(Model.)

A. KIRKS.

LOCK.

No. 329,456. Patented Nov. 3, 1885.

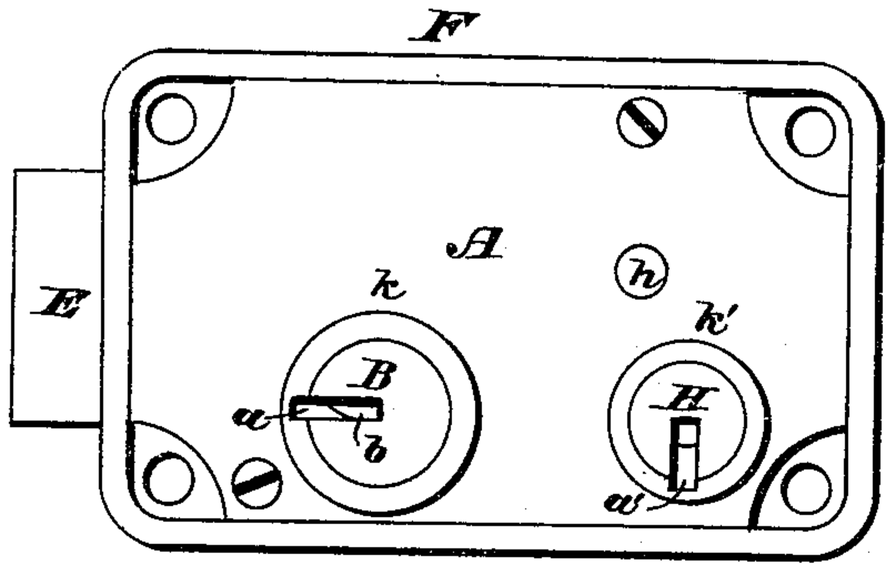

Fig. 1.

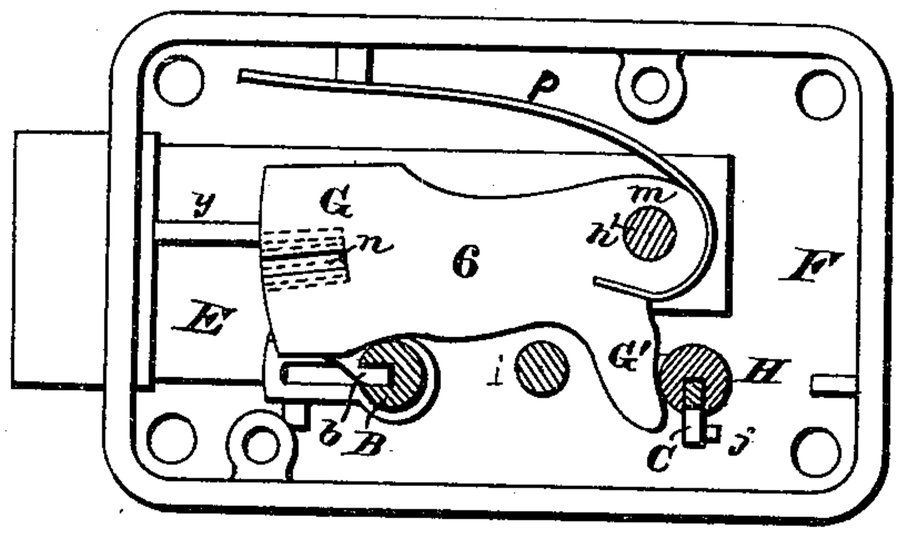

Fig. 2.

