

No. 702,333.

Patented June 10, 1902.

M. SCHRAUDER.  
LOCK.

(Application filed Dec. 18, 1901.)

(No Model.)

Fig. 1.

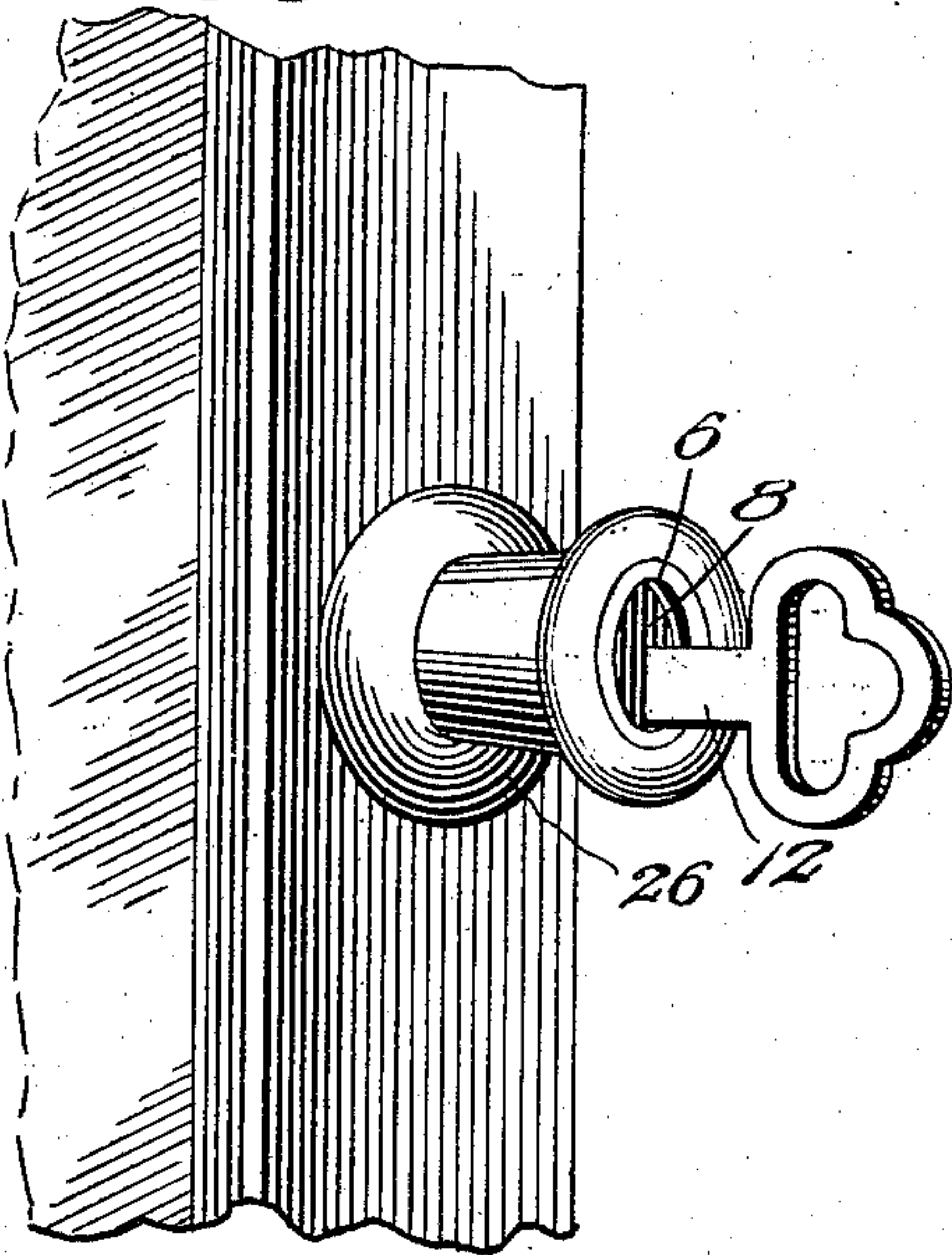


Fig. 2.

