

3 Sheets—Sheet 1.

Patented Feb. 4, 1890.

No. 420,854.

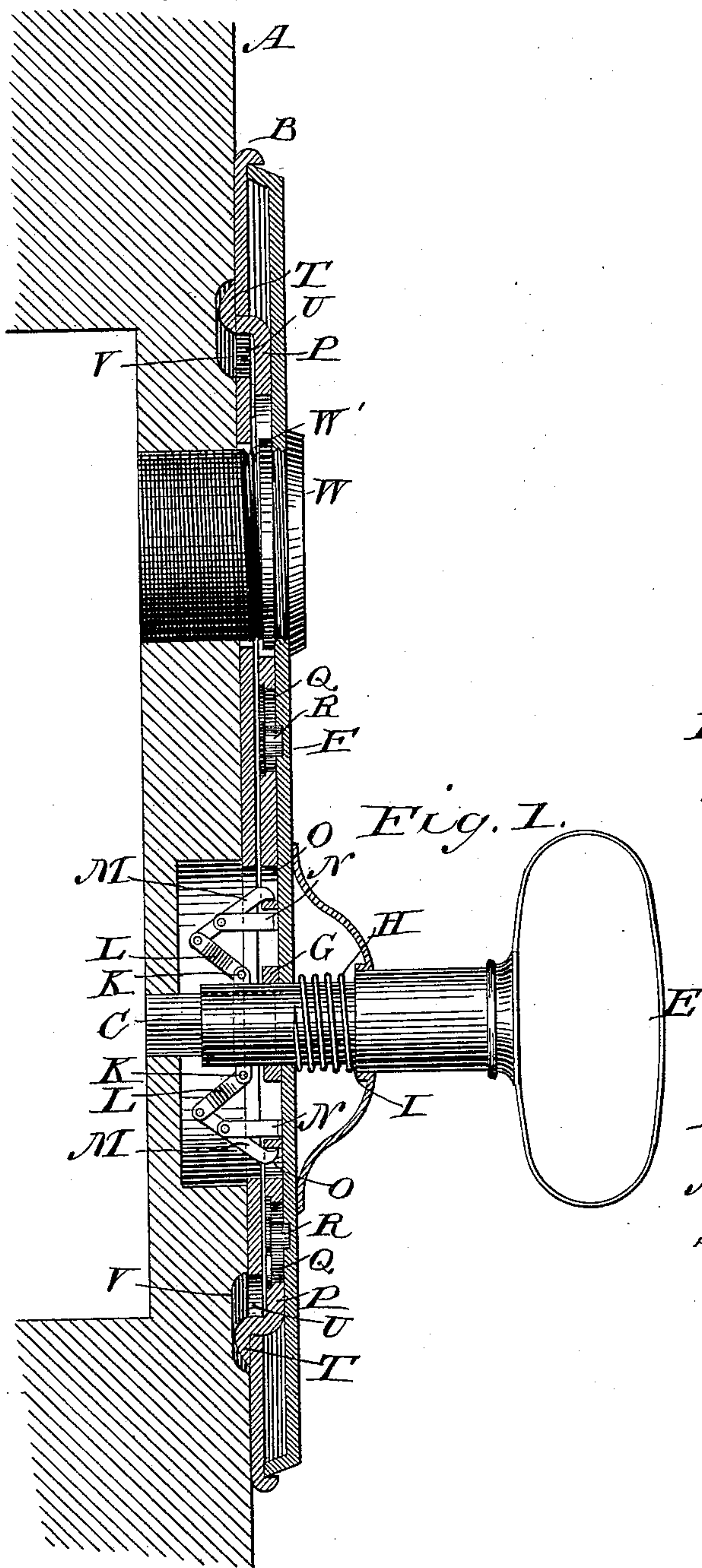
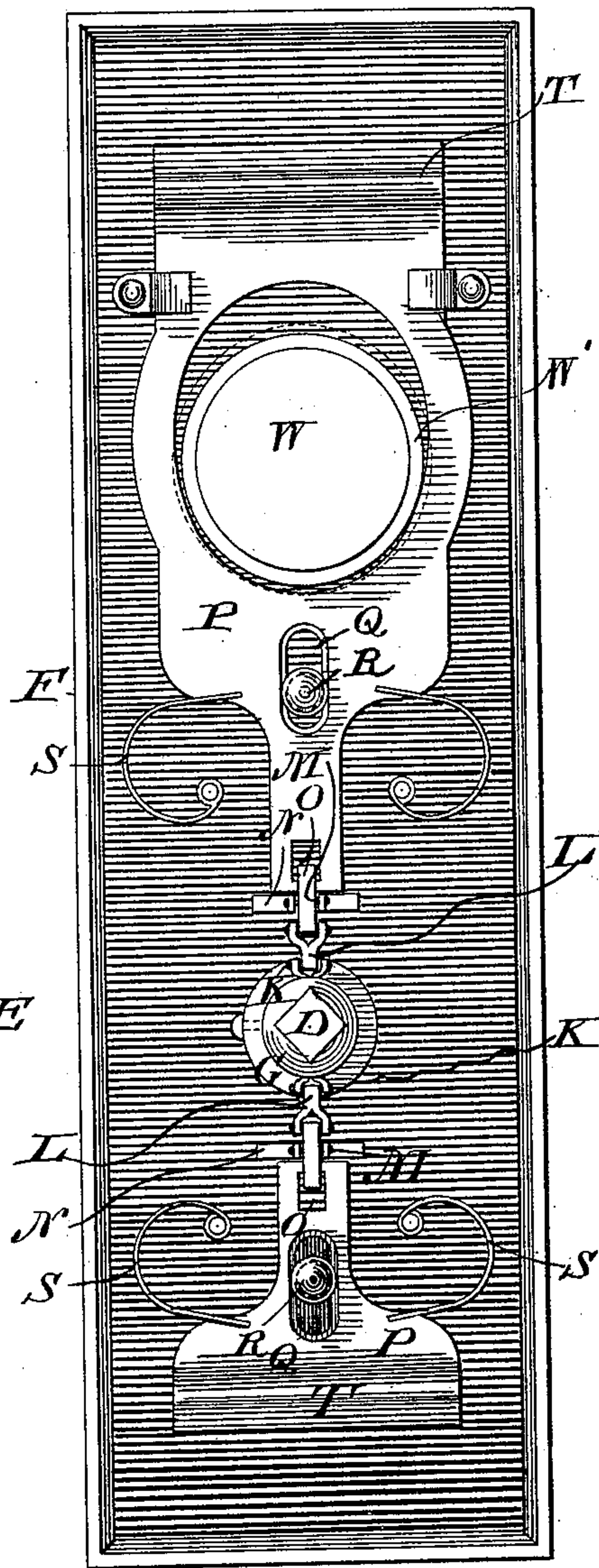


