

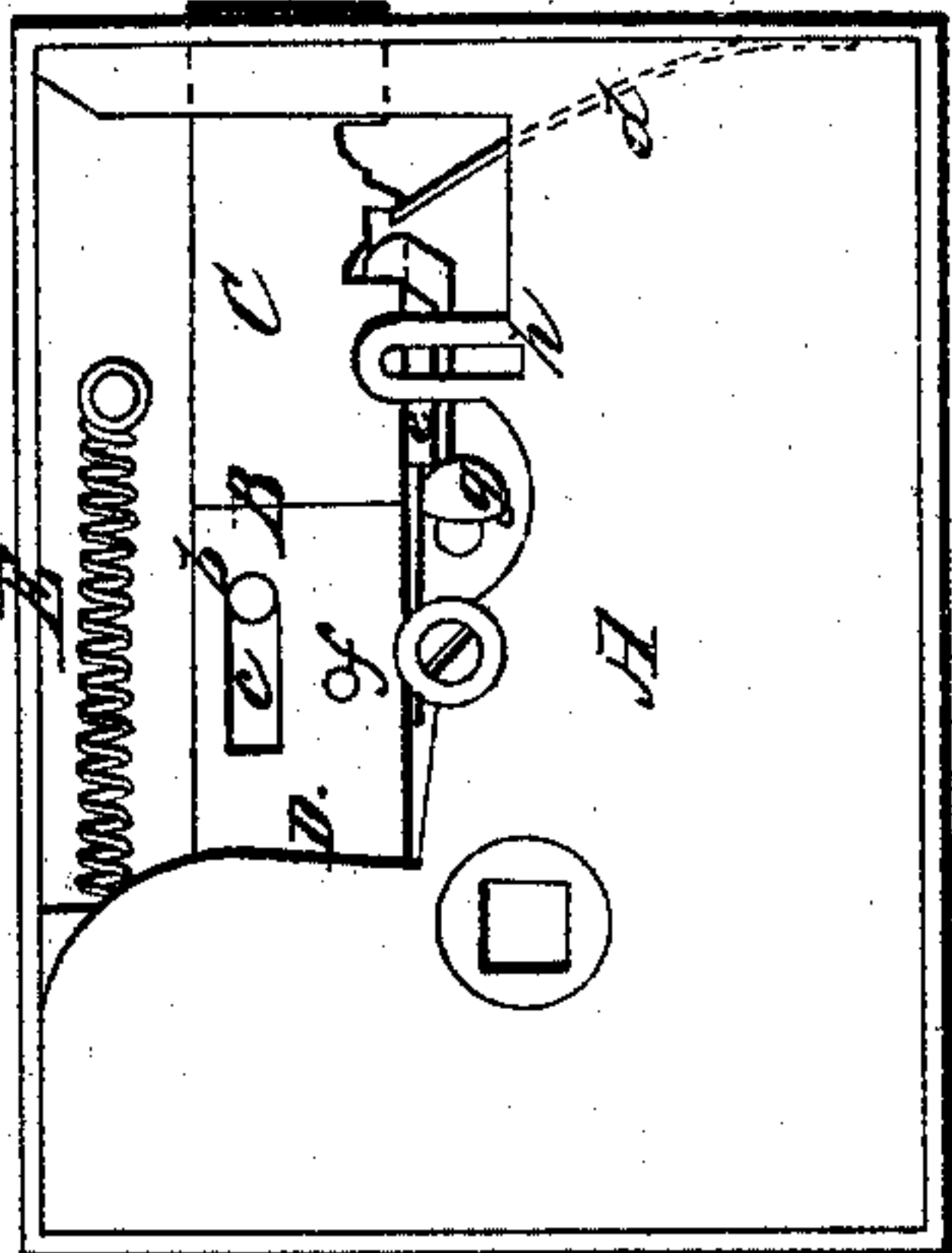
*H. B. Tyler,*

*Latch.*

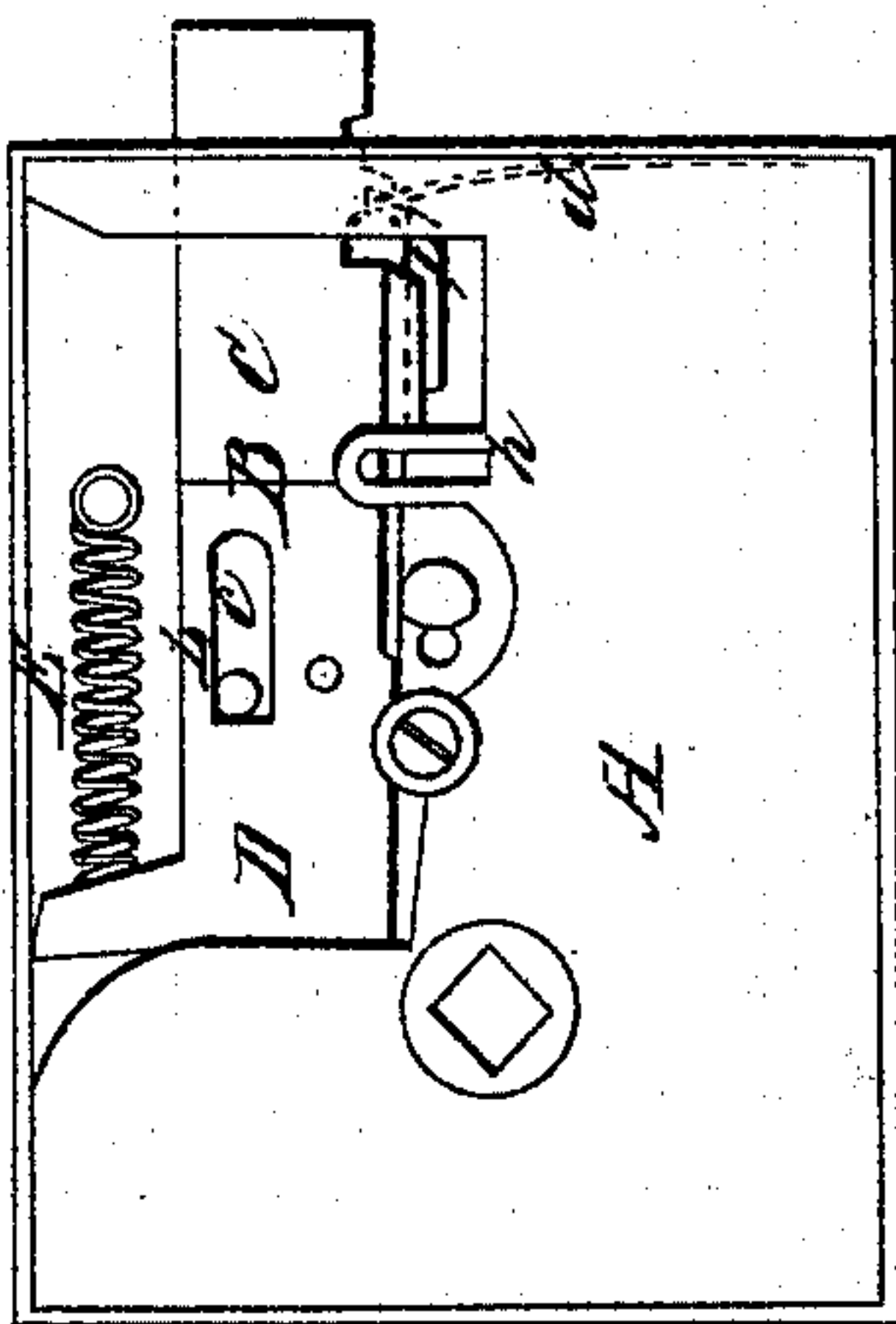
*No 49,481.*

*Patented Aug. 15, 1865.*

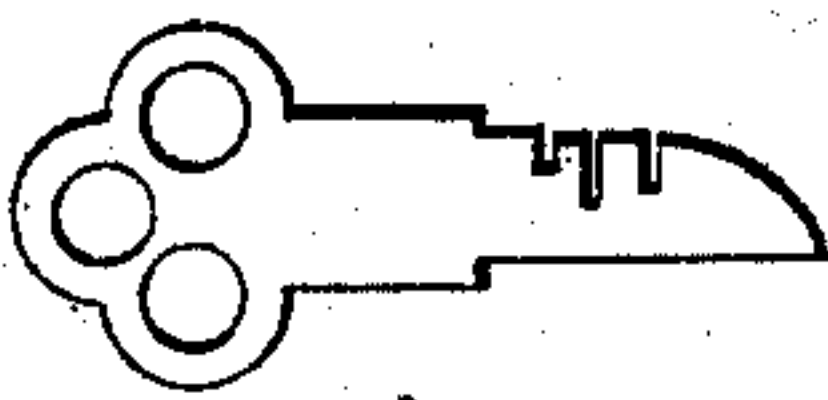
*Fig. 4.*



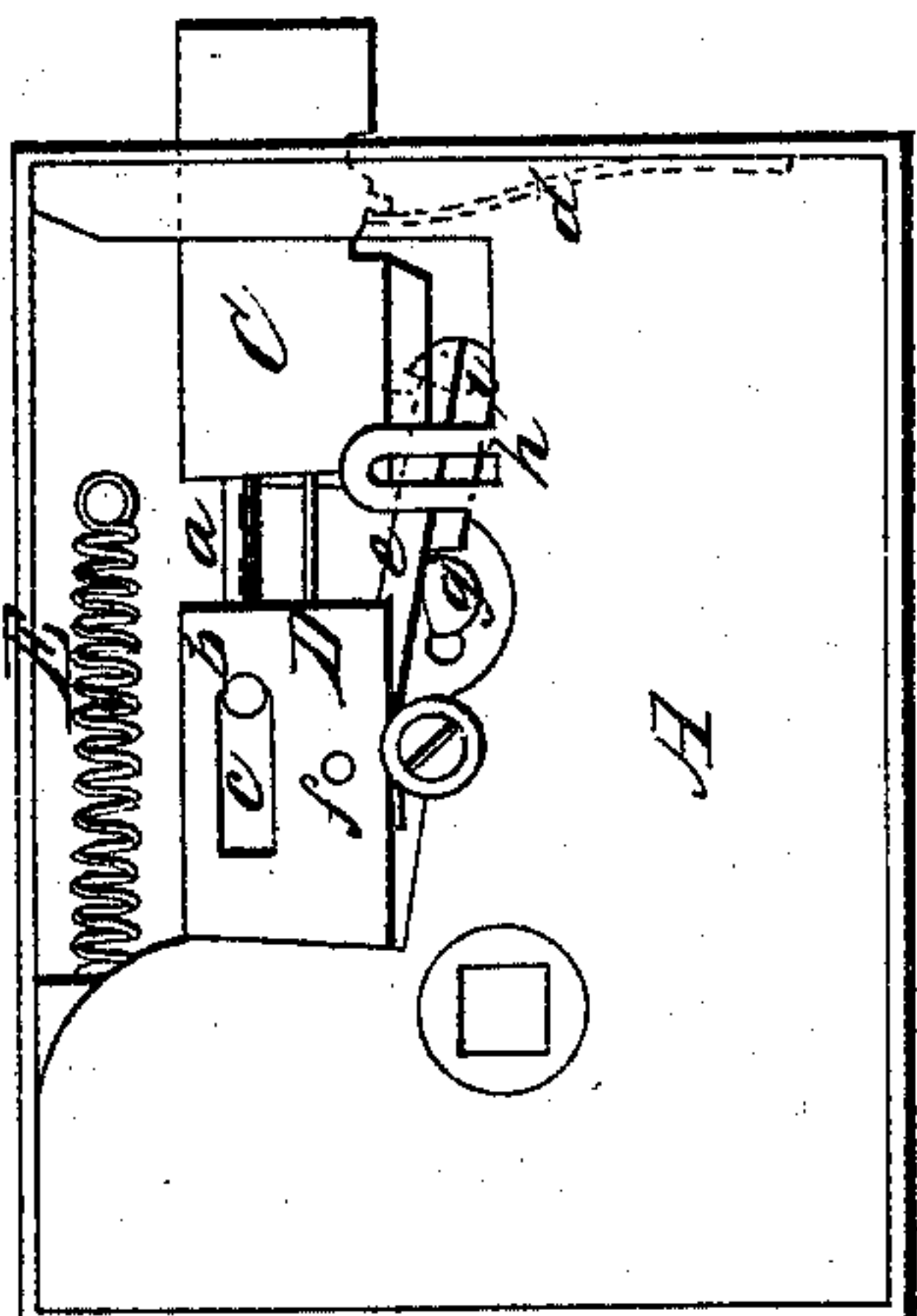
*Fig. 3.*



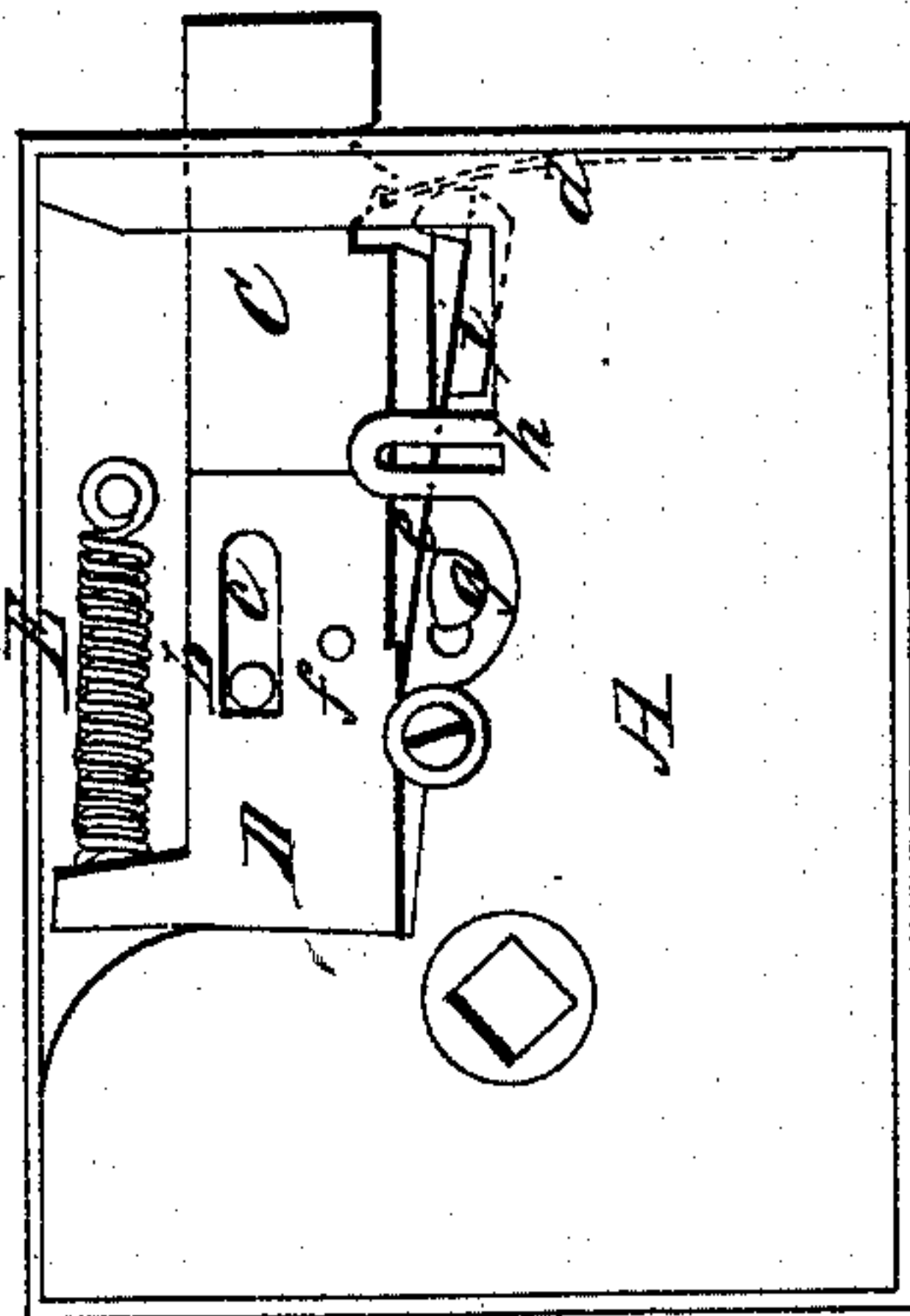
*Fig. 5.*



*Fig. 2.*



*Fig. 1.*



*Witnesses:*

*James Stone*  
*G. H. Spaulding*

*Inventor:*

*Henry B. Tyler*



# UNITED STATES PATENT OFFICE.

HENRY B. TYLER, OF NORWICH, CONNECTICUT, ASSIGNOR TO HIMSELF  
AND EUGENE M. PREVOST, OF SAME PLACE.

## IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. 49,481, dated August 15, 1865.

*To all whom it may concern:*

Be it known that I, HENRY B. TYLER, of Norwich, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Door-Locks; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

In all the drawings a portion of the plate is represented as cut away in order to exhibit the working parts.

Figures 1 and 2 are side views of the parts when the lock is arranged to serve the purpose of a bolt, and also to serve as a night-lock to be opened by the aid of a key. Figs. 3 and 4 represent the parts arranged so as to constitute the ordinary latch, to be operated by turning the knob, showing the latch in two positions. Fig. 5 is a view of the key-bit.