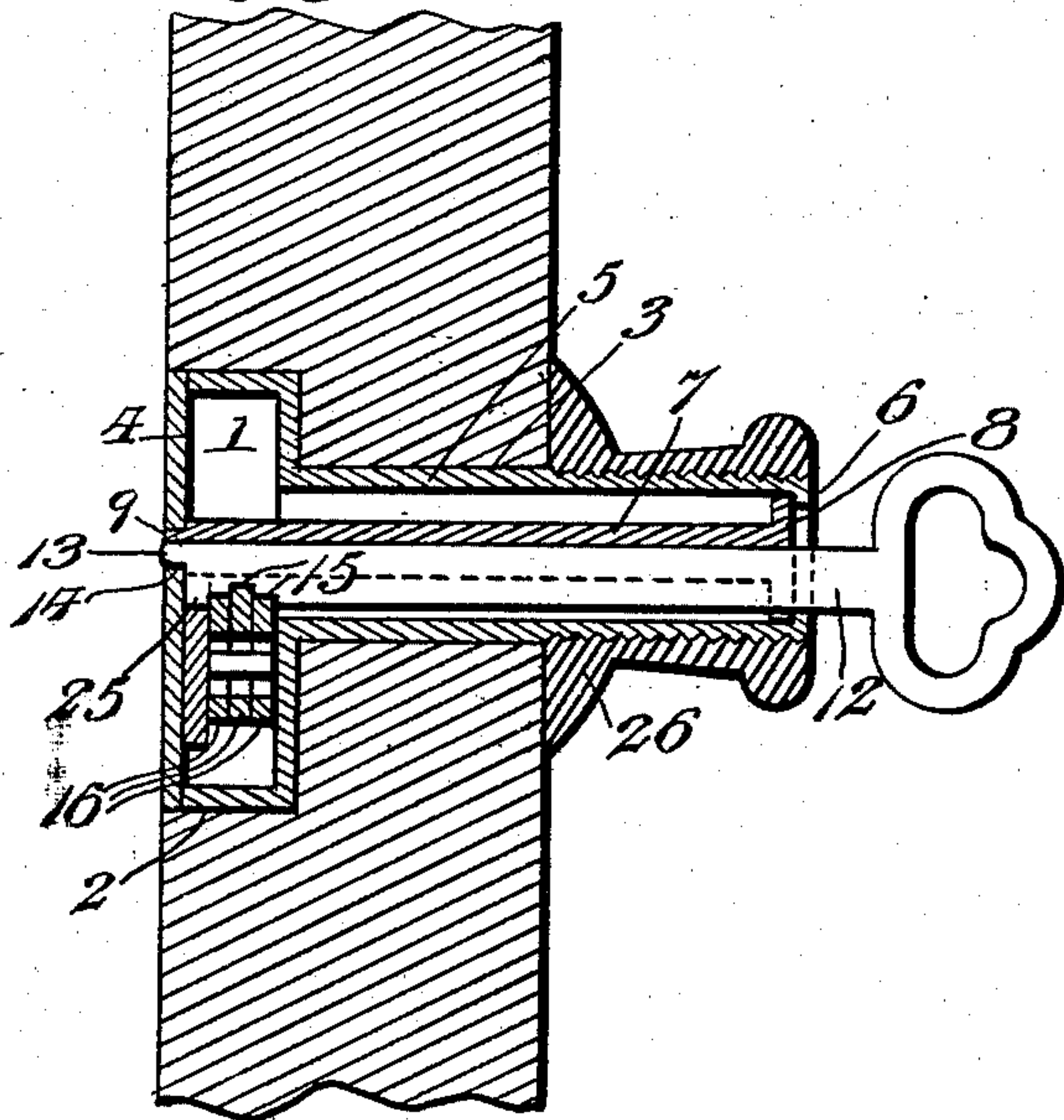


Fig. 3.

