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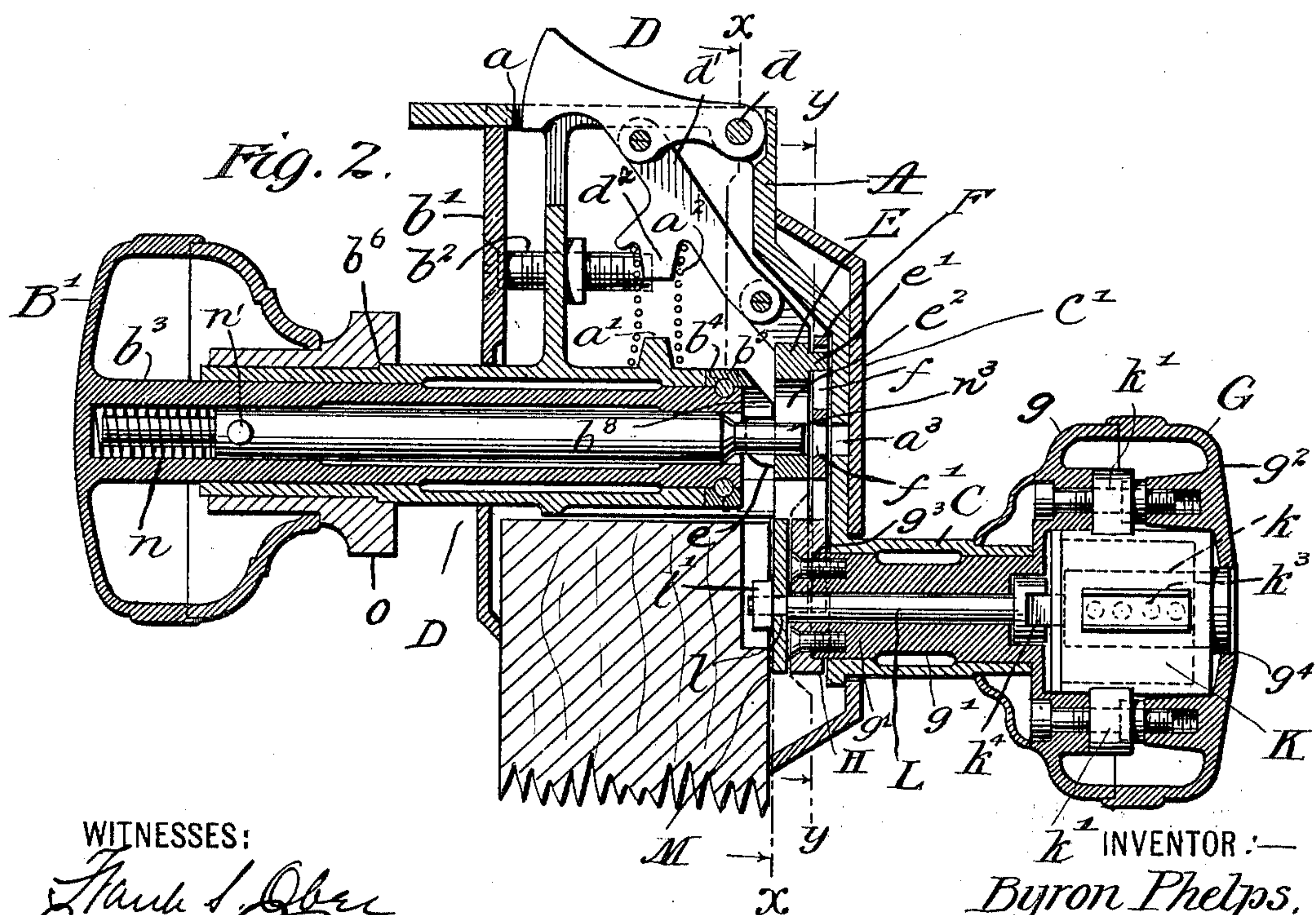
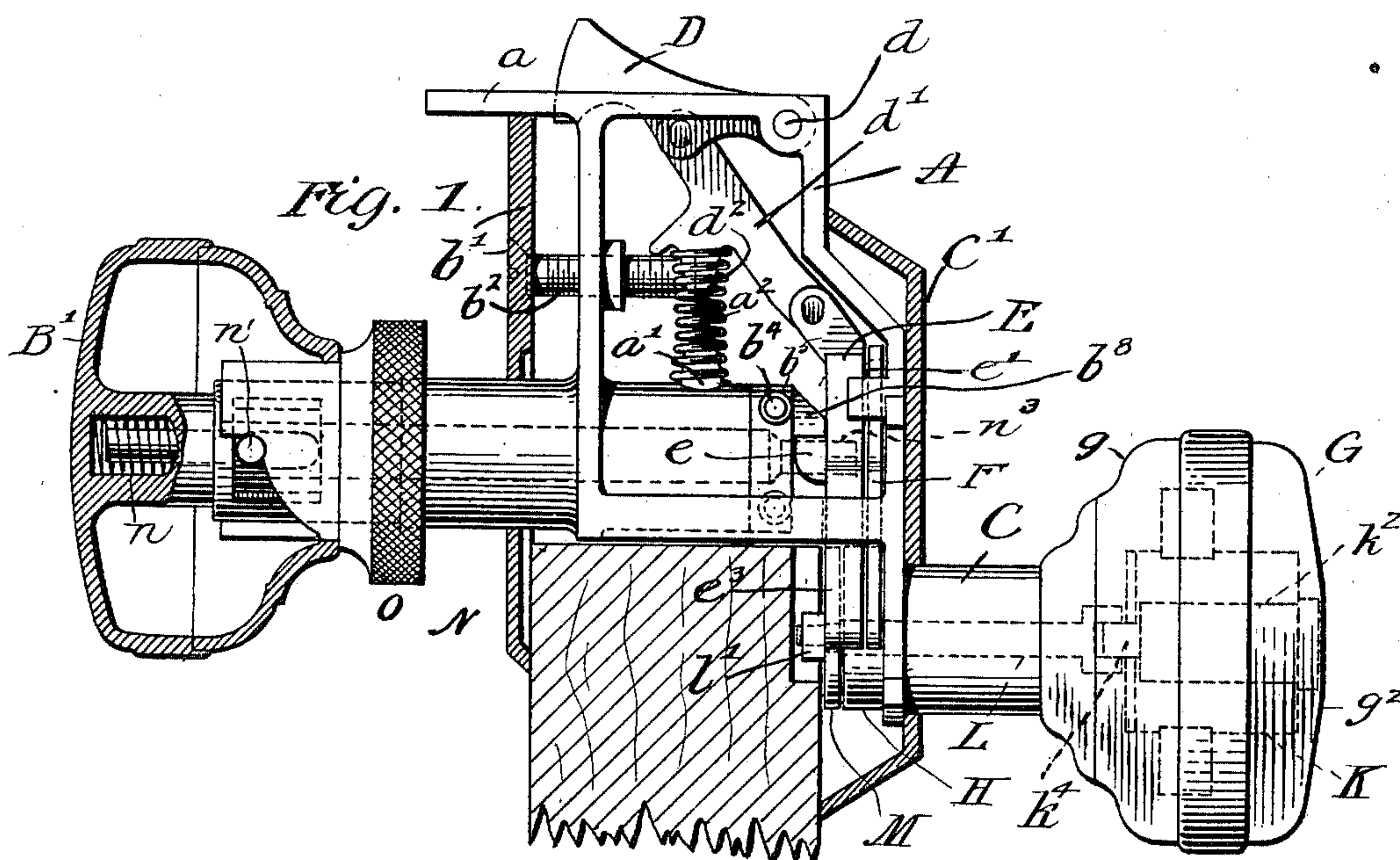
Patented June 6, 1899.