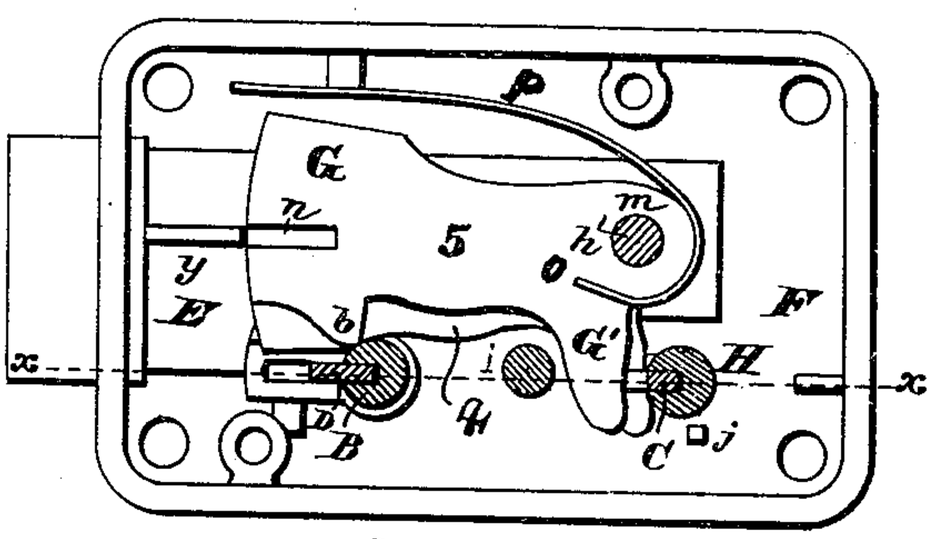

Fig. 3.

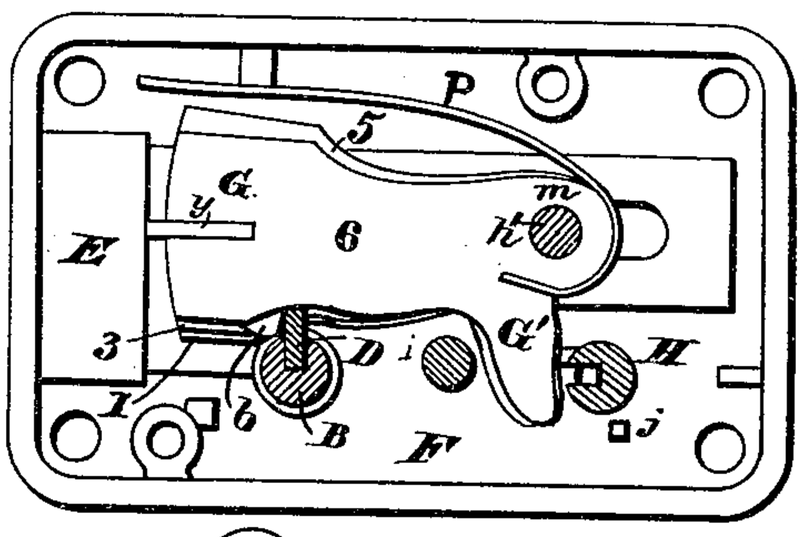

Fig. 4.

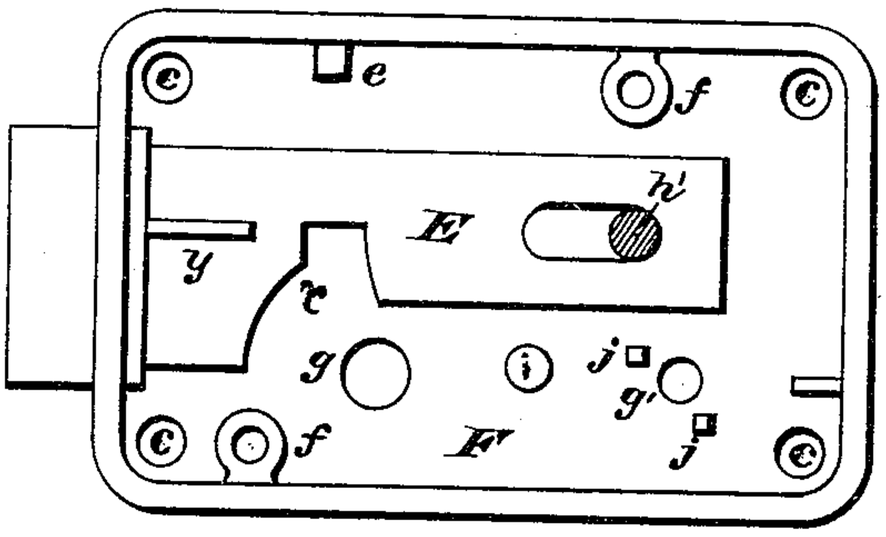

Fig. 5.