By my improvement a door-fastening of this character may be made to subserve the purposes, first, of an ordinary mortise or other latch; second, of a bolt; third, of a night-lock to be opened by a pass-key.

In the accompanying drawings, A represents one of the plates of an ordinary mortise-lock.

B is a spring-latch, similar in appearance to others in common use, and operated by a tumbler, through which passes the spindle, upon each end of which are the knobs for the hand. It is, however, made in two parts, C and D, the latch portion C being connected with the other portion, D, by a wire rod, *a*. There is also a pin, *b*, at right angles with the side plate. This rod *a* can slide freely in a corresponding hole made lengthwise in the rear portion, D, the pin *b* being accommodated by a slot, *c*. The object of the rod *a* is simply to keep the two portions of the latch in line and furnish a support for each, while that of the pin *b* is to afford a stop to prevent the rear portion of the latch from being moved too far back in turning the knob when the lock is arranged as a bolt. The coiled spring E, attached to the plate at one end and to the rear portion, D, at the other end, tends to press the portion D constantly forward, so as to abut against the portion C.

It is obvious that so long as the two por-

tions C and D of the latch are held together by any means as one piece, Figs. 1, 3, 4, the turning of the knob will operate the latch in the usual way; but if such connection is broken, the rear portion, D, will alone be moved by the knob, while the latch portion C will remain projecting beyond the face-plate by the tension of the flat spring *d*, arranged, as shown, for that purpose.

I break or restore the connection between the two parts of the latch, and thus make the lock serve the purpose of a latch or bolt at pleasure by the following means: I attach to the rear portion, D, of the latch one or more levers or tumblers, *e*, fitted to turn upon a pivot, *f*, the under surface of the rear portion, D, being cut away to accommodate them. The security of the lock against the burglar's pick will, as in all other locks, be increased by the number of these levers, which, at the ends opposite to which they are pivoted, are turned upward in the form of hooks, or provided with pieces at right angles to their length, so as to enter notches upon the under side of the portion C. These levers are constantly being pressed in a downward direction by the action of springs, similar to the manner in which the levers of locks of ordinary construction are depressed. Underneath these levers, and so that they will ride upon it, I place an eccentric or cam wheel, *g*, which is attached to a spindle passing through the plate of the lock and the stile of the door upon the inside of the room. The end of the spindle is provided with a thumb-piece, (not shown,) so that the wheel can be turned at will. Whenever that portion of the wheel *g* which is cut away is in the position shown in Figs. 1 and 2, the levers will, by the action of their springs, fall so low that the projecting pieces upon their ends will not engage with the notches upon the under side of the portion C, and consequently when the door-knob is turned the rear portion, D, will alone be moved. In this position of the parts the lock is arranged to act as a bolt. On the other hand, if the wheel *g* is turned so as to stand in the position shown in Figs. 3 and 4, the levers will be raised and their ends will enter the notches before mentioned, and the two parts of the latch will be united and be oper-



ated together with the same effect as if they were of one piece. In this position of the parts the lock is arranged to act as a common mortise-latch.

For hall-doors opening upon the street it is desirable to provide a means for unfastening the door by means of a pass-key, when the lock is arranged as a bolt. I propose, therefore, to cut a slit or parallel-sided opening, *h*, about three-eighths of an inch long by one thirty-second of an inch wide, at right angles to the axis of the latch and directly underneath the levers, but in front of the cam-wheel *g*. This slit extends through the stile of the door upon the street side, and serves the purpose of a key-hole. To open the door a key-bit, Fig. 5, is inserted, the face of which is cut to correspond with the arrangement of the levers, whereby the several levers are raised and the two parts of the latch are united. By simply turning the knob of the door the latch will be withdrawn, the several levers riding on the edge of the key-bit.

In order to prevent the door from being easily picked from the outside by the introduction

of an instrument other than the true key, I affix to the bottom surfaces of each of the levers, in front of the key-hole, projecting pieces *i* of varying widths, which, as the latch is drawn back, will obstruct the key-hole unless there be used a true key provided with wards to allow the same to pass.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Constructing the latch B of a door-lock in two parts, C and D, as described, which can be united or disconnected at pleasure to serve the purposes of a latch or of a bolt, as desired, and operated in the manner and on the principle as herein specified.

2. The combination of the cam-wheel or tumbler *g* with the connecting links or levers, substantially as described, for the purposes specified.

HENRY B. TYLER.

Witnesses:

JAS. S. HOWE,

GEO. H. SPAULDING.