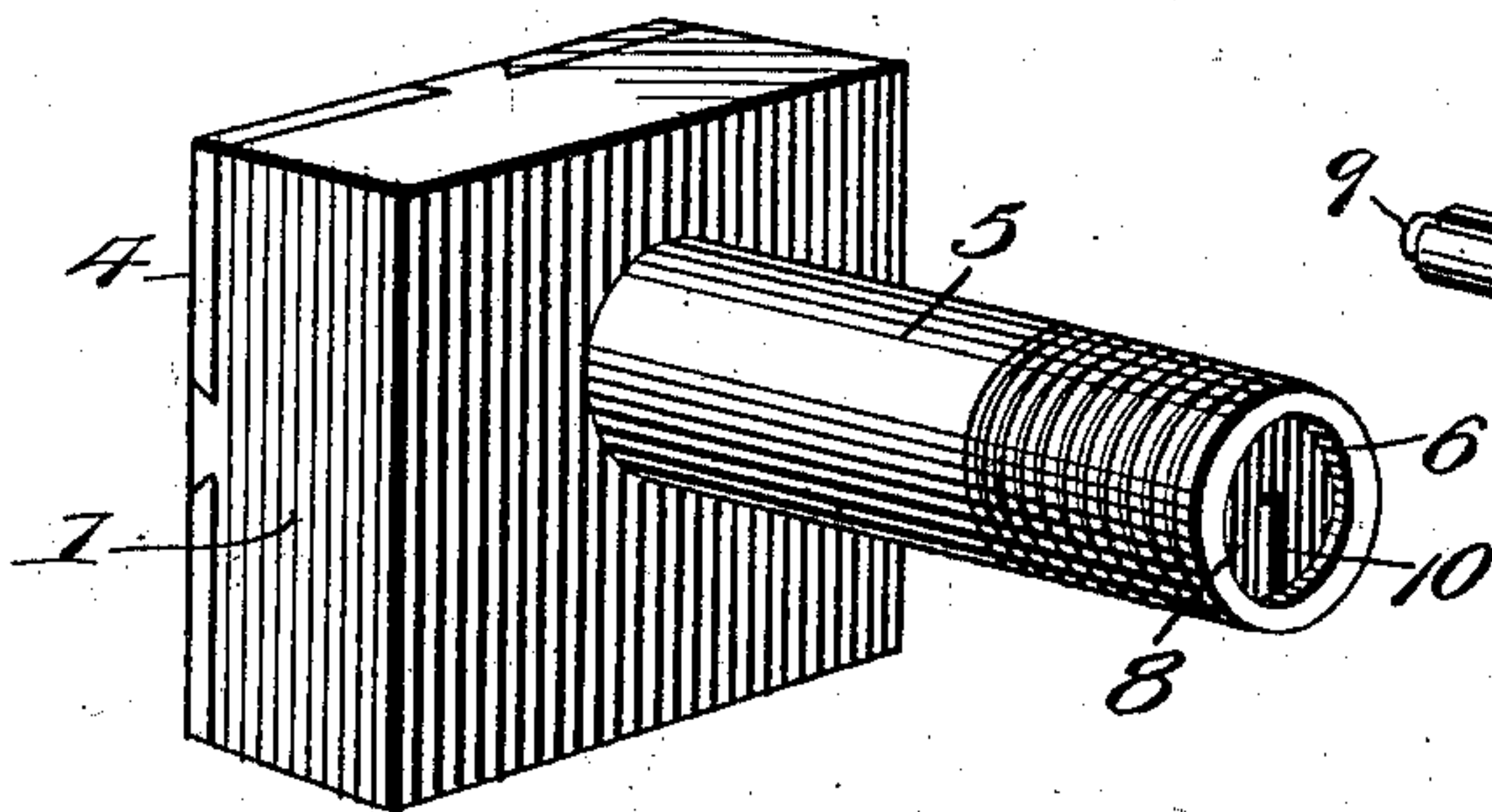


Fig. 4.