**B. PHELPS.
LOCK.**

(Application filed Dec. 29, 1898.)

(No Model.)

3 Sheets—Sheet 1.



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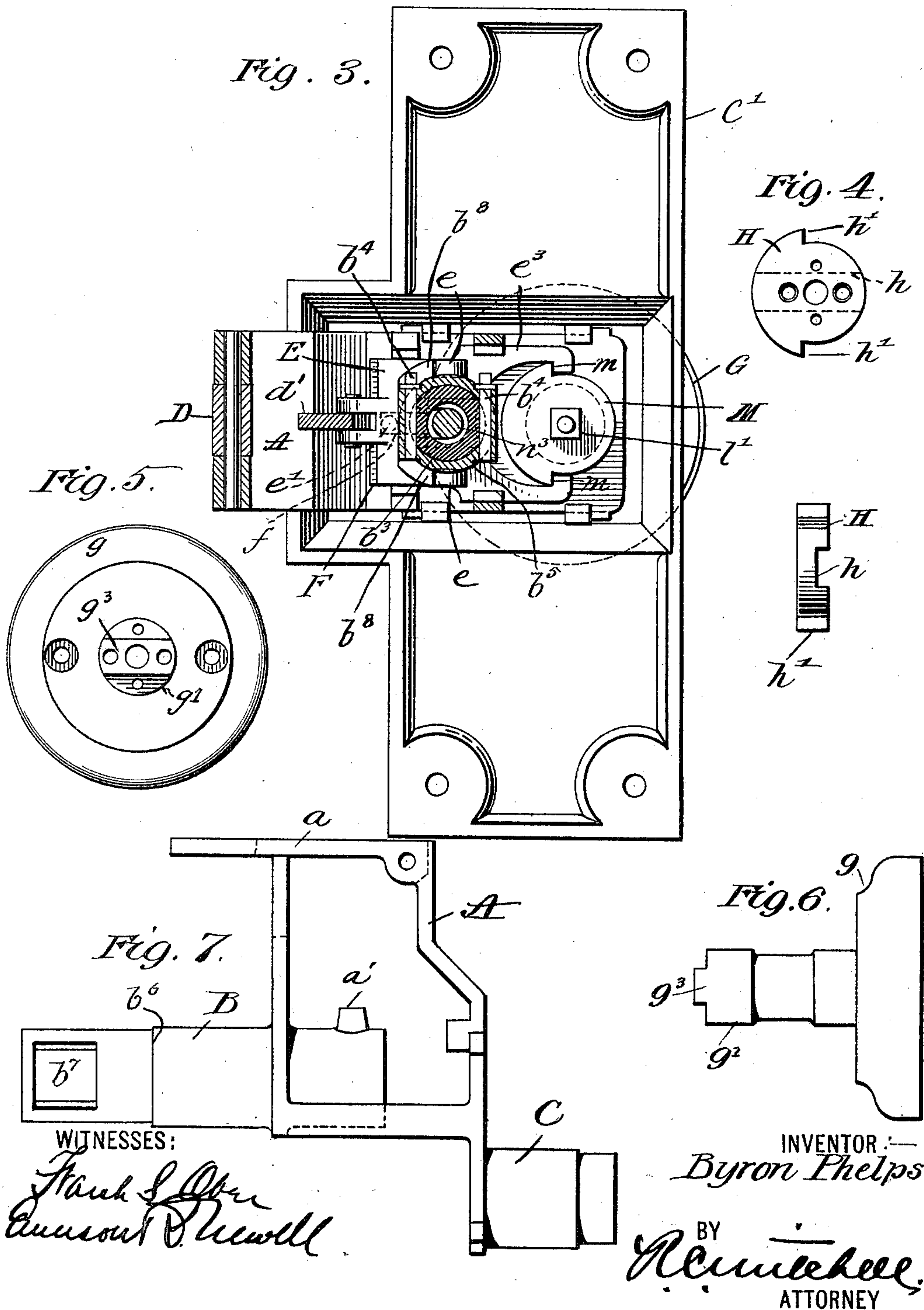
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