Fig. 2.



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(No Model.)

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LOCK TRIMMING.

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Fig. 3.

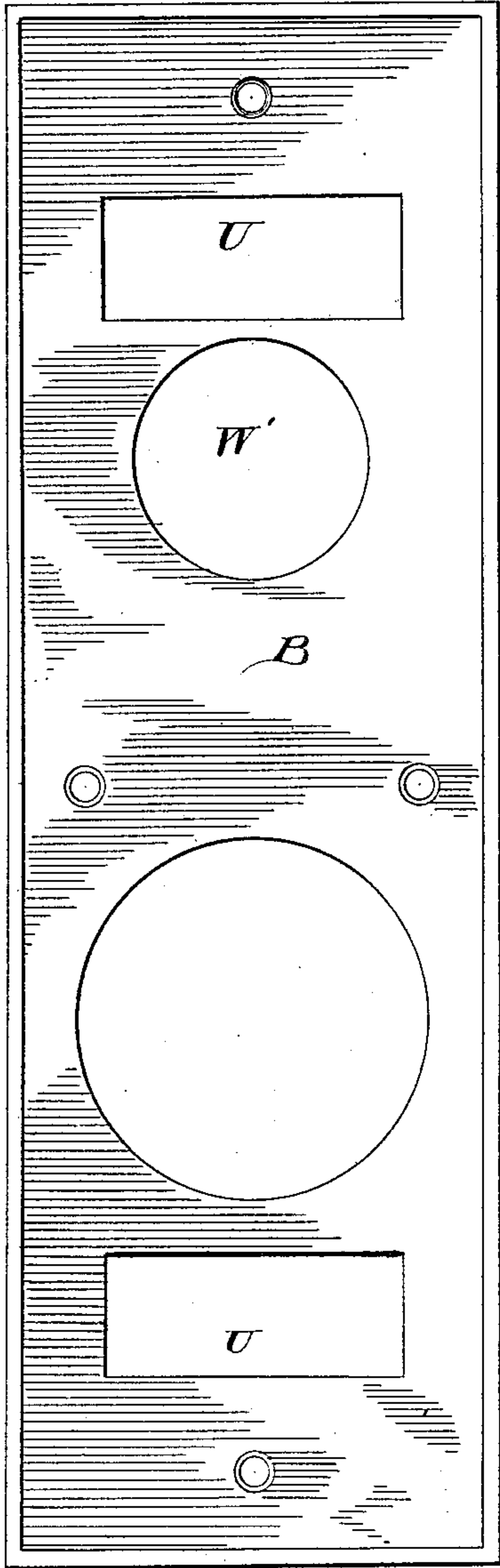


Fig. 5.

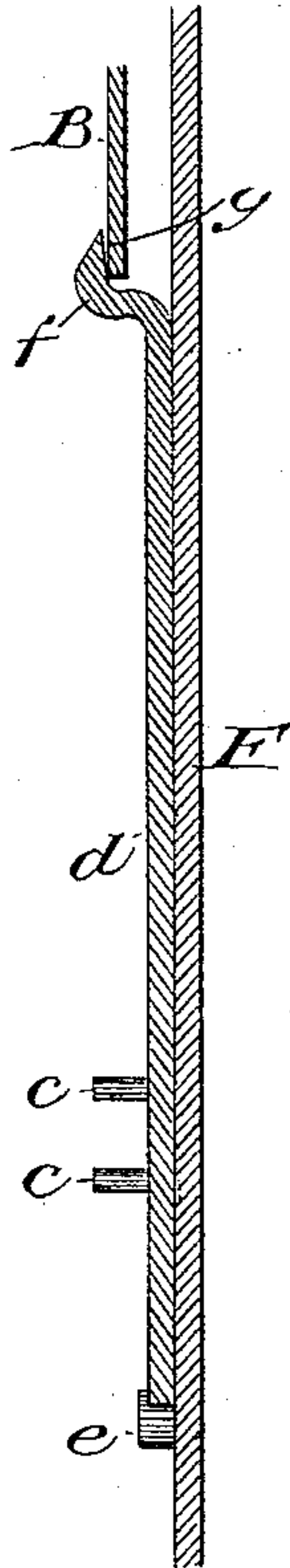
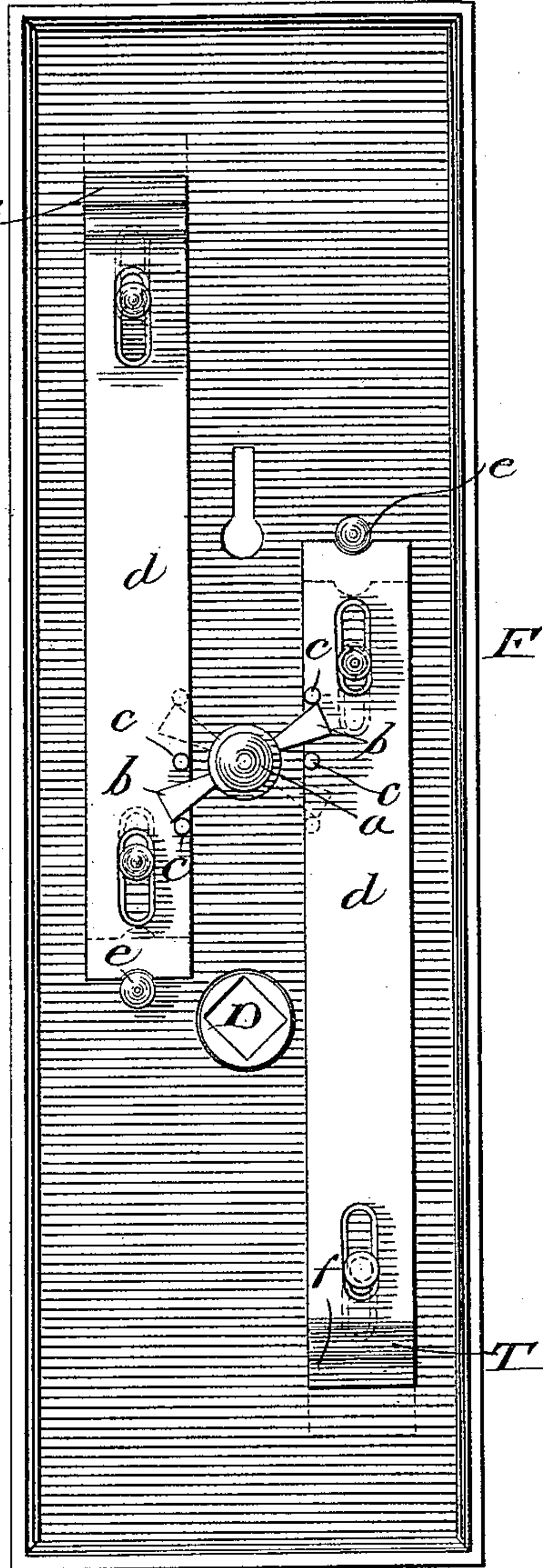