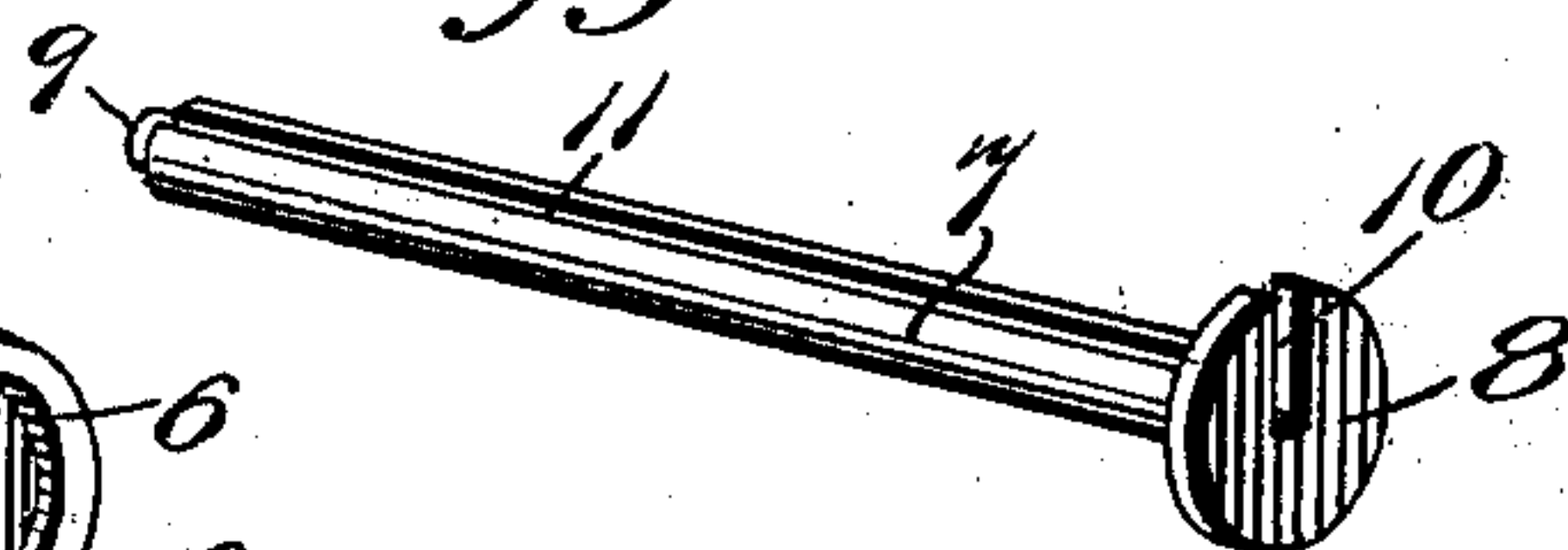
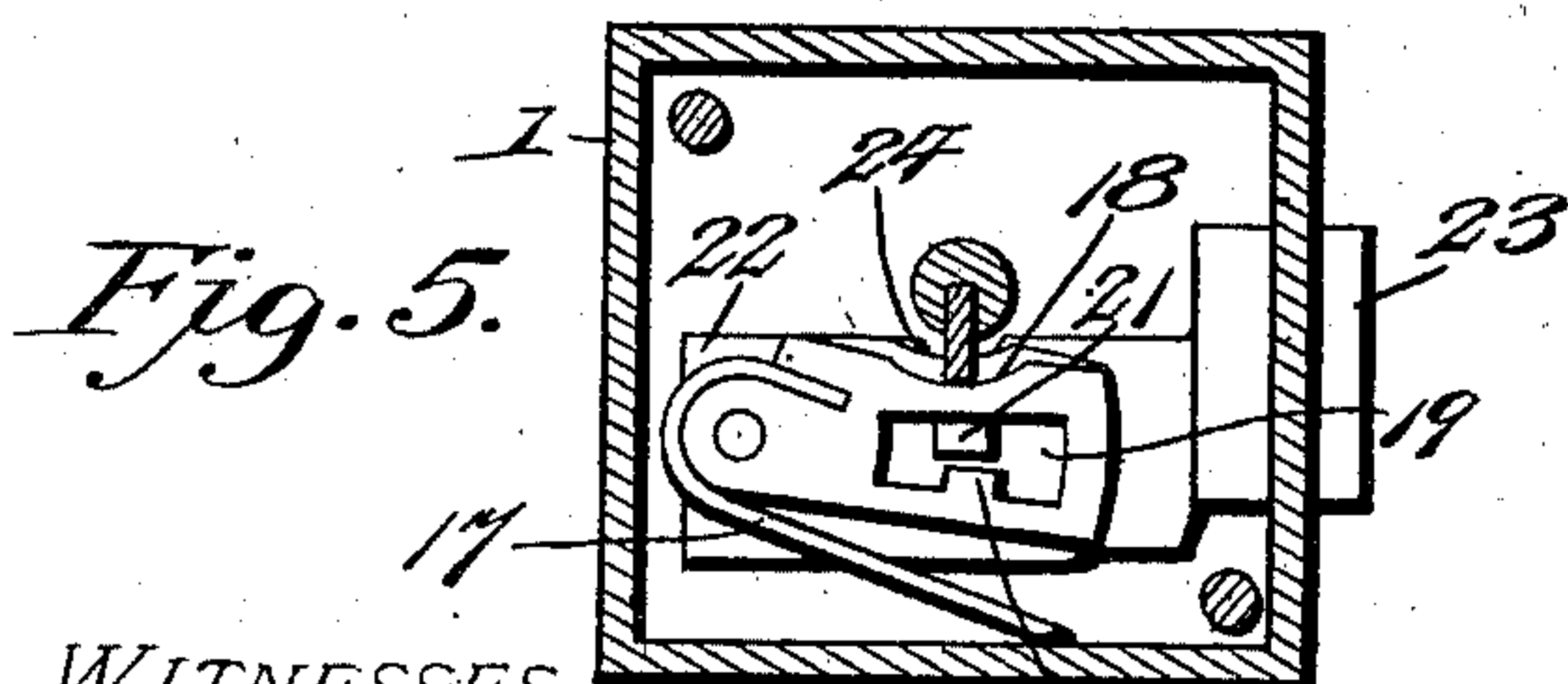