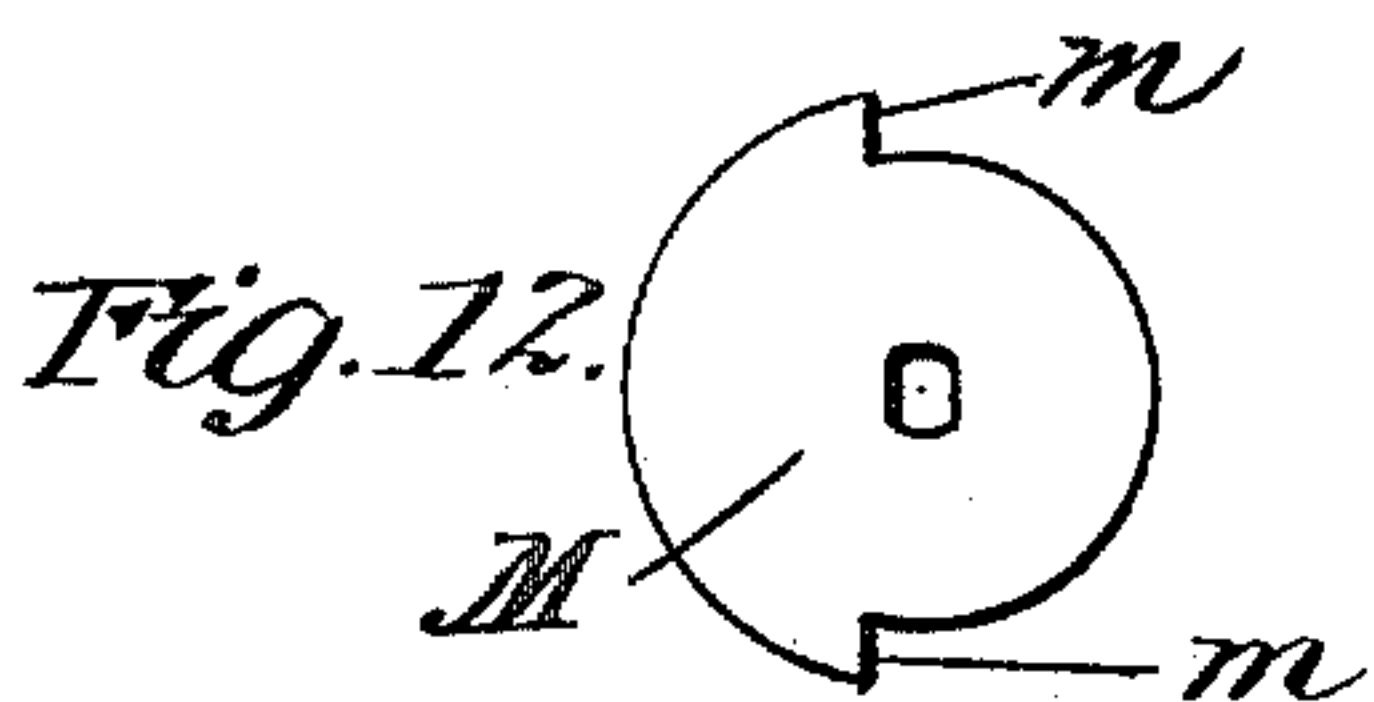
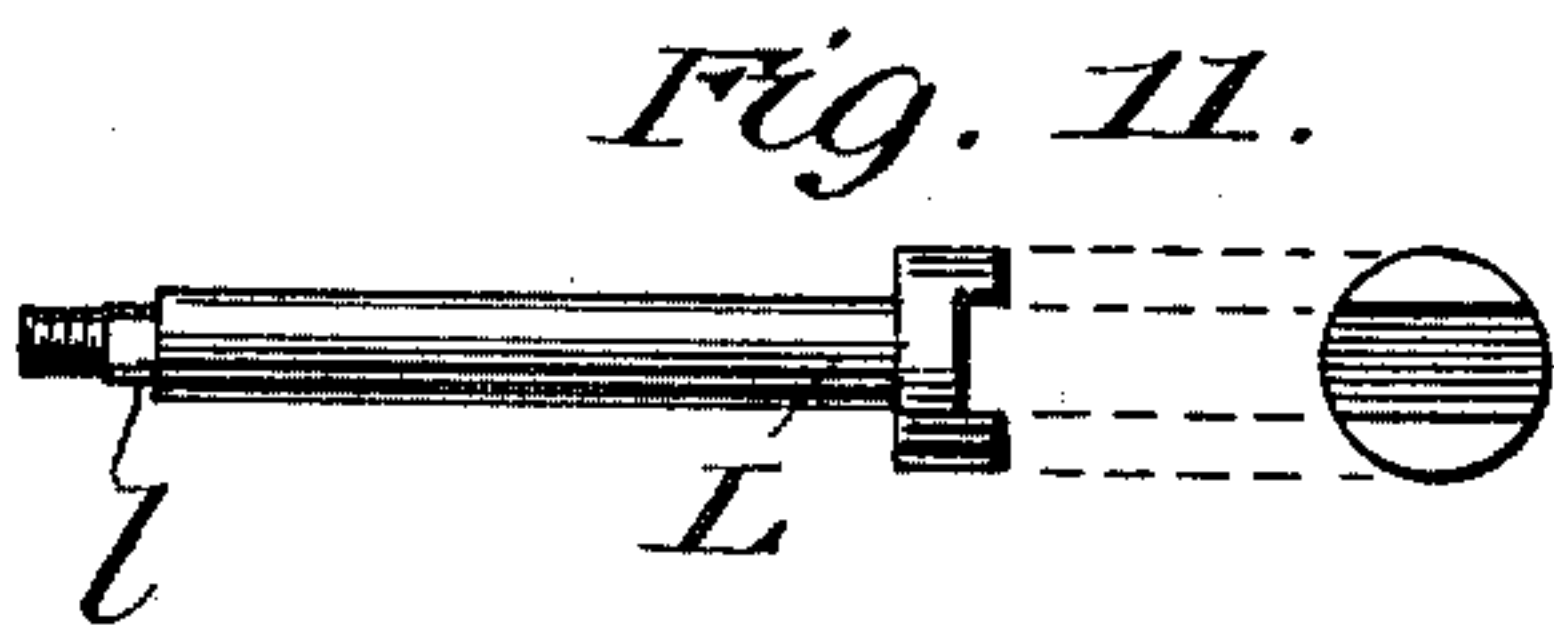
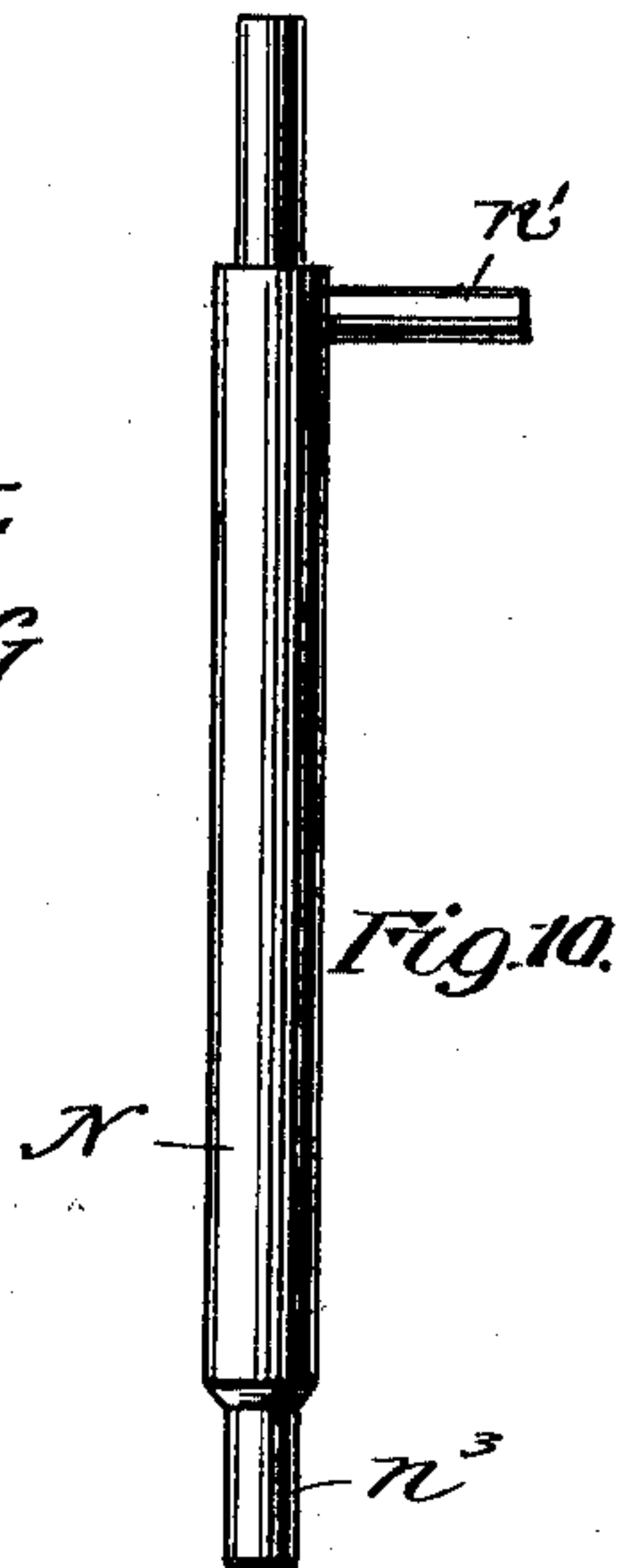
