

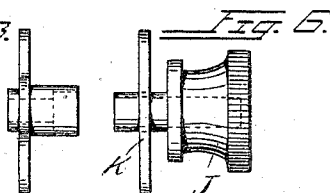
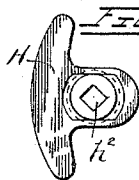
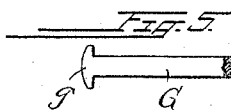
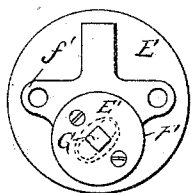
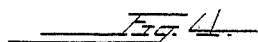
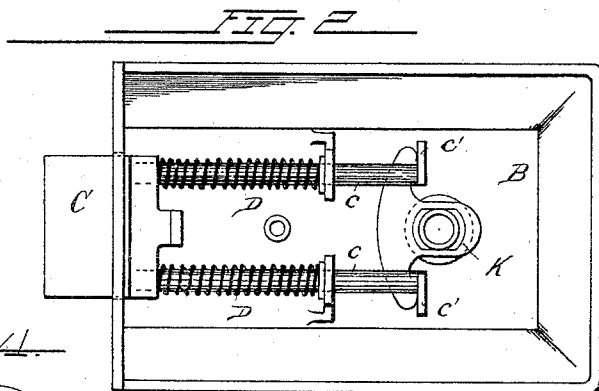
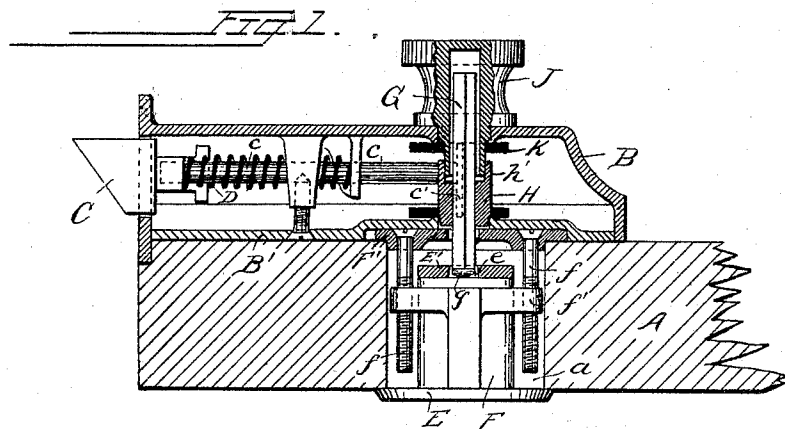
(No Model.)

2 Sheets—Sheet 1.

G. E. TYSON.
LOCK.

No. 500,696.

Patented July 4, 1893.



Witnesses

Ed. A. Kelly
David Levan

George E. Tyson, Inventor

By *his* Attorney

John Stewart

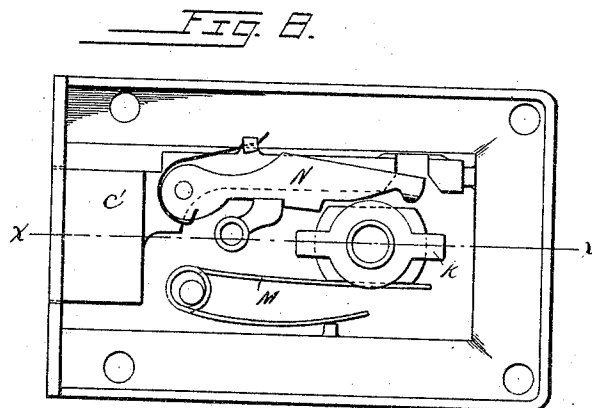
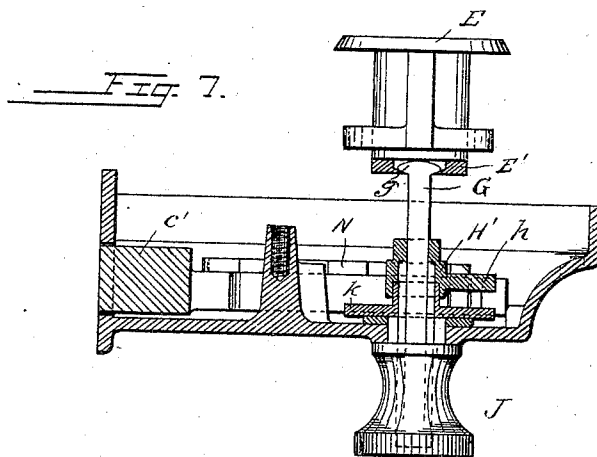
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2 Sheets—Sheet 2.

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By his Attorney *W. H. H. H.*

UNITED STATES PATENT OFFICE.