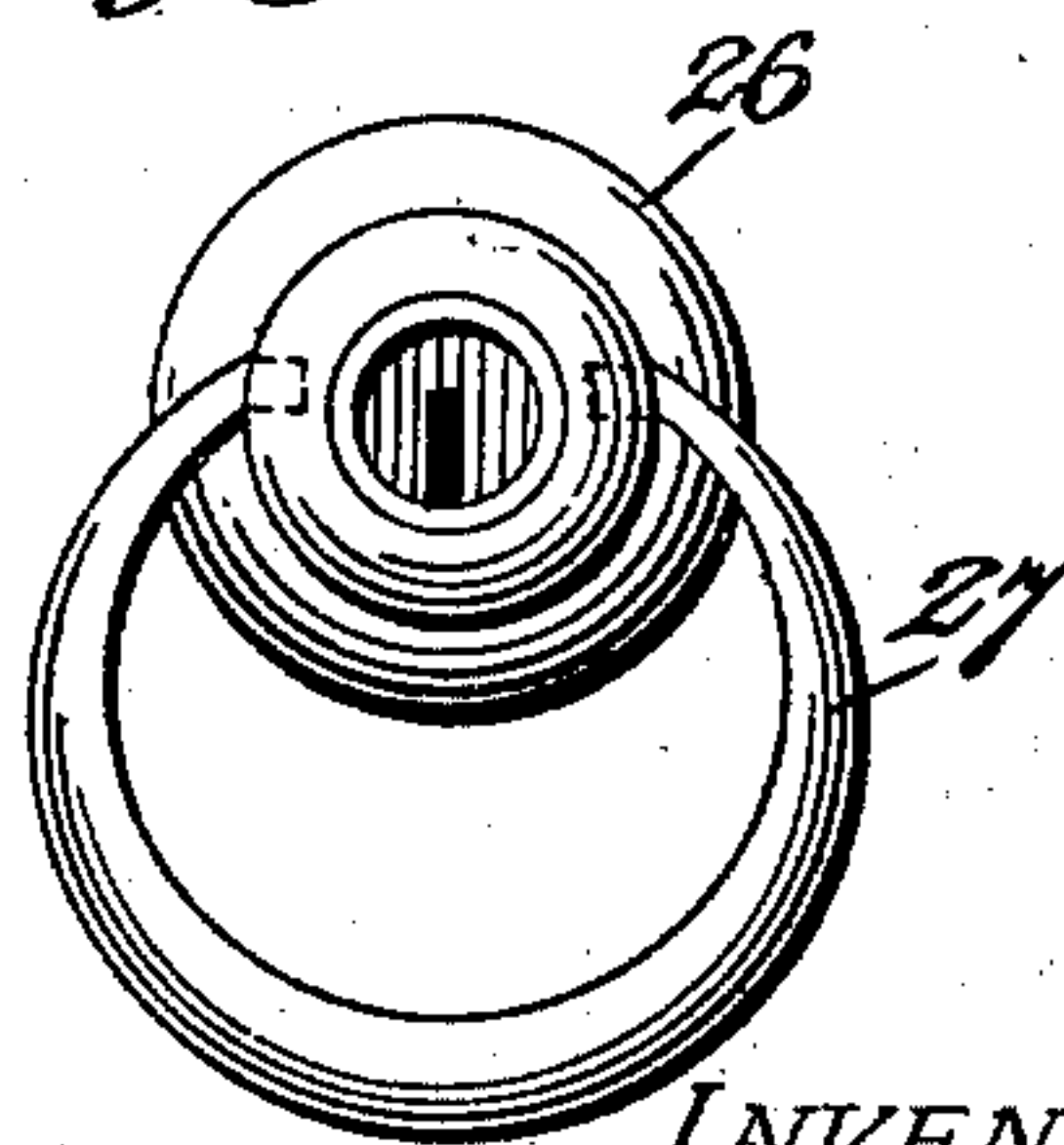