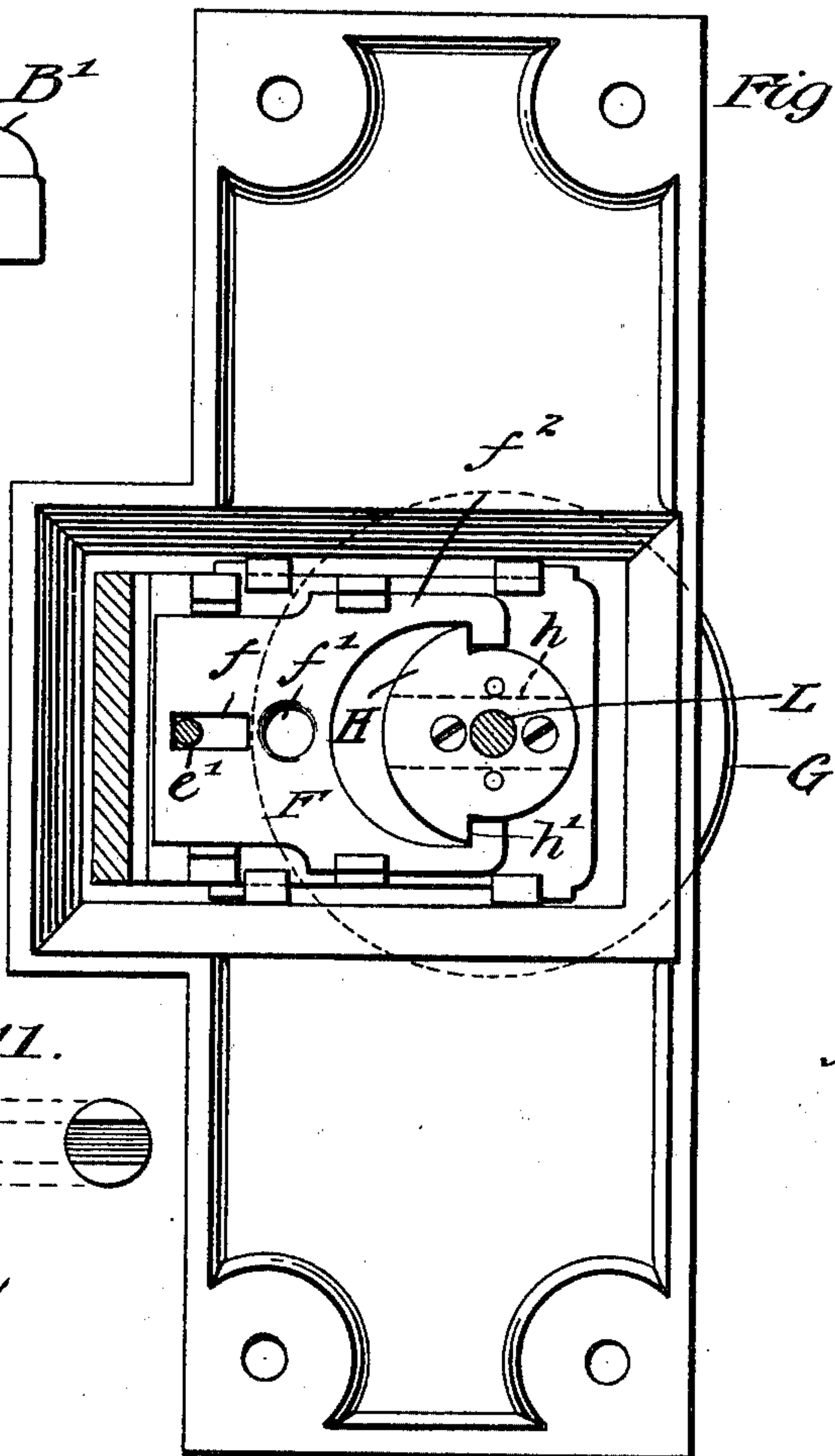
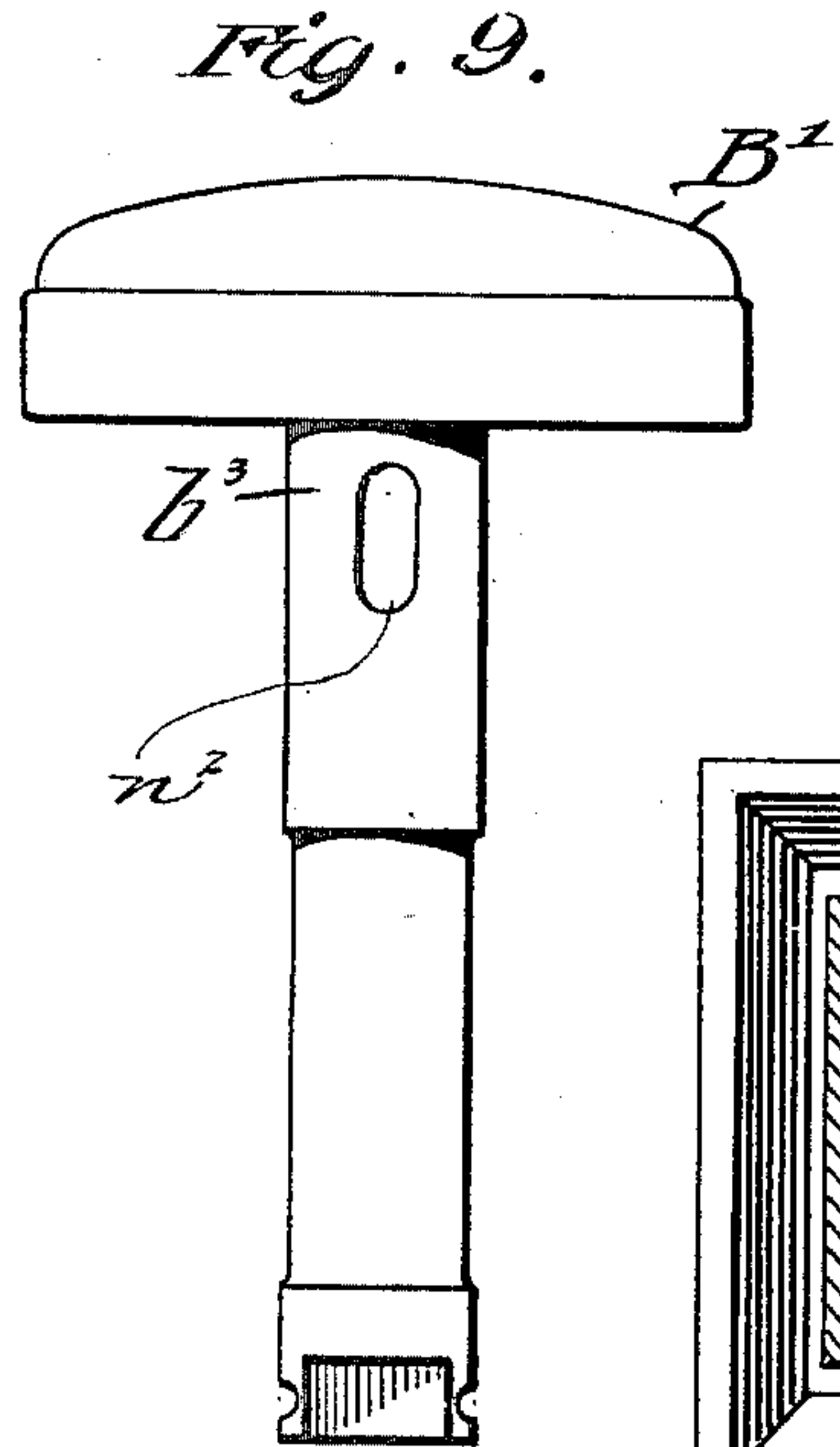
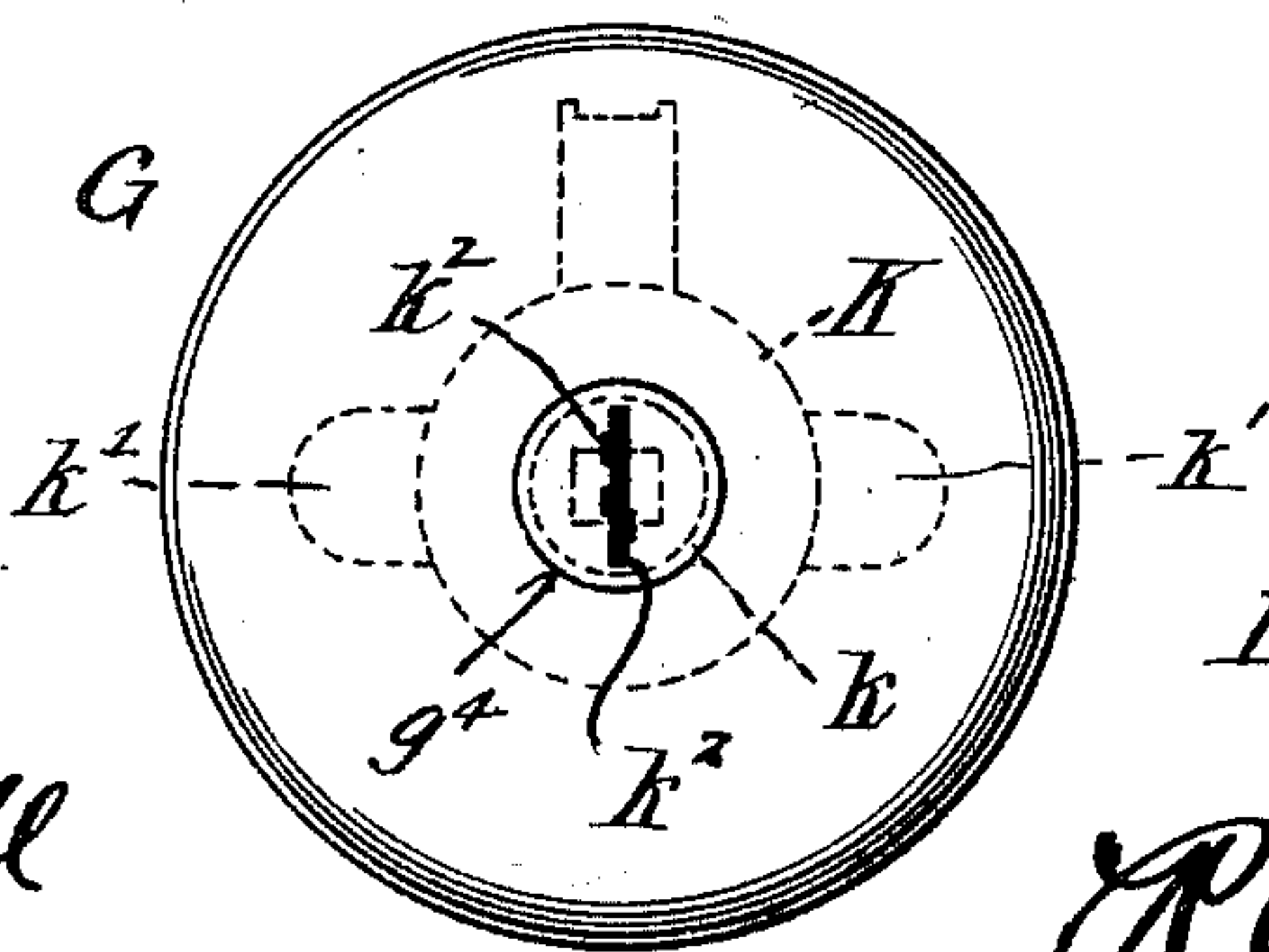


