2 Sheets—Sheet 1.

A. P. SILVA.
Door-Knob Alarm.

No. 219,314. **Patented Sept. 2, 1879.**

Fig. 1.

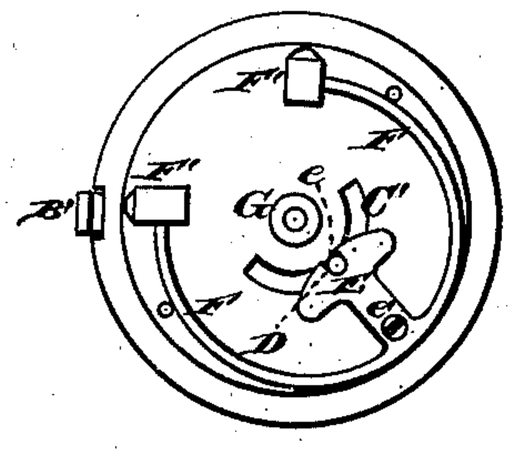


Fig. 5.

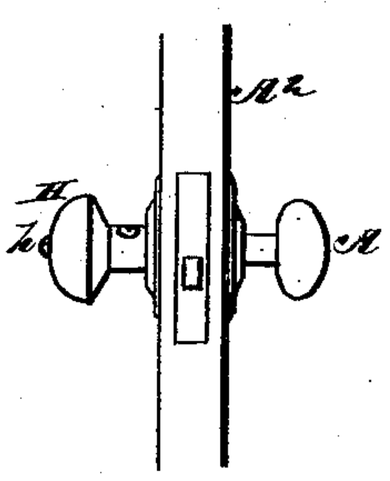


Fig. 2.

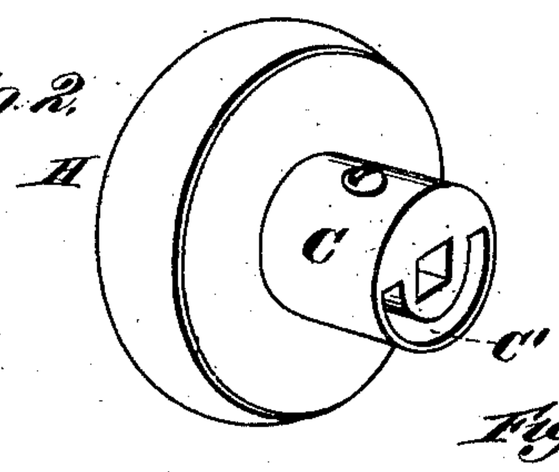


Fig. 3.

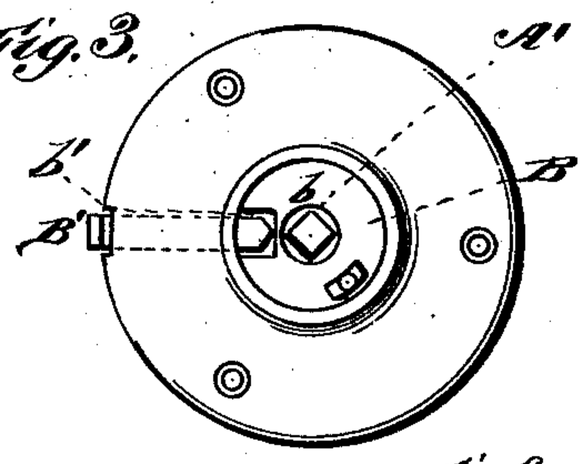


Fig. 4.

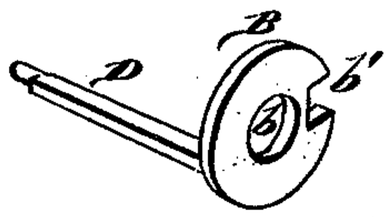
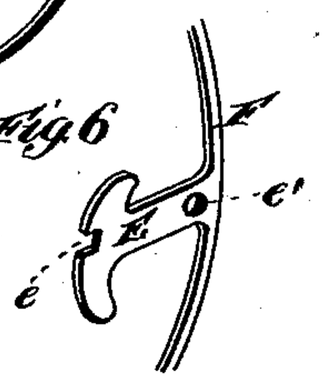


Fig. 6



WITNESSES

Robert Everett

James J. Shuby.

