H. A. Bleckmann.

Lock.

No. 13,814. Patented Nov. 20, 1855.

Fig. 5.

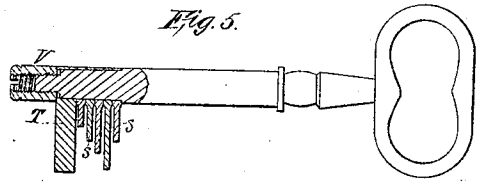


Fig. 7



Fig. 6

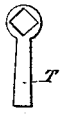


Fig. 1.

Fig. 3.

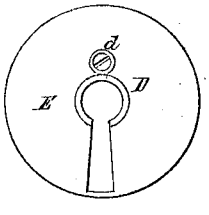


Fig. 2.

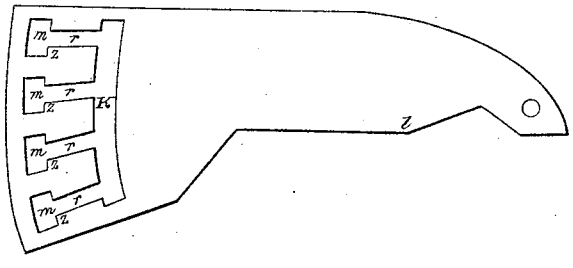
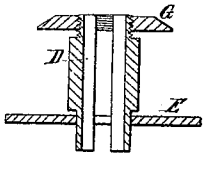


Fig. 4



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

H. A. BLECKMANN, OF RONSDORF, PRUSSIA.

LOCK.

Specification of Letters Patent No. 13,814, dated November 20, 1855.

To all whom it may concern:

Be it known that I, HENRY A. BLECKMANN, of Ronsdorf, near Elberfeld, in the Kingdom of Prussia, have invented certain new and useful Improvements in Locks, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, in which—

Figure 1, is an isometric view of the interior of the lock, the back plate being removed; Fig. 2, a detached view of one of the tumblers; Fig. 3, circular plate which covers the key hole, and prevents the inspection of the tumblers when the key is within the lock; Fig. 4, section through the same; Fig. 5, view and section of the key; Fig. 6, detached view of the bit which shoots the bolt; Fig. 7, one of the bits which raise the tumblers.

In the locks heretofore constructed, in which the keys are furnished with a changeable set of bits, and which may be located with the bits in a great variety of positions, but which can only be unlocked with the very same arrangement of bits by which they are locked, several sets of tumblers and a great complication of parts have been employed. My present invention has for its object to effect this end by the use of a single set of tumblers the construction and operation of which I will now describe.

In the accompanying drawings A, is the lock case, B the bolt, the motion of which is limited in each direction by the stop *a*, projecting up from the front plate of the lock and playing in the slot *b*, of the bolt.

D, is a slotted tube which is secured to the cover plate E, by the screw *d*. Both the tube and plate revolve with the key, the former guiding and steadying it, and the latter covering the key hole as the key is turned. The tube D, plays within the circular opening I, in the front plate, and is retained in place by the circular nut G.

In Fig. 2, is represented one of the tumblers which I employ and which will now be described. The tumblers, of which there may be any suitable number, are all formed alike. They are each furnished with a slot K, and several notches *m*, in which slides the stump *p*, affixed to the bolt. The tumblers are all pivoted to the front plate of the lock at L.

The key is formed as follow: A portion of its shank is square and the bits S, are adapted thereto in any desired order. T, is a bit similarly applied to the shank of the key which strikes against the shoulders *x*, and *y*, Fig. 1, of the bolt by which the latter is shot back and forth. The bits are secured to the key by the nut V. The bolt is represented in Fig. 1, as withdrawn and the lock as ready to be locked. The bits S, are of such a length that when brought to bear upon the tumblers at *l*, the latter shall be elevated so as to bring one or other of the channels I opposite to the stump *p*. When in this position the bit T, striking against the bolt at *y*, shoots it forward, the stump *p*, passing into one or other of the notches *m*, according as the tumblers are more or less raised by their bits. As the key passes around, the tumblers fall upon the stump, and the bolt cannot be again returned until each tumbler is raised a sufficient distance to permit the stump to return through the channels *r*. This can only be effected by the use of the same combination of bits as was employed to shoot the bolt. If it be attempted to unlock the lock by a different arrangement of bits some of the tumblers will be raised so high that the stump *p*, in lieu of passing through the channel *r*, will strike against the shoulder B, of the tumblers and prevent the bolt from being drawn back. If the same combination of bits be employed as was used to shoot the bolt, then each tumbler will be raised to the proper height to permit the stump to pass through the channels and the bolt may be withdrawn.

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

The tumbler herein described having two or more notches *m*, in combination with a series of changeable bits operating in the manner substantially as herein set forth.

H. A. BLECKMANN.

Witnesses:

FR. AUG. BUSCH,

FR. WIHL. ORTMANN.