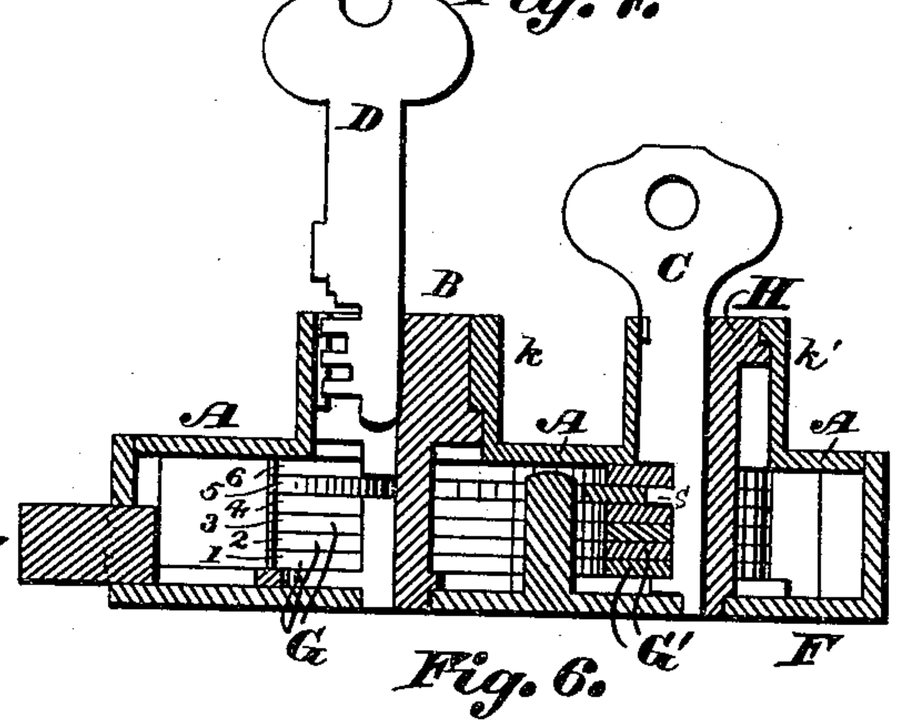

Fig. 6.

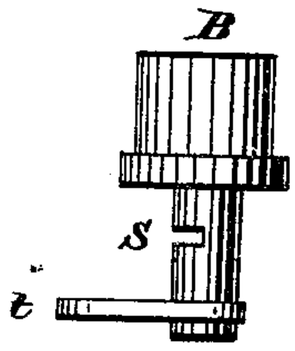

Fig. 7.

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ALBERT KIRKS, OF CANTON, OHIO, ASSIGNOR TO THE DIEBOLD SAFE AND LOCK COMPANY, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 329,456, dated November 3, 1885.

Application filed August 17, 1885. Serial No. 174,591. (Model.)

To all whom it may concern:

Be it known that I, ALBERT KIRKS, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Safe-Deposit Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in the construction of key-locks for safe-deposit boxes which are operated by means of two keys of different forms. One key, generally called the "master" or "pass" key, operates on all the locks, and is kept in possession by the cashier or other official in charge. The other is an individual key for each box, and belongs to the renter of same.

