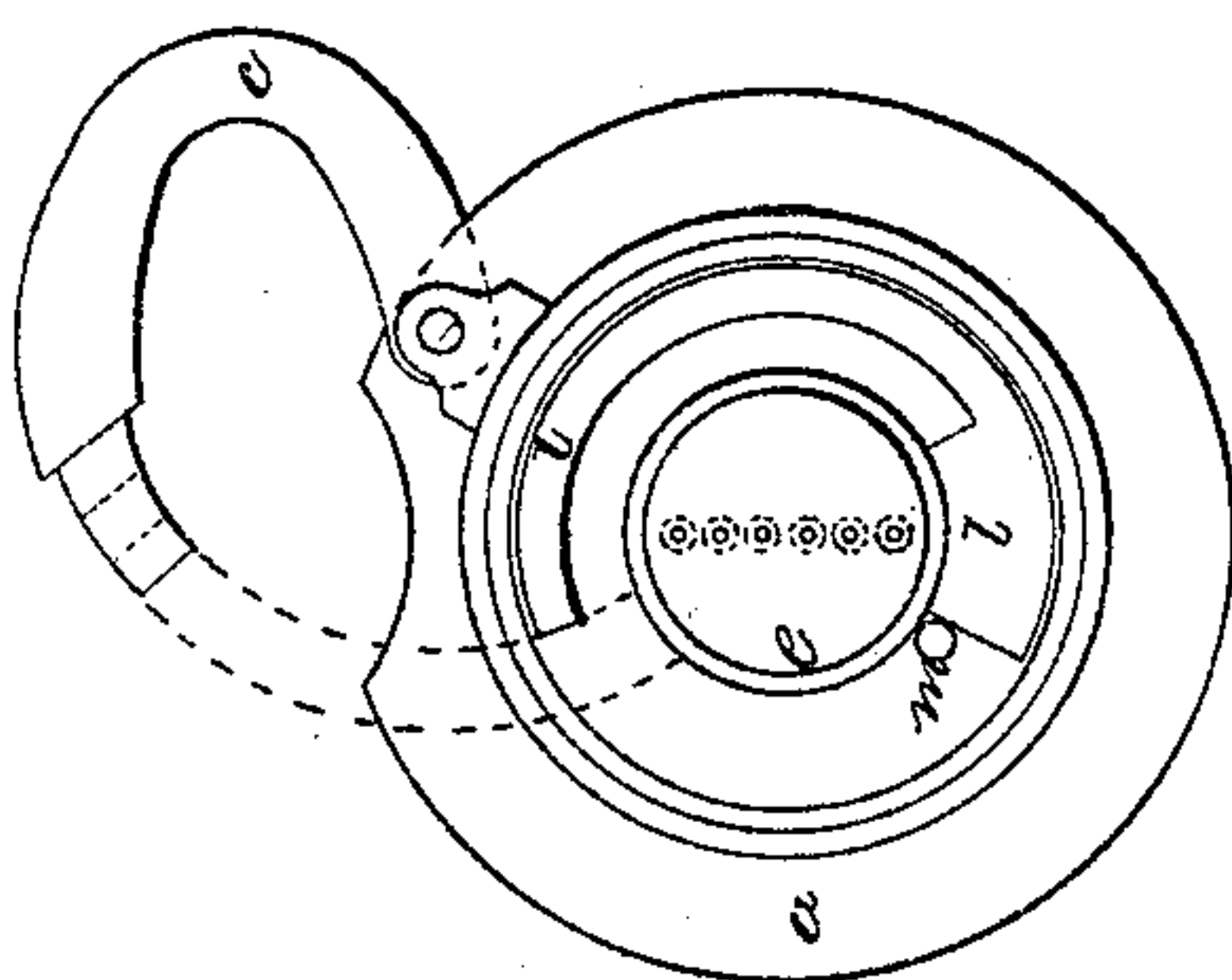