Fig. 4.



Witnesses

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(No Model.)

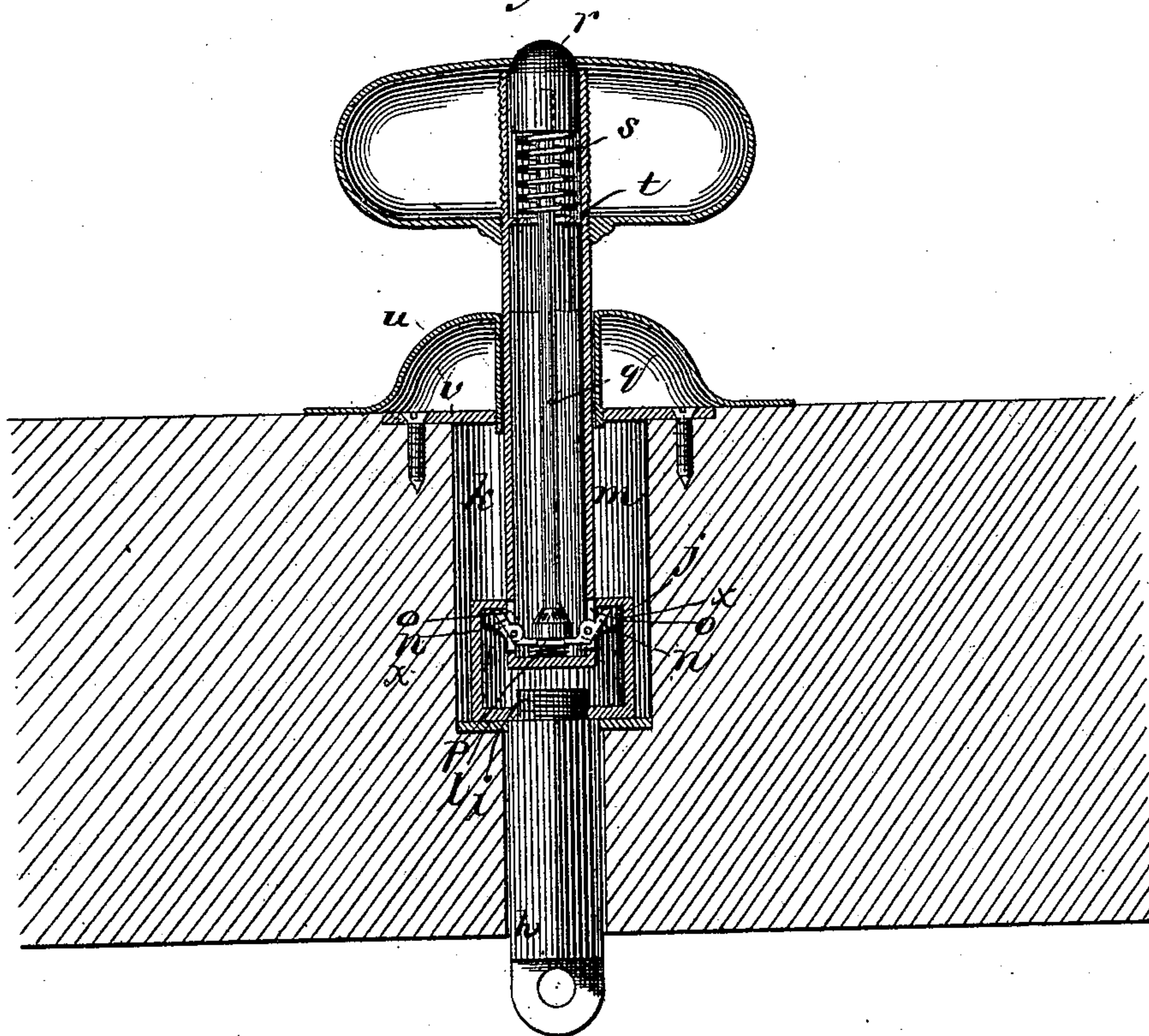
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Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH L. ATKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

LOCK-TRIMMING.