Fig. 6.



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# UNITED STATES PATENT OFFICE.

MARTIN SCHRAUDER, OF CINCINNATI, OHIO.

## LOCK.

SPECIFICATION forming part of Letters Patent No. 702,333, dated June 10, 1902.

Application filed December 18, 1901. Serial No. 86,454. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN SCHRAUDER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to locks adapted for general application, but particularly intended for drawers, furniture, cabinet-work, and either metallic or wooden doors.

The object of the improved lock construction is to provide means for simplifying the application of the lock to drawers and the like, and to embody therein a strong and durable construction as well as avoid the use of screws or the like as means for fastening the several parts of the lock.

With these and other objects and advantages in view the invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a portion of a drawer, door, or other device, showing the improved lock applied thereto and the manner of inserting the key therein. Fig. 2 is a transverse vertical section through the lock and device shown in Fig. 1. Fig. 3 is a detail perspective view of the lock casing or housing and cylinder inseparably held in connection therewith. Fig. 4 is a detail perspective view of the rotatable key-guide mounted in the cylinder. Fig. 5 is a longitudinal vertical section through a portion of the lock casing or housing, showing the lock mechanism. Fig. 6 is a front elevation of a portion of a lock, showing a ring-pull applied thereto.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The improved lock, as before indicated, is intended to be applied to any drawer, door, cabinet-work, furniture, or other device to which it may be applicable, and a mortise for the lock casing or housing may or may not be formed in the device to which the lock is applied, though it is preferable that such mortise be provided.

The numeral 1 designates a lock casing or housing which in the present instance is let

into a mortise 2, formed in the device or article to which the lock is applied, and opening into said mortise is a bore 3, extending transversely through the device to which the lock is applied. The lock-casing is angular in contour, and the mortise 2 is of similar form, so that when the casing is inserted in the mortise the lock as an entirety will be held in immovable position, so far as rotation or abnormal displacement is concerned. The lock-casing comprises a back plate 4, and projecting from the side thereof opposite said back plate is a cylinder 5 of such length as to compensate for the thickness of the device or article to which the lock is applied and have the front extremity of said cylinder project outwardly in advance of the face of the article or device with which it is adapted to use the lock. The front end of the cylinder 5 is inwardly swaged or upset to form a guard-flange 6 to retain a key-guide 7 in place within the cylinder, said guide having a flanged or disk head 8 at its front end movably bearing against the guard-flange 6 and a rear-shouldered terminal 9 rotatably let into the back plate 4, as clearly shown by Fig. 2. The flanged or disk head 8 of the key-guide 7 is constructed with a radial slot 10, which coincides or aligns with a longitudinal slot 11, extending throughout the full length of the body of the said guide to receive a key 12, which is longitudinally pushed into the said slots 10 and 11 and has a rear terminal projection 13 to enter and rotate in an opening 14 in the back plate 4 of the casing 1. When the key 12 is inserted in the slots 10 and 11, it is positively held by the guide, so that when said key is revolved to operate the lock the guide will be correspondingly revolved therewith. The rear extremity of the key 12 also has stepped recesses 15, three of said recesses being used in the present instance and equal in width to the thickness of three tumblers 16, which are normally held upwardly by springs 17, secured to said tumblers and engaging the bottom of the lock-casing, as clearly shown by Fig. 5. The upper edges of the tumblers are formed with concave recesses 18, with which the stepped recesses 15 of the key engage, and each tumbler has a slot 19 formed therein and a lug 20 at the center of the lower wall of said slot, said lug projecting upwardly. The