Escutcheons were formerly used in connection with safe-deposit locks to cover and secure the key-holes, the key of the escutcheon being used by the cashier as a pass-key for the locked box. These escutcheons, however, proved a source of constant annoyance to the cashier, by having to be unlocked and locked again whenever the boxes were opened to the customers, because the escutcheon could not be attached securely on the outside of the door, and were an interference to the full opening of the door, by reason of the projection striking the adjoining boxes, as well as being dust-catchers. To overcome and avoid these objectionable features, a lock was constructed with but one key-hole to accommodate both the master and individual keys. The mechanism for each key was within the same lock-case, and required the service first of the master-key and then of the individual key to be opened; but as both keys employed the same key-hole, trouble and confusion were frequently caused by a failure to use the keys in the right succession. A step in advance of this was the invention of a lock with two key-holes, so constructed that the keys could not be interchanged or inserted but where they belonged; but these latter locks left the key-holes unprotected, so that other persons could have access to the same, and, by accident or design, tamper with and derange the lock by using keys not intended to be inserted therein. Thus instances are also recorded where locks were opened by parties operating in the manner indicated. The present invention is designed to protect the key-holes of such locks without resorting to escutcheons on the outside of the door. The device provides a mechanism entirely within the lock, which operates a blind to cover the inside entrance of the key-hole, so that a key cannot enter from the outside until the obstruction is removed or thrown off by the master-key. The shape and style of this contrivance may be made differently to conform to the different construction of locks; but as an illustration of the manner of its application recourse is here had to a lock which is provided with two key-holes, both the master and individual keys operating the same set of tumblers, the master-key lifting one or more, and the other key working on the remaining tumblers. In this lock I cut a groove in the post, which receives the individual key at a place beneath where one of the tumblers rests, and make a slot of sufficient depth to allow the tumbler to drop down below the point of the key-entrance. This tumbler then blocks up the opening for the individual key; but on the introduction of the master-key it operates in its place to lift up and remove said obstruction and give entrance to the individual key. The tumbler thus employed is so formed as to cover the key-hole only so far as there are no grooves in the key. The key can therefore be removed without the assistance of the master-key, and the custodian of same need not be kept in attendance for the purpose of locking the customer's box. By the withdrawal of his key his box is locked and the key-hole closed automatically by action of the tumbler which forms the obstruction.

Figure 1 is a plan view showing the lock-lid A, revolving posts B and H, and the keyways *a* and *a'*, also showing an obstruction, *b*, in the keyway *a*. Fig. 2 is same view, with lid A removed and the head of the revolving posts B and H cut away, leaving the stem or body of the posts in position, and again showing an obstruction, *b*, in the keyway *a* and the pass-key C entered; Fig. 3, same view, with the upper tumbler, No. 6, removed, the master-key C turned to a position at right angles

to that on which it entered the lock, and tumbler No. 5 raised into its upper position, removing the obstructing-blind *b* from the keyway *a*, and the individual key D entered; Fig. 4, same view, showing all the tumblers in place, the individual key D turned to a position at right angles to that on which it entered, turning the post with it, and raising the remaining tumblers up so as to line the slots in their ends with that in the end of tumbler No. 5, the lock-bolt E thrown in and the master-key C removed; Fig. 5, same view of lock-box F, the tumblers and revolving post removed, showing the lock-bolt F in position. Fig. 6 is a longitudinal view showing the parts all in position, the pass-key C having been entered and turned so as to raise tumbler No. 5 and remove the obstruction from the keyway *a* of the individual key D, which is now in the post and may be passed into the lock. Fig. 7 is an elevation of the revolving key-post B, showing groove *d* in cross-section and the cam *t* for throwing the lock-bolt.