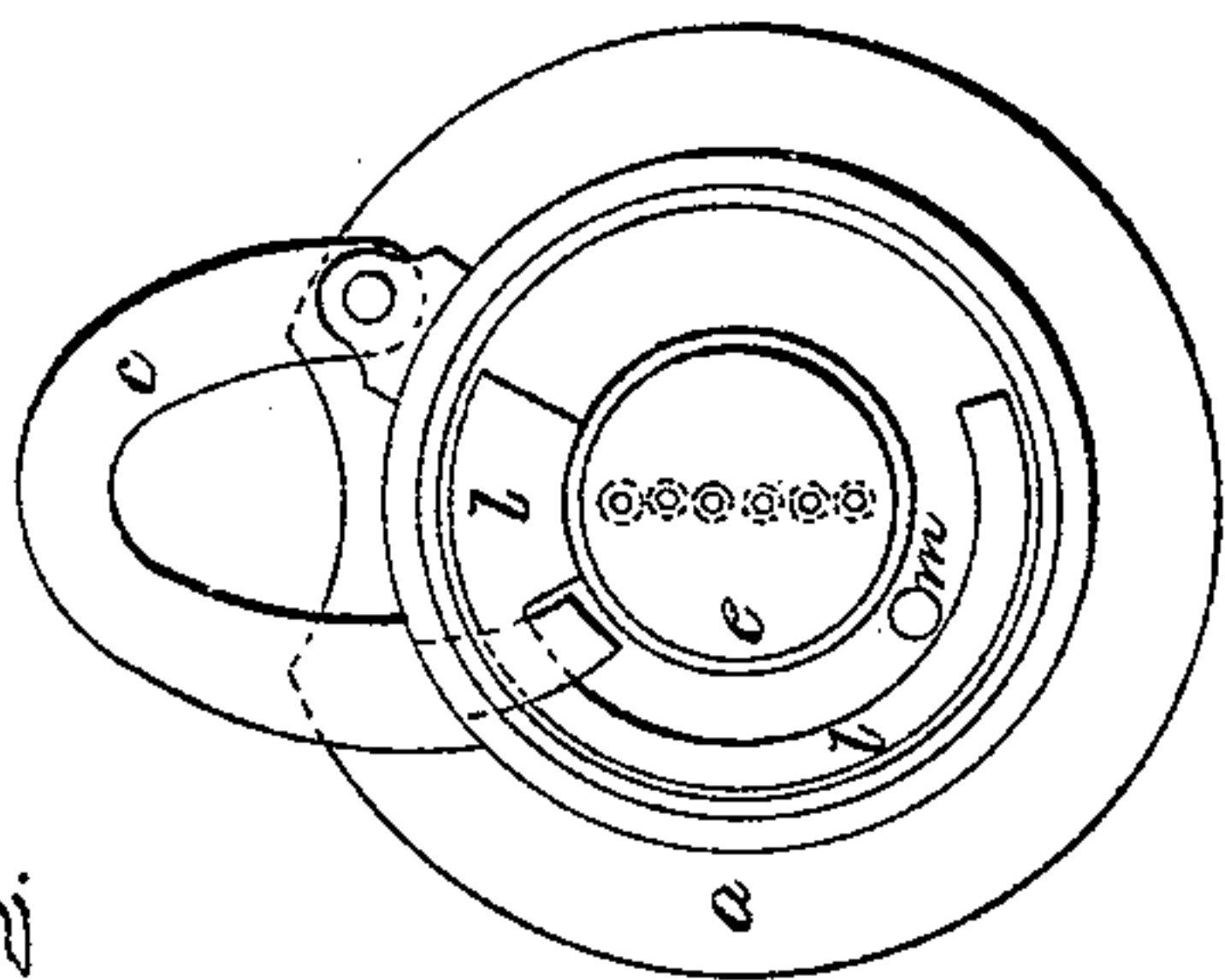