INVENTOR,

Albert P. Silva.

Gilmore. Smith & Co

ATTORNEYS

2 Sheets—Sheet 2.

A. P. SILVA.
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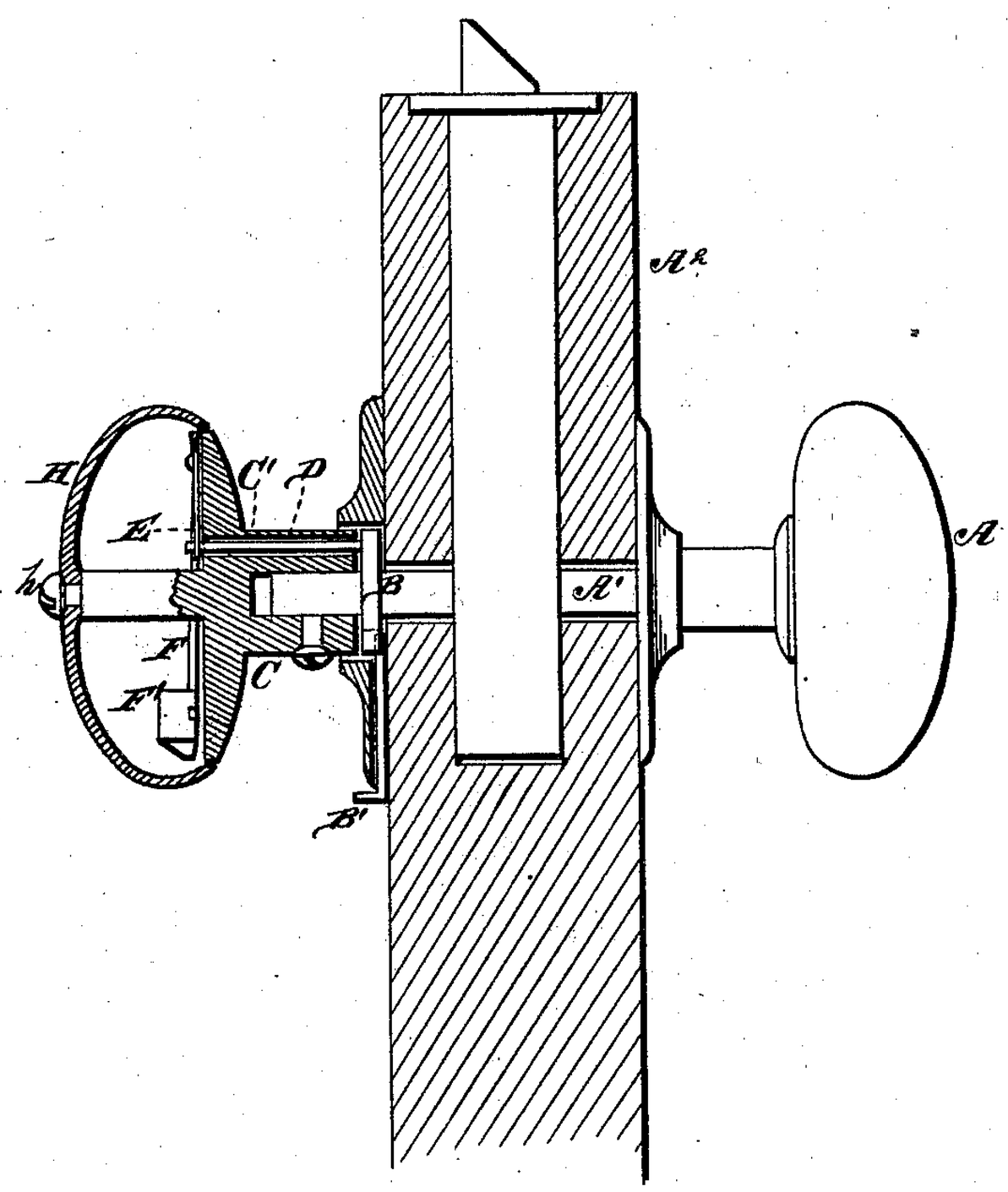
Fig. 7.



WITNESSES

Robt Everett

James J. Fleehy.