F is a quadrilateral lock-box provided with perforations *c*, through which screws or rivets may be passed to secure the lock in position, a spring-rest, *e*, threaded lid-supports *f*, perforations *g g'*, to support the ends of the key-posts B and H, an upwardly-projecting pin, *i*, to check or terminate the movement of the tumbler, also the elevations *j*, which check the movement of the pass-key. The lid A is adapted to the box F, and is provided with a perforation, *h*, adapted to pin *h'*, and upwardly-projecting escutcheon-cylinders *k k'*, that embrace and support the revolving key-posts B and H. The four corners of the lid may be cut away or perforated for the passage of screws or rivets. The lock-bolt is of the usual form, having a heavy rectangular-formed bolt-head and a flat plate extending into the lock, in which there is provided an oblong slot adapted to pin *h'*, which supports the bolt in a position parallel with the sides of the lock-box. This bolt is provided with a projecting rib, *y*, which is adapted to the slots in the end of the tumbler, and is also provided with a notch, *r*, on one side, for engagement with a cam or projection, *t*, from the rotary post B, by which engagement the bolt E is thrown to and fro. The tumblers number from one to six, and are of the same general contour, excepting No. 5, which is provided with a downwardly-projecting obstructing-blind, *b*, which will be hereinafter explained. The tumblers may be made of sheet metal of about No. 15, and in form to have a horizontal body part, G, and a downwardly-projected toe, G', in one end, and a perforation, *m*, adapted to the post *h'*, about which they rotate. The other end is provided with a slot, *n*, which is cut at a point of elevation differing each one from the other, and a slot, *o*, receives and retains the spring *p*, which is formed about the rounded end of each tumbler and rests under the rib *e*, in which position the exertion of the spring tends to rotate the tumblers about the pin *h'*, and in so doing to force the heads of the tumblers in a downwardly direction until they rest upon the post B. The rotary post B is adapted at one of its ends to perforation *g* in the lock-box, and has an outwardly-projecting cam, *t*, which, as the post is rotated, engages with the lock-bolt E in the notch *r*. A narrow groove extends through the length of the post cut from the surface to the center, forming a keyway for the key D. In the body of this post, directly under tumbler No. 5, and at right angles with the key way, there is a groove, S, cut to the depth of the keyway. The other end of the post is enlarged, so as to cover the body of the key D. The post H has a groove or keyway cut through its entire length, and from the surface to the center, one end adapted to the perforation *g'* in the lock-box, the other end provided with a collared head, which rests under a shoulder in the escutcheon-cylinder *k'*. The keyways *a* and *a'* are of unequal size. The way *a* in post B is deeper and narrower than the way *a'* in post H, so that the master-key C will not enter the keyway in post B, nor the individual key into the keyway in the post H, as each key is adapted to the way provided for it. The keys are flat and have notched edges, the notches varied to circumstances. The master-keys for one set of locks may be duplicates, varying only for different sets of locks; but not so with the individual keys, as they should be fitted to one lock only. In this case the master-key is constructed with a projection, *s*, which engages with the toe of tumbler No. 5, pressing it out, as seen in Fig. 3, and raising the body up, so that the slot *n* will be in line with the rib *y*, and the obstructing-blind *b* lifted out of the groove S, so that the individual key D may be entered, which is provided with grooves and projections adapted to raise the remaining tumblers, so as to bring the several slots (indicated by the dotted lines, see Fig. 2) in line with the slot *n* in the tumbler raised by the master-key, and when so brought into line the rib *y* will enter the slotted ends of the tumblers, as the lock-bolt is moved in by the cam *t*, and as the key and post are turned into position, as shown in Fig. 4. After the turning of this individual key and unlocking the door the master-key may be withdrawn, as the door can be locked and the individual key withdrawn.

I do not wish to limit myself to a blind on any one of the tumblers, as either of them, or more than one, may be used for that purpose.

Having thus fully described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a safe-deposit lock having two separate key-holes on one side of the lock operated by two different keys—a pass-key and a regular key—an obstruction adapted to cover the key-hole of the regular key, and a tumbler connected with the obstruction, whereby when the pass-key is introduced and turned

the tumbler is operated and the obstruction removed from the key-hole of the regular key, substantially as set forth.

2. In a safe-deposit lock having two separate key-holes on one side operated by two different keys—a pass-key and a regular key—a tumbler and an obstruction connected therewith, and adapted to cover the key-hole of the regular key and prevent the insertion of the regular key without the assistance of the pass-key, the parts being constructed and arranged to permit of the removal of the regular key without the assistance of the pass-key.

3. In a safe-deposit lock having two different key-holes on one side operated by two different keys, both operating one set of tumblers, so that one key operates one part of the tumblers, the other key the remaining tumblers and the lock-bolt, one or more of the tumblers operated by the pass or master key, so constructed that said tumbler or tumblers form an obstruction to the key-hole of the individual key, substantially as described, and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 15th day of August, A. D. 1885.

ALBERT KIRKS.

Witnesses:
W. K. MILLER,
BURT A. MILLER.