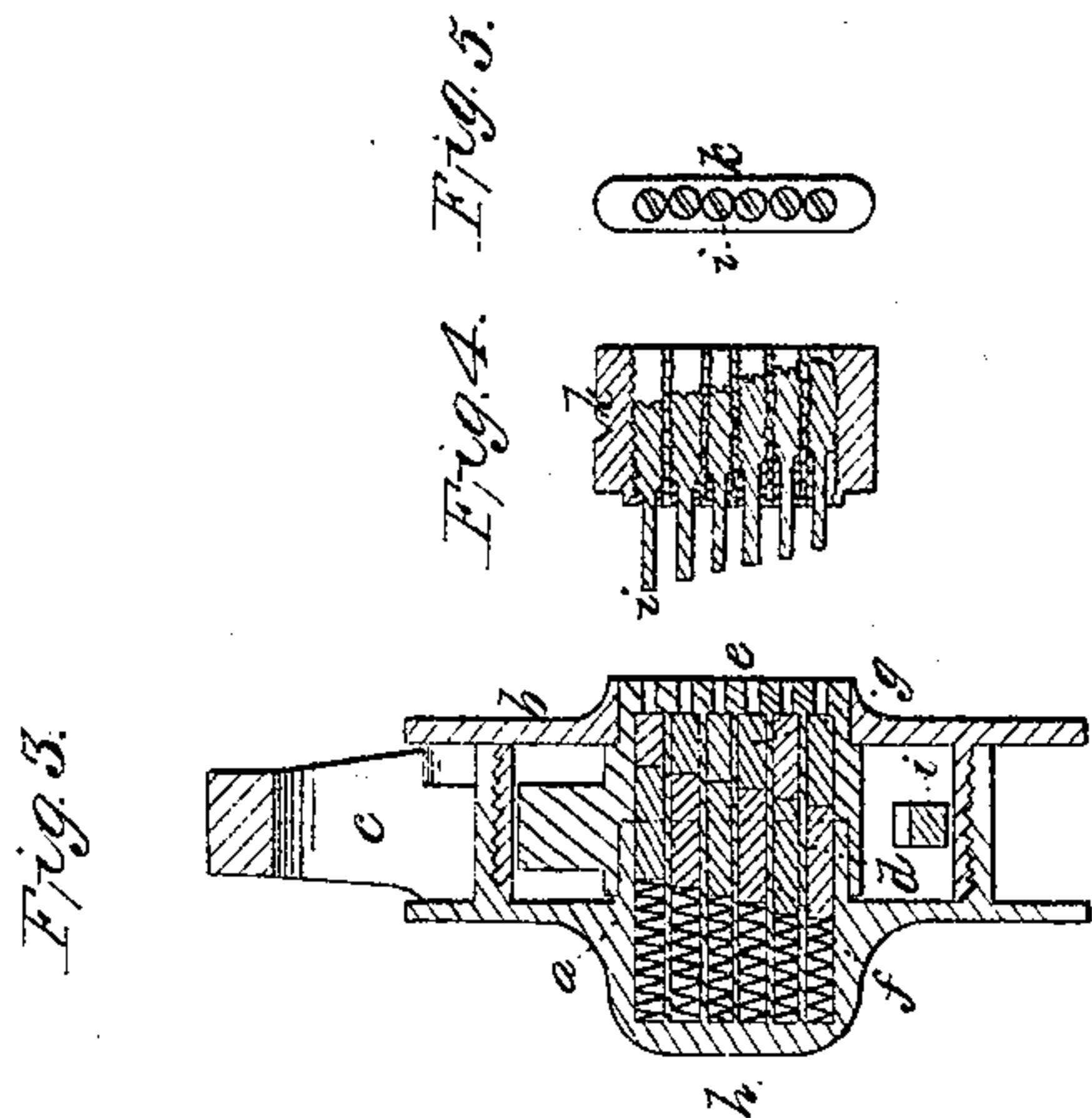