Fig. 13.



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UNITED STATES PATENT OFFICE.

BYRON PHELPS, OF SEATTLE, WASHINGTON, ASSIGNOR OF ONE-HALF TO
THEODORE NELSON, OF CHICAGO, ILLINOIS.

LOCK.

SPECIFICATION forming part of Letters Patent No. 626,343, dated June 6, 1899.

Application filed December 29, 1898. Serial No. 700,588. (No model.)

To all whom it may concern:

Be it known that I, BYRON PHELPS, a citizen of the United States, residing at Seattle, county of King, State of Washington, have
5 invented certain new and useful Improvements in Locks, of which the following is a full, clear, and exact description.

My invention relates to locks; and my object is to improve the construction of the same.

10 In the accompanying drawings, showing the preferred embodiment of my invention, Figure 1 shows a plan view, parts being in section, of my lock applied to the stile of a door. Fig. 2 shows a horizontal sectional view thereof. Fig.
15 3 shows a vertical sectional view on the line X X of Fig. 2 looking as the arrows fly. Fig. 4 shows the broad roll-back. Figs. 5 and 6 show details of the outer knob and spindle. Fig. 7 shows the frame of the lock in plan view. Fig.
20 8 shows a vertical section on the line Y Y of Fig. 2 looking as the arrows fly. Fig. 9 shows a detail of the inside knob and spindle. Fig. 10 shows the locking-rod. Fig. 11 shows the connecting-rod between the lock in the out-
25 side knob and the narrow roll-back. Fig. 12 shows the narrow roll-back. Fig. 13 shows a side elevation of the outer knob, the pin-tumbler lock therein being shown in dotted lines.

30 This embodiment of my invention is intended to be inserted in a notch in the stile of the door, following out the general lines in this respect of my former application, filed March 10, 1897, renewed December 5, 1898,
35 Serial No. 698,371.

In regard to the present embodiment of my invention it will be observed that the knobs and spindles are offset. It often happens that the stile of a door is so narrow that a deep
40 notch cannot be cut therein without materially weakening the same; but yet it is disadvantageous to bring the knobs very close to the edge of the door, because when the door is shut the outside knob would pass so close
45 to the jamb that a person's hand on the knob would probably be caught between the knob and the jamb and injured. This objection is not present with respect to the inner knob, because said knob does not pass said jamb at
50 any time. To give greater clearance between the knob and the jamb, and thereby avoid the

danger of thus injuring the hand, I offset the outside knob, as shown.

Referring to the drawings, A represents a frame, preferably formed integral and having
55 spindle-bearings B C and projecting face-plate *a*. Over these spindle-bearings are slipped side plates or escutcheons *b' c'*, relatively adjustable toward each other—for instance, by the screw *b²*—so as to clasp the
60 sides of the stile of the door, as set forth in my said former application.

D is a latch-bolt working in an aperture in the face-plate *a* and pivoted at *d*.

