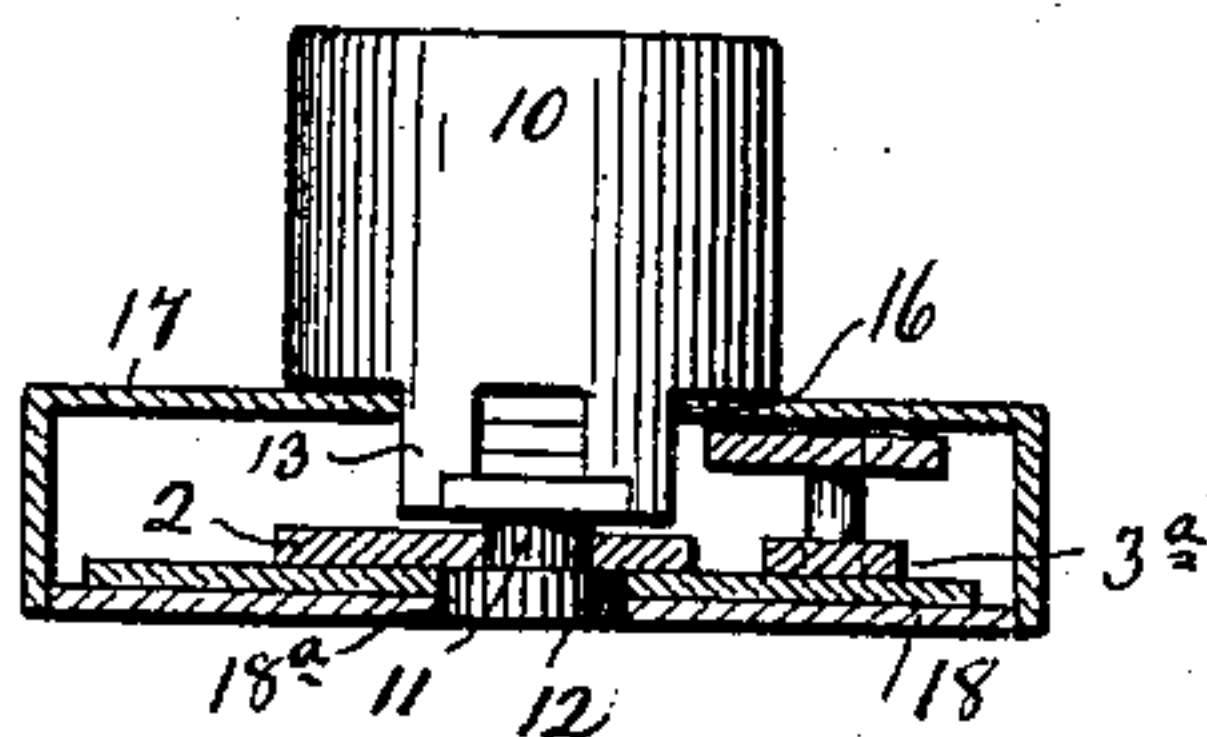


Fig. 7

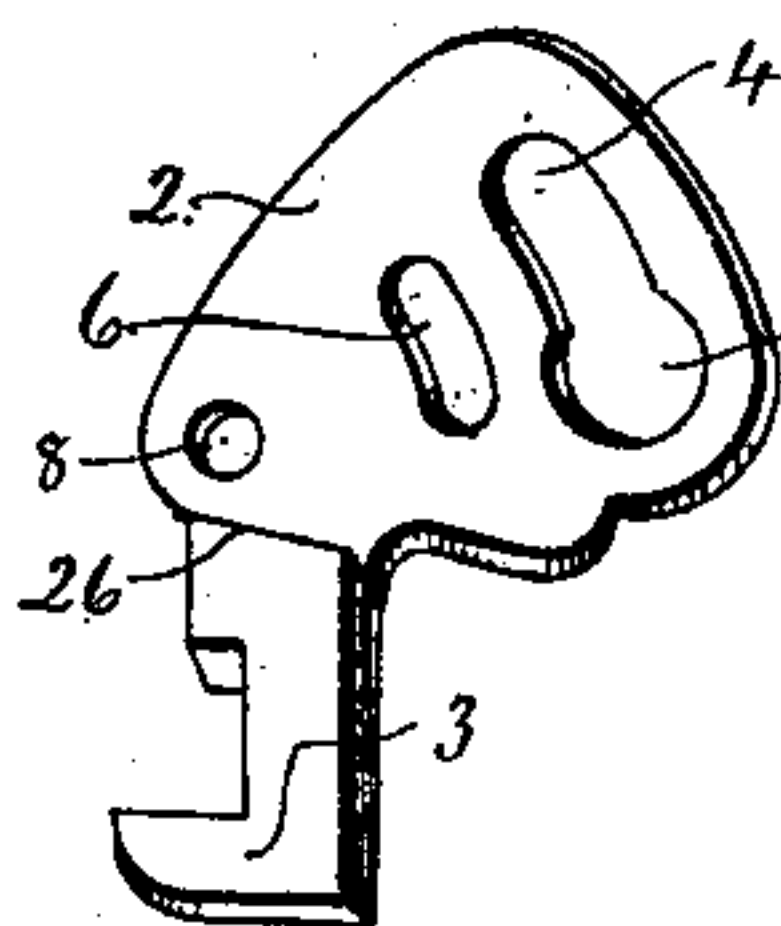


Fig. 9

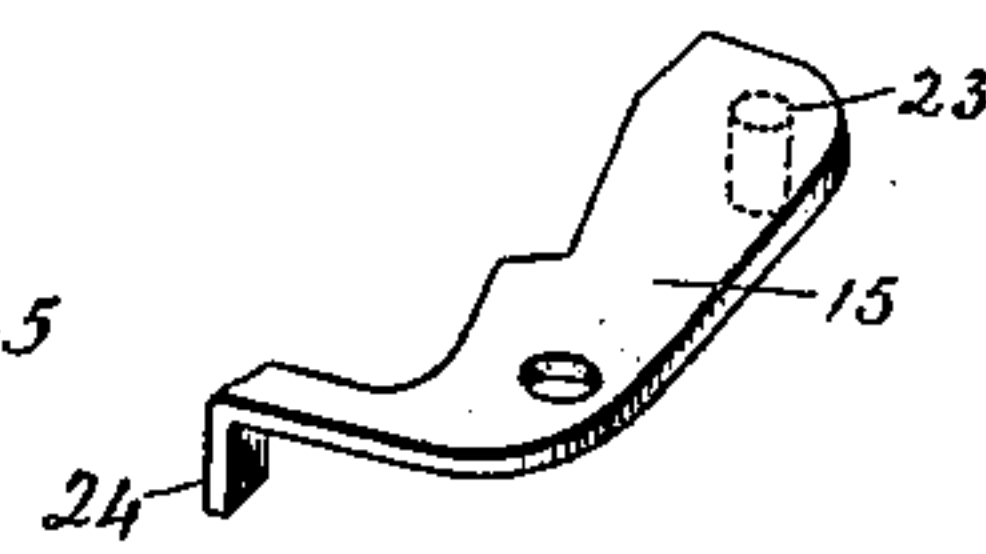


Fig. 8

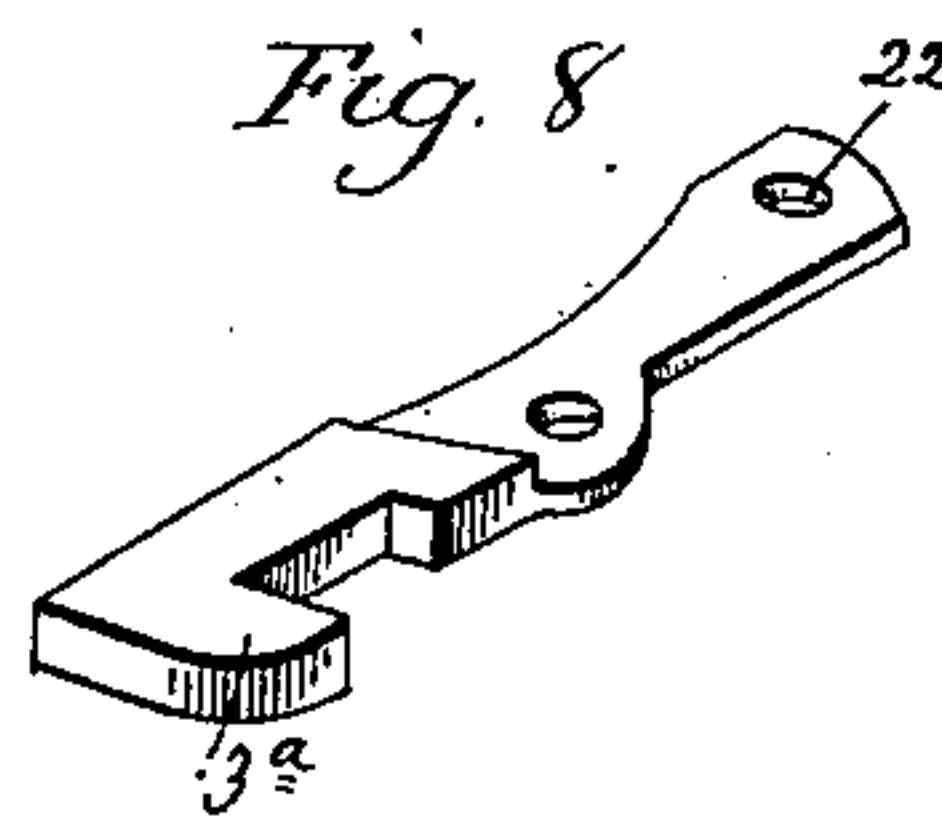
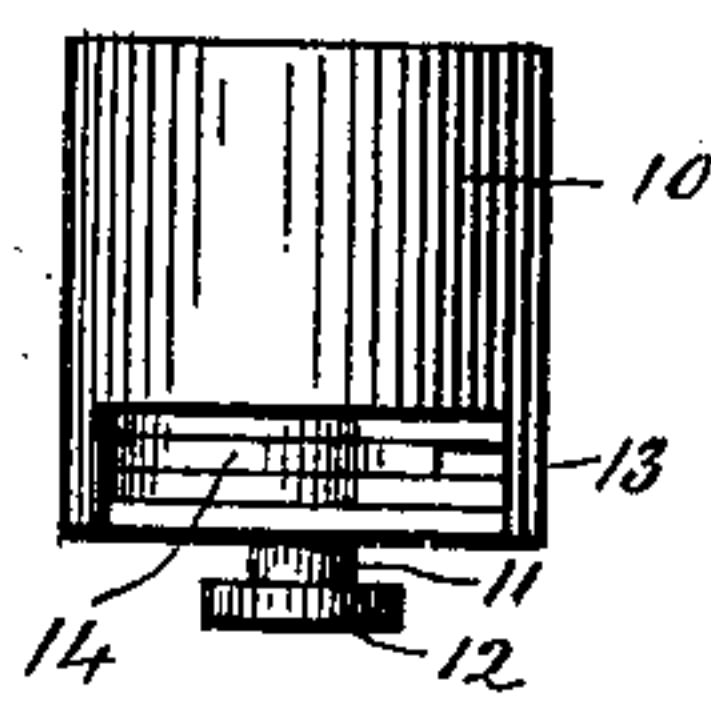


Fig. 6



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UNITED STATES PATENT OFFICE.

JAMES ROCHE, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO EAGLE LOCK CO., OF TERRYVILLE, CONNECTICUT, A CORPORATION.

DETACHABLE-CYLINDER DESK-LOCK.

SPECIFICATION forming part of Letters Patent No. 713,245, dated November 11, 1902.

Application filed May 2, 1902. Serial No. 105,583. (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
5 Improvement in Detachable-Cylinder Desk-Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact
10 description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a lock constructed in accordance with my invention;
15 Fig. 2, a plan view of the lock with the detachable cylinder or key-guide removed; Fig. 2^a, a view in side elevation of the cylinder or key-guide as it appears when detached; Fig. 3, a plan view of the lock with the cover removed and showing its cylinder-retainer in
20 its clearance position, into which it is forced preparatory to the attachment or removal of the cylinder; Fig. 4, a view of the lock on the line *a b* of Fig. 2 with the cylinder in position, showing the engagement of the cylinder-retainer with the retaining-head thereof; Fig.
25 5, a reverse view of the cylinder, showing its locking-head; Fig. 6, a view of the cylinder in elevation looking at one side of its locking-head; Fig. 7, a detached perspective view of the cylinder-retainer, which is associated
30 with one of the spring-hooks of the lock; Fig. 8, a detached perspective view of the other spring-hook; Fig. 9, a detached perspective view of the tumbler of the lock.
35

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

40 With these ends in view my invention consists in a desk-lock having one of its spring-hook locking-bolts provided with a cylinder-retainer for detachably securing the cylinder or key-guide to the lock.

45 My invention further consists in a lock having certain details of construction and combinations of parts, as will be more fully hereinafter described, and pointed out in the claims.