T. G. Harold,

Padlock.

N^o 41,178.

Patented Jan. 5, 1864.



Witnesses:
Lemuel W. Senell
Chas. H. Smith.

Inventor.
Thos. Geo. Harold

UNITED STATES PATENT OFFICE.

THOS. GEO. HAROLD, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF
AND JOHN W. KISSAM, OF SAME PLACE.

IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. 41,178, dated January 5, 1864.

To all whom it may concern:

Be it known that I, THOMAS GEORGE HAROLD, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Locks; and I do hereby declare the following to be a full, clear, and exact description of my said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of my lock with the front plate removed and the parts unlocked. Fig. 2 is a similar view with the parts locked. Fig. 3 is a vertical cross-section. Fig. 4 is a section, and Fig. 5 is a rear view, of my key.

Similar marks of reference denote the same parts.

Several locks have heretofore been made in which divided pins have been employed to prevent the turning or moving of a block until the divisions of the stop-pins coincided with the division between the stationary and moving parts of the lock. In these instances the portions of the divided stop-pins that are acted upon by the key have varied in length, and hence when turned aside and the lock unlocked a measure could be taken of such stop-pins and a false key could be made from such measure, because the inner or back ends of such stop-pins have rested (when unlocked) upon the flat surface at the point of separation between the stationary and moving parts; hence a wire or wires introduced at the time of the lock being open would show exactly how far the respective pins would have to be pressed back for opening the lock.

The nature of my said invention consists in constructing and arranging a turning block and stop-pins so that the bolt shall be withdrawn and the stop-pins made to coincide when unlocked as well as locked, thereby preventing an impression being taken for a false key; and I provide screw-bits introduced in a stock to form the key, so that the length projecting of such bits may be adjusted to accommodate various permutations of the divided stop-pins without changing such bits themselves.

In the drawings, *a* is one-half of a circular lock-case, and *b* is the other half-case, screwed or locked together, and receiving the hasp or bolt *c*, that enters a mortise through said cases the same as in my patent of August 5, 1862.

d is a stationary block in the center of the case *a*, and *e* is a moving block sitting as a cylinder around the end of *d* and retained in place by the case *b*, sitting around a neck on said block *e* at the part where said block *e* passes through the case. In holes in these blocks *d* and *e* are the divided stop-pins *f g*, kept forward by the springs *h*; and *i i* are the key-bits in the block or key *k*, which are of such a length that when pressed into and through the small holes in *e* at the end of the pins *g* said pins *g* will be so placed that their back ends correspond with the division between the blocks *d* and *e*, and in this position the block *e* can be turned for locking or unlocking the lock. The hook-bolt *l* is attached to or actuated by the turning block *e*, and when locked passes through the mortise in the hasp *c* and is stopped against said hasp, as in Fig. 2, and in this position the stop-pins come opposite to each other and spring forward on releasing or withdrawing the key.

To unlock the lock it is necessary to enter the key and rotate the block *e* a half-turn before the hook or bolt *l* draws out of the hasp, in doing which the block *e* is stopped by the pin *m*, and the divided stop-pins being again opposite to each other spring forward on releasing or withdrawing the key, and the lock cannot be locked without inserting the proper key; hence the obtaining of an impression or measure for a false key is avoided.

It will be evident that if a second row of pins, *f*, were employed in the block *d* at right angles or less to the first row it would only be necessary to rotate the block *e* until the stop-pins *g* coincided with them in unlocking the lock.

The key pins or bits *i* are formed of screwed wires with slots in their ends, and the holes receiving them are cut with a screw-thread. Thereby a small screw-driver can be employed to adjust the amount each pin or bit projects, to cause it to press the pin *g* back the amount required. This adjustment can be effected when the lock is apart and the block *e* set upon the key and the pins *g* placed in the desired holes.

The pins *i i* might have graduations marked on their smooth projecting parts to determine the place to which they are screwed in or out to conform to the positions of the pins *g*.

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

1. In constructing and arranging the turning block and stop-pins so that the bolt shall be withdrawn and the stop-pins made to coincide when unlocked, for the purposes and as specified.

2. The pins or bits of the key formed as screws, adjustable within the key or holder, so

that their length may be determined, as specified.

In witness whereof I have hereunto set my signature this 7th day of November, 1863.

THOS. GEO. HAROLD.

Witnesses:

LEMUEL W. SERRELL,
CHAS. H. SMITH.