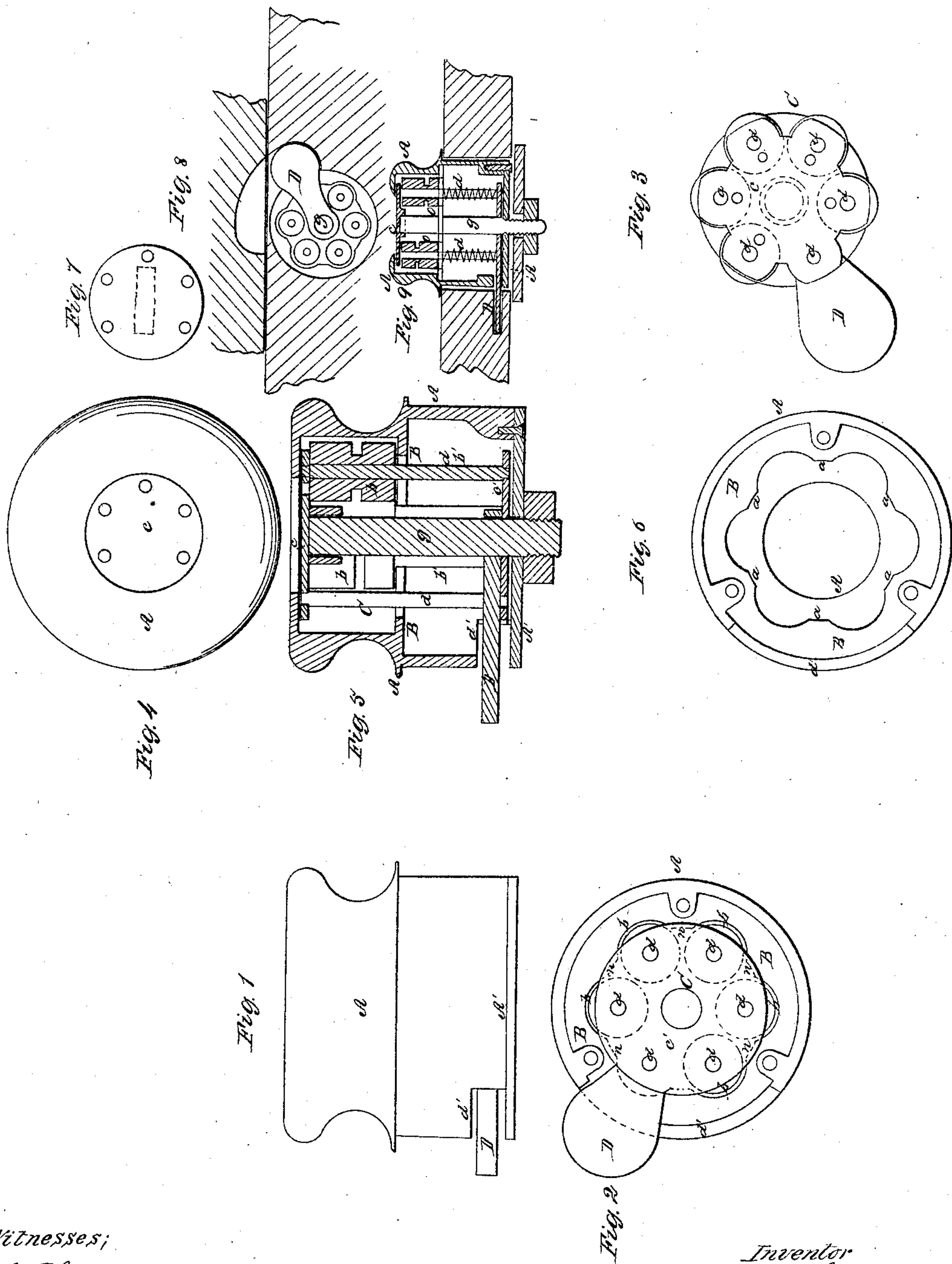


F. G. Johnson,

Lock.