INVENTOR

Albert P. Silva

Gilmore. Smith & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT P. SILVA, OF ELMIRA, NEW YORK.

IMPROVEMENT IN DOOR-KNOB ALARMS.

Specification forming part of Letters Patent No. **219,314**, dated September 2, 1879; application filed April 12, 1879.

To all whom it may concern:

Be it known that I, ALBERT P. SILVA, of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Door-Knob Alarms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is an interior view of my door-knob alarm. Fig. 2 is a perspective detail view of the same. Figs. 3 and 4 are detail views. Fig. 5 is a view of the edge of a door, showing my device applied. Fig. 6 is a detail view of the T-plate, and Fig. 7 is a longitudinal sectional view through the entire mechanism.

My invention relates to door-knobs; and the novelty consists in the construction and arrangement of parts comprising the inner knob and its connection with the knob-spindle, whereby an alarm adapted to be thrown in and out of operation at will is struck when the outer knob is turned for the purpose of opening the door, as will be more fully hereinafter set forth.

My invention is designed as an improvement upon Patent No. 165,691, of July 20, 1875.

In carrying out my invention I employ a disk which passes loosely over the spindle, which disk is provided with an arm, as shown. The disk is thrown in and out of operation by a slide which operates in a recess therein.

The arm or trigger operates in a semicircular slot in a sleeve with square hole and ordinary spindle-connection. At the outer end of this slot, made in one with the sleeve, is a disk, which forms the inner side of the inner knob, and upon the face of this disk is pivoted a T-plate having spring-arms carrying hammers, as shown.

The alarm-bell forms the rest of the inner knob, being a concavo-convex cup, secured at the center by a screw to a pintle at right angles with the plane of the disk-face, and rigid with said disk and the sleeve.

It will be observed that the pivoted T-plate has a recess upon the face above the semicircular slot, which recess receives the end of the arm or trigger. Thus, when the lock-slide is pulled out, the disk, arm, and sleeve operate to oscillate idly together without causing the alarm; but when the disk and arm are locked by the slide, the rotation of the spindle while the arm is stationary causes one or other of the hammers to strike the alarm, according as the spindle is turned in one or the other direction, as shown.

From the recess in the T-plate the sides traversed by the end of the trigger are flaring, and the shank of the T-plate springs outward to allow the end of the trigger to regain the recess in the T-plate when the knob stops at rest.

I deem it important to make the alarm on the inner knob, for the reason that while the said alarm would always be struck from the outer knob, the hand of the party grasping the inner knob would prevent the vibration of the alarm, and consequently the alarm would not be uselessly given.

Referring to the drawings, A represents the ordinary outer knob, A^1 its spindle, and A^2 an ordinary door.

B represents a disk having a circular central opening, *b*, which receives the square spindle A^1, as shown. A recess, *b'*, in this disk operates with a lock-slide, B', to lock the said disk fast, or to allow it to oscillate with a sleeve, C, which operates with the square spindle, as shown.

Upon the disk B is an arm, D, which works in a semicircular slot, C', in the sleeve C, the outer end of which arm engages with the recess *e* in a T-plate, E, pivoted at *e'* upon the face of the sleeve, and having spring-arms F, carrying hammers F', as shown.

The T-plate has a spring-shank, which allows the end of the trigger D to traverse the under side of the plate when the knob is turned to regain the recess when the knob stops at rest.

Upon a pintle, G, is secured the alarm H by a screw, *h*, and this alarm forms the body of the inner knob, adapted to be struck by the hammers F', as shown.

I claim—

1. The disk B, mounted on the spindle A^1, and having arm D and recess *b'*, combined

with the sleeve C, T-plate E, lock-slide B′, and alarm, as and for the purpose set forth.

2. The combination of the disk B, having opening *b* and recess *b′*, lock-slide B′, arm D, sleeve C C′ and spring T-plate E, pivoted at *e′*, having recess *e*, spring-arms F, and hammers F′, with the alarm and spindle, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALBERT P. SILVA.

Witnesses:
W. S. KERSHNER,
WILLIAM WALTERS.