E is a shoe having a yoke *e³*, pivotally connected to the latch D by a connection *d'*.
65 This connection has a lug *d²*, between which and a lug *a'* on the frame is a spiral spring *a²*, tending to press this latch connection and shoe outward, as shown in Figs. 1 and 2. 70

B' is a knob, preferably having a hollow spindle *b³* attached to the inner side of the head thereof and rotatably supported in the spindle-bearing B. This knob may be formed
75 of two parts, as shown. To the inner end of this spindle *b³* is fixed, by dowel-pins *b⁴*, a roll-back *b⁵*, which has lugs *b⁸* thereon which contact with lugs *e* on shoe E to retract the same, and consequently the bolt D. F is a
80 second shoe narrower than said first shoe E, lying alongside the same and having a slot *f* therein, into which projects a lug *e'* on shoe E. Shoe F has also a hole *f'* therein opposite a hole *a³* in the relatively stationary frame
85 when said shoe is in its normal position of rest. Shoe E has an elongated slot *e²* therein, extending, when said shoe is at its normal position of rest, over the holes *f'* and *a³*, as shown in Fig. 2.

G is a second knob, preferably formed in
90 two parts, the part *g* having the spindle *g'* and the other part *g²* forming a cap suitably attached to said part *g*—for instance, by screws, as shown—and hollowed out to inclose a lock,
95 if desired. The general features of this knob and inclosed-lock construction are claimed in my former application, Serial No. 699,891, filed December 21, 1898. This spindle *g'* has
100 a tongue *g³* on the end thereof, as shown in Fig. 6, over which fits a broad-face roll-back H, which has a slot *h* and shoulders *h' h'*. This roll-back may be fastened to the spin-

dle by screws, as shown, the tongue g^3 fitting slot h . Within the knob G is located a lock, preferably of the familiar pin-tumbler kind, in which one part K constitutes the casing and which has an inner part k , which is normally locked to the casing by the pin-tumblers, but which may be rotated by the insertion of a suitable key, as in said former application. The casing of this lock is fixed relatively to the knob G by projections k' , as shown, so that it will rotate with said knob, but will be always in fixed relation thereto. The part k , which I designate the "key-barrel," has a key-slot k^2 , exposed by the opening g^4 in the cap g^2 . By the insertion of the key into this key-barrel the pin-tumblers k^3 will be raised and the key-barrel may be rotated relative to the casing and knob, as is usual in this class of locks. This key-barrel may carry on the end thereof a lug k^4 , to which is attached a rod L, (shown in detail in Fig. 11,) reduced at its inner end l to fit the hole in roll-back M and threaded. Over this reduced inner end is slipped a narrow roll-back M, which is held to the end of this rod by any suitable fastening means, such as a nut l' . This roll-back is fixed to this rod, is rotatable therewith, and has the usual shoulders m thereon. The roll-backs H and M preferably have their shoulders in alignment and contact at the same time with the yokes e^3 and f^2 on the shoes E and F, as shown in Figs. 3 and 8. It will be evident that both roll-backs will normally be operated when knob G, and consequently spindle g' , is turned, and will therefore throw back both of the shoes, and consequently the latch-bolt D. The wide roll-back H extends from in contact with the narrow shoe F across into contact with the wide shoe E; but the roll-back M contacts only with the wide shoe E. The broad roll-back H is firmly fixed to spindle g' and actuates shoe F, which contacts at the rear of slot f therein with lug e' on shoe E. Rotating g' therefore would throw back shoe E, and consequently latch D, even if roll-back M were not present, and this construction of spindle g' , roll-back H, and shoe F takes most of the strain off from rod L, roll-back M, key-barrel k , and the pin-tumblers k^3 when knob G and spindle g' are rotated. This prevents the relatively weaker latch-operating means—namely, key-barrel k , rod L, and roll-back M—from being strained at every rotation of knob G and spindle g' , and consequently loosened.

N is a locking-rod held inside the hollow spindle b^3 so as to be longitudinally movable therein and is pressed inwardly by the spiral spring n in said spindle. The locking-rod has a pin n' projecting laterally therefrom through a slot b^7 in bearing B and a slot n^2 in spindle b^3 , as shown in Figs. 1, 7, and 9. O is a rotatable finger-cam preferably held outside this spindle b^3 and bearing B and against shoulder b^6 on the spindle-bearing, as shown. The finger-piece has a cam-face abutting

against the pin n' . By the rotation of this finger-cam the pin n' , and therefore the locking-rod, may be moved outward and allowed to be moved inward by the spring n . This locking-rod has a projection n^3 in the inner end thereof, which preferably passes into a longitudinal slot e^2 in the shoe E.

It will now be evident that when knob G is turned both roll-backs will be rotated and both shoes will be retracted. When, however, the finger-cam O is rotated, the spiral spring will press the locking-rod N inward or to the right in Fig. 2 and the projection n^3 will pass through the hole f' in shoe f and pass into the hole a^3 in the frame. This will lock shoe F from retraction; but the shoe E may still be drawn back, because the slot e^2 therein allows a movement of said shoe in spite of projection n^3 . When the locking-rod thus locks the shoe F, the knob G and spindle g' cannot be rotated, because the shoulders h' on roll-back g abut against the lugs on the yokes f^2 of the locked shoe. This results in locking the knob from rotation. By the insertion of a key, however, into the key-barrel the same may be rotated inside of the knob, which would rotate the rod L and roll-back M, which in turn will retract shoe E, and consequently latch D. In this way the door may be opened, although the outside knob G is fixed and the door locked in respect to it. The inner knob B' can operate the shoe E, and consequently the latch D, at any time, as said shoe is preferably not at any time locked.

It will be obvious that many changes may be made in my construction herein shown without departing from the spirit of my invention.

What I claim is—

1. In a lock in combination latch mechanism embracing a latch bolt or head, a plurality of offset rotatable spindles, bolt-actuating means adapted to be operated thereby to move said bolt, mechanism to lock one of said spindles against rotation and operative from a side of said lock other than that on which said locked spindle is situated.

2. In a lock a main frame to support the lock mechanism and adapted to be inserted in a notch in the stile of a door, having a plurality of separated, hollow and offset spindle-bearings attached thereto and extending transversely outside of the same, said frame having an opening at one end for a latch-bolt.