N^o 55,500.

Patented June 12, 1866.



Witnesses;

N. F. Campbell

Edw. Schaefer

Inventor

Frank G. Johnson

*By his Atty's
Mason Leavick & Lawrence*

UNITED STATES PATENT OFFICE.

FRANK G. JOHNSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN KNOB-LOCKS.

Specification forming part of Letters Patent No. 55,500, dated June 12, 1866.

To all whom it may concern:

Be it known that I, FRANK G. JOHNSON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Knob-Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an external view of a knob which has a lock applied to it. Fig. 2 is an end view of the knob-lock having the cap-plate detached. Fig. 3 is an end view of the lock mechanism detached from the knob. Fig. 4 is an end view of the knob showing the perforated key-plate. Fig. 5 is a diametrical section through the knob and lock. Fig. 6 is an end view, showing the interior of the knob.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to inclose within a hollow knob a lock mechanism in such manner that the knob forms the shell of the lock and serves all the purposes of a knob or handle for opening or closing a drawer or door, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the hollow shell of the lock, which shell is made circular and in the form of a common door or drawer knob or handle.

B represents a flange, which may be formed on or secured to the inside of the knob A in any suitable manner. The inner edge of the flange B is scalloped, so as to form a number of guards, *a a a*, which are for the purpose of preventing the tumblers *b b b* and their skeleton-frame C from being turned unless the proper key for unlocking the lock is used.

The skeleton frame C consists of a perforated plate, *c*, through which the pins of the key pass, a circular plate, *c'*, and a number of rods or studs, *d d*, which secure the two plates *c c'* together, and also serve to receive and guide the perforated cylindrical tumblers *b b b* and their respective springs *b' b' b'*. This case C has a tongue or vibrating bolt, D, secured to it, as shown in Figs. 2, 3, and 5, which projects through a slot, *d'*, which is made through the knob A, as shown in Figs. 1, 2, and 5.

The case C is fitted within the knob A, as shown in Fig. 5, and secured therein by means of a cap, A', which has a pin, *g*, projecting

from it, about which the case C is allowed to oscillate.

The tumblers *b b b* are grooved, as shown in Fig. 4, and when they are depressed, by means of pins on a key, so that all the grooves in said tumblers are brought in a plane with the edge of the flange B, the case or frame C can be moved about its axis *g*, and the drawer or door to which the knob is applied either locked or unlocked.

It will be seen by reference to Figs. 4 and 5 that a hole is made through the rounded handle of the knob A to receive the key, which is a circular handle having pins projecting from it, which pins differ in length according to the positions of the annular grooves in the tumblers. When these tumblers are all brought in a plane coinciding with the inner edge of the guard-plate the tongue or bolt D can be vibrated, and when the case C is turned so that the guards *a a a* will release the tumblers *b b b*, the springs *b' b' b'* thereof will force them out against the perforated plate *c* in a position shown in Fig. 5, in which position the tumblers will strike the guards *a a a* if an attempt is made to pick the lock with a false key.

The two sectional views, Figs. 8 and 9, show the manner of applying my knob-lock to a door or drawer.

The vibrating tongue D, which projects through the slot *d'* of the cylindrical case A, is allowed to clear itself by forming a recess in the object to which the knob is applied, and when said tongue is in this recess the drawer or door, as the case may be, can be opened or closed. A corresponding recess is made in the drawer or door frame to receive said bolt D, when it is turned so as to lock the drawer or door, as indicated in red, Fig. 9.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The movable tumbler-case C, in combination with a knob, A, having a stationary flanged guard, B, applied to it, substantially as described.

Witness my hand, in the matter of my application for a patent on a combined knob and lock for doors, drawers, and other articles, this 15th day of November, 1865.

FRANK G. JOHNSON.

Witnesses:

J. JARVIS JONES,
E. M. O'BRIEN.