50 In carrying out my invention as herein shown I employ a cylinder-retainer 2 in the

form of a plate made integral with the upper end of the spring-hook locking-bolt 3, the said plate being formed with a segmental locking-slot 4, the inner end of which
55 merges into a circular clearance-opening 5. The said plate 2 is also formed with a segmental slot 6, receiving a stop-pin 7, which limits its swinging movement, and with a pivot-hole 8, receiving a stud 9, upon which
60 the plate, and hence the hook 3, swings as upon a center. To adapt the cylinder of key-guide 10 to coact with the said plate 2, it is provided at its inner end with a centrally-arranged retaining-stud comprising a shank
65 11 and an overhanging head or flange 12, the shank 11 being adapted in diameter to enter the slot 4 of the plate and the overhanging head 12 being adapted in diameter to pass through the clearance-opening 5 thereof. To
70 prevent the cylinder from turning, it is formed at its inner end with an oblong locking-head 13, the sides of which, as shown, are open to permit the roll-back 14 of its contained mechanism to coact with the tumbler 15 of the lock
75 in the usual manner. The said locking-head 13 enters an oblong opening 16, formed in the cover 17 of the lock-case, which also comprises a plate 18, formed with flanges 19, by means of which it is secured to the face-plate
80 20, which is provided with the usual housing 21 for the spring-hook locking-bolts 3 and 3^a. The lock-case plate 18 aforesaid is formed with a circular opening 18^a, corresponding in diameter to and receiving the flanged head
85 12 of the stud of the cylinder, as seen in Fig. 4. The spring locking-bolt 3^a is of ordinary construction and swings upon a stud 9^a, corresponding to the stud 9, before mentioned. At its upper end the hook 3^a is formed with
90 a hole 22 for the reception of a coupling-pin 23, extending inward from the upper end of the tumbler 15, the lower end of which is formed with an inwardly-turned operating-finger 24, which engages with the lower edge
95 of the plate 2. A spring 25, having a coil 25^a to adapt it to be engaged with the stud 9, presses against the shoulder 26, between the plate 2 and the hook 3, and exerts a constant effort to hold the hook in its position of pro-
100 jection beyond its end of the housing 21. Through the medium of the tumbler 15 the

same spring also exerts a constant effort to hold the hook 3^a in its normal position of projection beyond the opposite end of the housing.

5 With regard now to the attachment and detachment of the cylinder 10 it is to be observed that the clearance-opening 5 of the plate 2 is brought into registration with the stud-receiving opening 18^a in the lock-case
10 plate 18 only when the plate 2 is swung to the extreme limit of its outward movement, as shown in Fig. 3, which is done by using some instrument, such as a knife-blade or a screw-driver, to crowd the hook 3 inward into
15 the housing 21 almost to the center thereof and beyond any position which it takes therein in the ordinary use of the lock. When the plate 2 has been moved into this position, the cylinder is applied to the lock-
20 case, its locking-head 13 being passed through the locking-opening 16 in the cover 17 and its retaining-stud being passed through the clearance-opening 5 of the cylinder-retaining plate 2 and into the stud-receiving opening 18^a in the case-plate 18. Inward pressure upon the hook 3 is now removed, allowing the spring 25 to reassert itself and restore the plate 2 to its normal position, as shown in Fig. 2, whereby the segmental retaining-slot 4 of the cylinder-retaining plate
30 2 is moved over the stem 11 of the cylinder-retaining stud in such a way that the edges of the slot 4 engage with the overhanging head 12 and secure the cylinder in place. Thereafter in the normal operation of the lock
35 the plate 2 swings with reference to the said stud, but never releases the same, and hence the cylinder, because in the ordinary operation of the lock the plate is never permitted
40 to swing outward enough to bring its clearance-opening 5 into registration with the head

12 of the stud, nor can that be done by the action of the roll-back of the cylinder, but only by crowding the hook 3 inward beyond its normal position by the use of some such
45 instrument as described. This, of course, would never be done after the initial application of the cylinder to the lock-case, unless to repair or adjust the lock.

It is apparent that in carrying out my invention some changes from the construction shown and described may be made. I would therefore have it understood that I do not limit myself to such construction, but hold myself at liberty to make such variations
55 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
60 Patent, is—

1. In a desk-lock, the combination with a spring-hook locking-bolt provided with a cylinder-retainer, of a cylinder adapted to be engaged by the said cylinder-retainer which detachably secures it to the lock.
65

2. In a desk-lock, the combination with a spring-hook locking-bolt provided with a cylinder-retainer in the form of a plate having a retaining-slot and a clearance-opening, of a cylinder provided at its inner end with a retaining-stud adapted to enter into the said
70 opening when the hook is crowded inward beyond its normal position, and to be engaged by the walls of the said slot when the hook is in its operative position.
75

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

JAMES ROCHE.

Witnesses:

R. J. PLUMB,
OTIS B. HOUGH.