3. In a lock in combination a main frame to support the lock mechanism and adapted to be inserted in a notch in the stile of a door, having a plurality of separated, hollow and offset spindle-bearings attached thereto and extending transversely outside of the same, and plates extending transversely of said bearings and adjustable with relation to each other so as to fit the sides of said stile.

4. In a lock a main frame to support the lock mechanism and adapted to be inserted in a notch in the stile of a door, having a plurality of separated, hollow and offset spin-

dle-bearings attached thereto and extending transversely outside of the same, said frame having a face-plate at one end extending from one side of said frame across and projecting beyond the other side thereof and having an opening at one end for a latch-bolt.

5. In a lock in combination latch mechanism embracing a latch bolt or head, a plurality of offset rotatable spindles, bolt-actuating means adapted to be operated thereby to move said bolt, and mechanism to lock one of said spindles but not the other and operative from the same side of said lock as said unlocked spindle.

6. In a lock in combination latch mechanism, a plurality of offset rotatable spindles extending to said mechanism to operate the same, one of said spindles being chambered, locking means extending into said chamber and adapted to hold the other of said spindles against rotation but not said first spindle.

7. In a lock in combination latch mechanism embracing a latch bolt or head, a plurality of offset rotatable spindles, bolt-actuating means adapted to be operated thereby to move said bolt, and mechanism to lock one of said spindles but not the other, including a shoe normally operated by said locked spindle, when it is unlocked, and a movable part to lock said shoe, operative from the same side of said lock as said unlocked spindle.

8. In a lock in combination latch mechanism, a plurality of offset rotatable spindles extending to said mechanism to operate the same, one of said spindles being chambered, locking means extending into said chamber and adapted to hold the other of said spindles against rotation but not said first spindle, and a device adapted to be operated by the fingers extending outside said chambered spindle transversely of the axis thereof and connected with said locking means to operate the same.

9. In a lock in combination latch mechanism, a plurality of offset rotatable spindles extending to said mechanism to operate the same one of said spindles being chambered, locking means extending into said chamber and adapted to hold the other of said spindles against rotation but not said first spindle, and a device adapted to be operated by the fingers extending outside said chambered spindle transversely of the axis thereof and connected with said locking means to operate the same, and key-operated means on the same side as said locked spindle connected with said latch mechanism to operate the same.

10. In a lock in combination latch mechanism, a plurality of offset rotatable spindles extending to said mechanism to operate the same, one of said spindles being chambered, locking means extending into said chamber and adapted to hold the other of said spindles against rotation but not said first spindle, and a device adapted to be operated by the fingers extending outside of said chambered spindle transversely of the axis thereof and connecting with said locking means to operate the

same, and key-operated means contained in a knob on said locked spindle having a part thereof fixed relatively to said knob so as to move therewith, and a second part movable relatively to said first part and adapted to be operated by said key and connected with said latch mechanism to operate the same.

11. In a lock in combination latch mechanism embracing a latch bolt or head, a plurality of offset rotatable spindles each carrying a roll-back, a shoe for each roll-back to operate said bolt, and mechanism to lock one of said shoes, and thereby its spindle, operative from the same side of said lock as said unlocked spindle.

12. In a lock in combination latch mechanism embracing a latch bolt or head, a plurality of offset rotatable spindles each carrying a roll-back, a shoe for each roll-back to operate said bolt, and mechanism to lock one of said shoes, and thereby its spindle, operative from the same side of said lock as said unlocked spindle, and supplementary key-operated means on the same side of said lock as said locked spindle to move said latch.

13. In a lock in combination, latch mechanism embracing a latch bolt or head, a plurality of independent rotatable spindles, a plurality of shoes connected with said latch-bolt and spindles and adapted to independently operate said latch-bolt, and mechanism to lock one of said shoes and thereby its spindle operative from the side of said lock opposite said locked spindle.

14. In a lock in combination, latch mechanism embracing a latch bolt or head, a plurality of independent rotatable spindles, a plurality of shoes connected with said latch-bolt and spindles and adapted to independently operate said latch-bolt, mechanism to lock one of said shoes and thereby its spindle operative from the side of said lock opposite said locked spindle, and supplemental key-operated means on the same side of said lock as said locked spindle to move said latch-bolt.

15. In a lock in combination, a latch-bolt, a pair of rotatable spindles, a roll-back to actuate said bolt connected with one of said spindles, said spindle being hollowed, means to lock said spindle, a second roll-back movable independently of said locked spindle to actuate said bolt, a key-rod contained in part within and movable independently of said locked spindle and directly connected with said second roll-back to move the same.

16. In a lock in combination, a latch-bolt, a pair of offset rotatable spindles, a roll-back to actuate said bolt connected with one of said spindles, said spindle being hollowed, means to lock said spindle, a second roll-back movable independently of said locked spindle to actuate said bolt, a key-rod contained in part within and movable independently of said locked spindle and connected with said second roll-back to move the same.

17. In a lock in combination, a latch-bolt, a pair of shoes connected therewith and adapt-

ed to independently retract said latch-bolt, a rotatable spindle carrying a roll-back connected with both of said shoes said spindle being hollowed, means to lock one of said shoes and thereby said spindle, a key-operated rod within and movable independently of said locked spindle and connected with a second roll-back adapted to retract the other of said shoes and consequently said bolt.

10 18. In a lock in combination, a latch-bolt, a pair of independently-rotatable offset spindles, a pair of shoes connected with said bolt and adapted to independently retract the same, a roll-back carried by one of said spindles and connected with both of said shoes to

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retract the same, means contained within the second spindle movable longitudinally thereof and adapted to lock one of said shoes and consequently said first spindle, a key-operated rod contained within said locked spindle and rotatable independently thereof and carrying a second roll-back connected with the other of said shoes and adapted to retract the same and consequently said bolt.

Signed at New York city, New York, this 14th day of November, 1898.

BYRON PHELPS.

Witnesses:

EMERSON R. NEWELL,
L. VREELAND.