slots 19 and lugs 20 of the tumblers are similar in location and dimensions in all the tumblers 16, and extending transversely through the said slots and slidable in the latter is a catch-bar 21, carried by a sliding bolt 22, having a locking-head 23, movable through a suitable slot in one end of the lock-casing 1. The upper edge of the bolt 22 is formed with a slot 24, into which the rear terminal projection 25 of the key 12 extends or engages to move the said bolt either inwardly into the casing 1 in unlocking position or outwardly from said casing to cause the head 23 to be disposed in a locking position, and the said bolt and its head will be held in either a locking or unlocked position by the lugs 20 engaging the reverse sides of the locking-bar 21, it being obvious that when the key 12 is turned at such an angle as to be out of contact with the upper edges of the tumblers 16 the springs 17 will throw up the said tumblers and dispose the lugs 20 on either one side or the other of the locking-bar 21.

The key-guide 7 insures a positive application of the key 12, and one of the very essential features of the present improved construction is the substantially integral connection of the cylinder 5 in relation to the casing 1, and, furthermore, the assemblage of the components of the lock, except the exterior pull, within the casing 1 and cylinder 5 will render the application of the improved device convenient and simple without requiring the use of securing devices, and thus materially save in the expense of labor and time in applying the improved lock. The key 12 is of such width that when the back edge thereof is located in the slots 10 and 11 and firmly presses against the walls of said slots said key will have its rear extremity brought into accurate operative relation to the tumblers and bolt when the guide is turned to the position shown by Fig. 2.

On the front projected extremity of the tubular cylinder 5 a pull-knob 26 is secured and serves as the means for holding the casing and cylinder in firm applied position in relation to the article or device with which the lock is used. This pull-knob 26 can be secured to the projected end of the cylinder 5 by several different means; but a simple method of arriving at a positive securement of the said pull-knob is to exteriorly screw-thread the front projecting extremity of the

cylinder and similarly screw-thread the interior or bore of the knob, and when the latter is turned inwardly over the front projecting extremity of the cylinder and contacts with the front face of the device or article to which the lock is applied the cylinder and lock will be positively drawn into immovable relation to the article or device on which the lock is to be used and fastening-screws or the like are entirely dispensed with as well as keyhole-plates and escutcheons. The mutilation of the part of the drawer, door, or other device to which the improved lock is applied is therefore reduced to a minimum, and it is obvious that many ornamental elements or members can be used in connection with the pull-knob 26—as, for instance, the ring 27. (Shown by Fig. 6.) This addition or modification is intended to indicate that it is proposed to vary the arrangement and construction of the pull-knob to suit the device to which the lock is applied or to produce a pleasing design or ornament. At times the pull-knob 26 or the part applied thereto may be plated, ornamented, or colored to correspond to the design and coloring or ornamentation of the article to which the lock is applied, and changes in the form, proportions, dimensions, and minor details may also be resorted to without in the least departing from the principle of the invention.

Having thus fully described the invention, what is claimed as new is—

In a lock, the combination of a casing having a cylinder immovably projecting therefrom and communicating with the interior thereof, said cylinder having an outer intumed retaining-flange, lock mechanism within the casing, a rotatable key-guide in the cylinder and casing and having a longitudinal slot extending the full length thereof and also provided with a slotted disk-head rotatably bearing against the inner portion of the flange of the cylinder, a key longitudinally insertible through the cylinder and key-guide, and a pull device attached to the outer extremity of the spindle and forming the sole means for securing the lock in applied position.

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

MARTIN SCHRAUDER.

Witnesses:

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JOHN M. WILKE, Jr.