GEORGE E. TYSON, OF READING, PENNSYLVANIA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 500,696, dated July 4, 1893.

Application filed October 24, 1892. Serial No. 449,758. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. TYSON, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Escutcheon-Locks, of which the following is a specification.

My invention relates to escutcheon locks and the invention consists in the improved form of mechanism particularly described hereinafter in connection with the accompanying drawings, the main features of which are the novel connections of the spindle to the key hub so as to be permanently fixed thereto while capable of a limited swinging movement; and the form and arrangement of the latch operating plates in connection with said spindle and the thumb knob upon the inside of the door.

Figure 1 is a horizontal sectional view of a door provided with a spring lock embodying my invention. Fig. 2 is an inside view of the latch, the cover plate and latch-operating-hub which is operated by the key, being removed. Fig. 3 shows the latch operating hub detached. Fig. 4 is an end view of the escutcheon showing the connecting spindle fixed to the key hub therein. Fig. 5 is a separate view of the spindle. Fig. 6 is a separate view of the thumb knob and attached plate; and Figs. 7 and 8 are views illustrating the application of my invention to a dead lock.

A represents the section of a door of ordinary thickness.

B B' is the latch case upon the inner face of the door,—within which the bolt C is mounted as usual in this class of locks, springs D being provided upon the latch rods c and the latter formed with extended heads or lugs c' which are engaged by an operating hub H and plate K, arranged to be operated respectively by a key on the outside of the door and a thumb knob J on the inside.

F represents the escutcheon or tumbler case which is secured within an opening a bored in the door, by means of a plate F' upon the inside, through which plate pass screw-bolts f f' engaging screw-threaded lugs f' f' on the escutcheon. The key hub E in the escutcheon is operatively connected with the latch bolt C by means of a connecting spindle

G. The spindle G is preferably square in cross-section and is formed with a head g as shown. It is secured to the inner end of the key hub E by means of a cap plate E' the inner face of which is recessed at e to form a seat for the head g of the spindle, which when the cap plate is screwed onto the end of the key hub, is compelled to rotate with the latter, the head g being incapable of turning in the recess e though so shaped as to allow the spindle a limited swinging movement sufficient to enable it to be readily connected with the latch mechanism even though the latter be somewhat out of line. The T-form of the head g allows room for the screws by means of which the cap plate is secured to the key hub. The latch operating hub H is strung upon the spindle G which fits the square opening h² in the hub so as to compel the latter to rotate with it. The knob plate K is secured to the inner end of the knob J which is rotatively mounted in the case and is bored out sufficiently large to permit the spindle to be turned freely within it. The inner end h' of the hub H is rotatively mounted upon the inwardly projecting portion of the thumb knob thus keeping them perfectly in line, and at the same time permitting each to be independently rotated for the purpose of moving the latch bolt C by engaging the rod heads c'.

The connecting spindle G is fixed to the key hub E instead of being removably attached thereto as is the case with connecting bars heretofore used, yet as already stated, it has sufficient swinging motion to make its connection to the latch an easy matter.

The thickness of the door may vary considerably without affecting the attachment of the latch, the spindle G merely extending a greater or less distance into the hollow thumb knob without affecting the operation of the lock either by the knob or the key, each of which may be used independently of the other.

The mounting of the hub H upon the inner end of the knob in the manner described enables the parts to be very conveniently put together and insures satisfactory working of the latch mechanism. In Figs. 7 and 8 is shown the applicability of my invention to a dead lock. The form of dead lock illustrated embodies features described and claimed in

my Patent No. 489,049, issued to me January 3, 1893. The arm *h* of the hub or cam *H'* which is operated by the key, and the arm *k* on the hub of the thumb knob both operate
5 first upon the tumbler *N* and then upon the bolt *c'* to either shoot or withdraw the latter, each arm being operated independently of the other and the hub *H'* of the arm *h* being
10 mounted upon the extended hub of the thumb knob as in Fig. 1. The spring arm *M* returns the thumb knob arm *k* to its normal position thus preventing its possible interference with the movement of the bolt by means of the
15 key. The arrangement of the connecting spindle *G* with relation to the operating hubs and its attachment to the key hub are also the same as indicated in Fig. 1.

What I claim is—

1. In an escutcheon lock the combination
20 with the key hub of an operating spindle

formed with an angular head on one end and loosely fixed to said hub so as to be rotated therewith by means of a cap piece perforated and recessed on its inner face to receive said angular head and permit a limited swinging
25 movement of the spindle, substantially as set forth.

2. In a lock the combination with the latch of independent key and thumb knob mechanisms for operating it, the key operating hub
30 or plate being rotatably mounted upon the inwardly projecting end of the thumb knob, substantially as set forth.

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

GEORGE E. TYSON.

Witnesses:

ED. A. KELLY,
F. PIERCE HUMMEL.