SPECIFICATION forming part of Letters Patent No. 420,854, dated February 4, 1890.

Application filed October 30, 1889. Serial No. 328,661. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH L. ATKINS, of the city of Washington, District of Columbia, have invented certain new and useful Improvements in Lock-Trimming, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide convenient means for readily removing a plate—such, for instance, as an escutcheon of a lock—from a door, or the like, to which it is fastened.

Heretofore escutcheons and the like have been secured to doors by screws or other similar means, so that they could not be removed without danger of defacing them, except by a skilled workman, and then only at the expense of considerable time and trouble.

In all situations where ornamental polished-metal door-fixtures are used it is necessary, in order to preserve their luster and beauty, to scour them frequently. The consequence is, because these parts have been heretofore fixed in place, that the polishing process soils the surface of the wood or other material upon which they are placed, so that in the attempt to preserve the beauty of finish of the metal fixture that of the thing to which it was attached has been marred and the fine effect of the combination destroyed.

My invention is intended to permit the convenient separation of a plate or escutcheon from a door—for instance, for the purpose of polishing it—and of readily replacing it and securing it in position. By this means I prevent the soiling of the adjacent surfaces and at the same time provide for keeping the metal perfectly bright and clean.

In the accompanying drawings, Figure 1 is a vertical central section of my removable escutcheon secured to a door, the knob and key-escutcheon being shown in full. Fig. 2 indicates a view of the back part of the ornamental escutcheon detached. Fig. 3 indicates a front elevation of the fixed plate detached. Fig. 4 shows a modification of my invention provided with lock and bolts for locking the escutcheon in position. Fig. 5 indicates a detached vertical section through one of the bolts, showing the relative position of the parts. Fig. 6 is a vertical central section of

a modification of my invention as applied to an ordinary pull-bell.

Referring to the letters upon the drawings, A indicates a section of a door, and B a plate adapted to be secured by ordinary means upon it.

C indicates an ordinary lock-spindle projecting from the lock. It may be secured in the lock or slipped loosely through the hole usually provided for it in the lock. The spindle fits into the socket D in the shank of the knob E, which is loosely carried on the plate or escutcheon F. The knob may be rotated or moved longitudinally toward the door, but is prevented from being withdrawn from the plate by the collar G, secured to it.

H indicates a spring, which is designed to maintain the relations of the parts. It is seated at one end upon the plate F and bears at the other against a shoulder I in the shank of the knob.

Behind the plate F to the lugs K are pivoted at one end links L, which are pivoted at their other ends to levers M, mounted upon fulcrums N, secured to the inside of the plate F. The free ends of these levers take into recesses O in the bolts P.

Q indicates guide-slots in the bolts, and R guide-pins carried on the plate F and working therein.

S indicates two pairs of springs, each one of each pair being secured at one end to the plate F and bearing at its other end against one of the bolts P. Each of the bolts is provided with a curved end T, adapted to latch under the plate B through the apertures U, provided therein. The surface of the door may be hollowed out to receive these latches, as indicated in the drawings at V, or the plate B might be indented from the inside, so as to allow the latches to engage with them without cutting the wood; but this construction, being an obvious variation, is not shown in the drawings.

The key-escutcheon W is, as usual, carried on the plate F and passes through the hole W' in the plate B.

The operation of my device is as follows: Suppose the parts to be secured in position on the door, as illustrated in Fig. 1, and a servant wishes to remove the plate from the door

to clean it, he simply presses on the knob, which operates the levers *M*, and thereby causes the retraction of the bolts *P*, whereupon the plate *F* and the parts secured to it
 5 may be readily removed. The spring *H* may be made of such strength as to resist any ordinary pressure on the knob and prevent the accidental unfastening of the bolt. It is, for
 10 an additional reason, desirable that it should be strong, in order to prevent tampering with the parts by meddlesome or evil-disposed persons. In some situations, however, it may be desirable to have the plate securely locked to the door; and I provide means for doing
 15 this, as shown in Fig. 4, in which *a* indicates the rear end of the plug of an ordinary pin-tumbler lock of well-known construction, and *b* cams secured to it in the usual way, as projecting from opposite sides of it. These cams
 20 engage with pins *c*, secured in pairs to each of the bolts *d*, which are secured by guides and slots in the ordinary way to the plate *F*, and are limited in their retracting motion by the pins *e*. When these means for operating
 25 the bolts are used, the latches *f* may be provided with beveled surfaces *g*, as indicated in Fig. 4, so that when the bolts are pressed into place, as they may be by the direct action of a suitable key, they produce a wedging action and draw the plate *F* very close to the
 30 face of the door and prevent the possibility of its becoming loose. The knob and the key-escutcheon (if that is used instead of a key-hole, as shown in the drawings) are carried on the plate *F*, as shown in Fig. 1, so that
 35 all the parts may be readily removed after the bolts have been retracted.

Where the knob is adapted to be pulled instead of rotated—as, for instance, in a bell
 40 pull—it is necessary to provide special means for separating the outside ornamental parts from the door.

In Fig. 5 I illustrate a device for the purpose, which consists of an ordinary four-
 45 sided section of a pull *h*, which is permanently carried in the side of a wall or like part, and is provided at its outer end with a male screw-threaded projection *i*, upon which is screwed a box *j*, which moves in a socket
 50 *k*, and has its seat in the bottom *l* of the same. The front end of this box is open and is adapted to receive the shank of the knob *m*.

n indicates bell-crank levers, which are fastened upon pivots in slots *o* in the side of
 55 the knob-shank. One arm of each of these levers extends toward the center of the knob-shank, which is hollow, and the other extends outwardly beyond the sides of the knob-shank and latches into pockets *x* of the box *j*.

60 *p* indicates a spring seated in the bottom of the knob-shank, which tends to keep the outer ends of the levers projecting beyond the edges of the knob-shank.

q indicates a pin extending longitudinally through the knob-shank, resting on its inner
 65 end against the levers *n*, and provided at its other end with a button *r*, which projects partially through a hole in the knob, but is too large to pass entirely out.

s indicates a spring. It bears at one end
 70 against a shoulder *t* within the knob-shank, and at its other end against the inside of the button *r*, and tends to project it and the rod secured thereto through the knob.

u indicates an ordinary escutcheon provided
 75 with a square orifice, in which the knob-shank fits. This escutcheon is secured, preferably because of the simplicity of construction, though other means might be substituted, by a single turn of a screw-thread to the inter-
 80 nal screw-threaded plate *v*, secured to the wall in the ordinary way.

If it is desired to remove the outside parts to clean them, by pressing upon the button
 the knob is unlatched from the permanently
 85 located part of the pull, and may be released from it by withdrawing the knob a short distance. Then by turning the knob but a little way the whole fixture may be removed.
 It may be conveniently removed by first simply
 90 turning the escutcheon until it is set into the permanent plate, and then pushing the knob until it latches into the box.

Many variations of detail may be employed without departing from the scope of my in-
 95 vention. I do not confine myself to the details of construction at all. I have only shown those forms which present themselves to my mind at the present time as preferable embodiments of the substance of my invention.
 100

What I claim is—

1. The combination, with a plate, of locking mechanism for securing the same to a
 door located back of said plate, and devices
 for operating said locking mechanism, sub-
 105 stantially as set forth.

2. The combination, with an escutcheon, of a knob and knob-shank carried thereon, and
 locking mechanism for detachably securing
 the escutcheon, knob, and knob-shank to a
 110 door located back of the escutcheon, substantially as set forth.

3. The combination, with a fixed plate adapted to be fastened to the side of a door
 or the like, of a removable plate, locking
 115 mechanism for detachably securing the removable to the fixed plate located back of the removable plate, and devices for operating said locking mechanism, substantially as
 set forth.
 120

In testimony of all which I have hereunto
 subscribed my name.

JOSEPH L. ATKINS.

Witnesses:

THOS. S. HOPKINS,
 NELLIE WETMORE.