(No Model.)

J. ROCHE.

MASTER KEY LOCK.

No. 520,121. Patented May 22, 1894.

Fig. 1

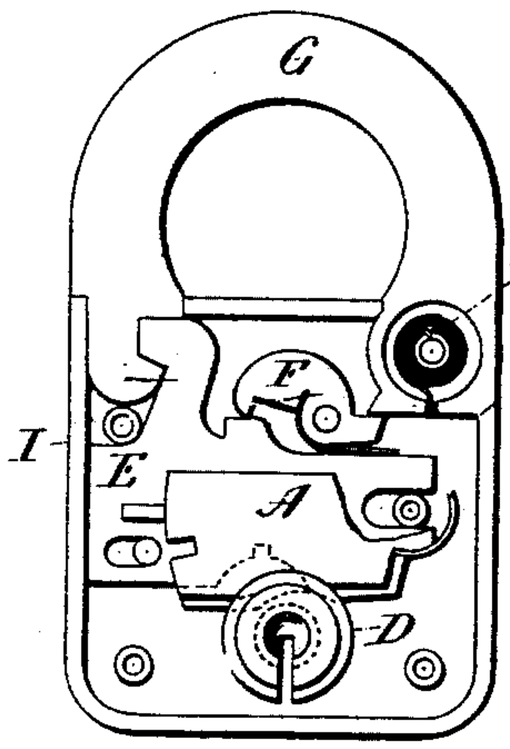


Fig. 2

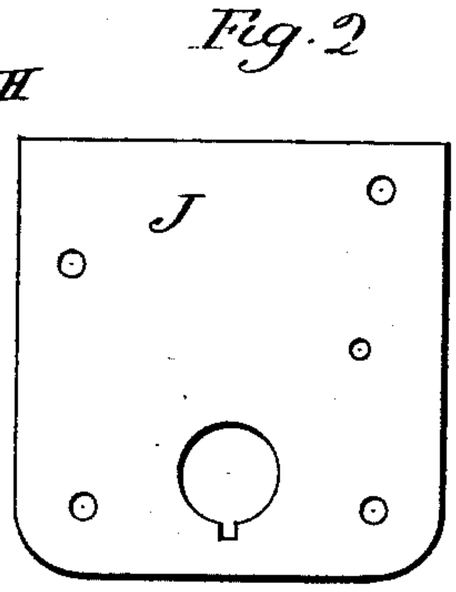


Fig. 3

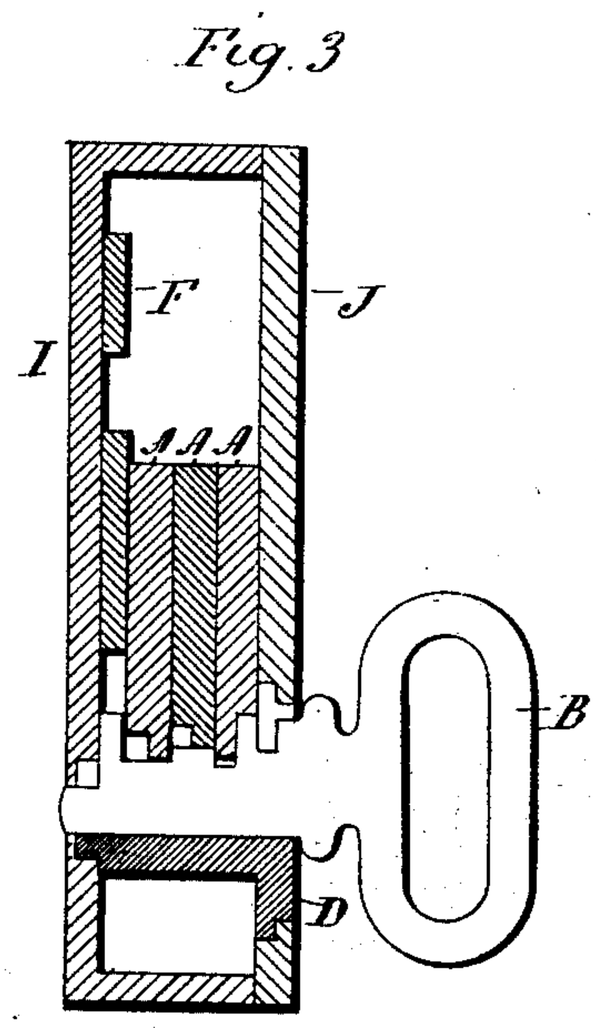


Fig. 4

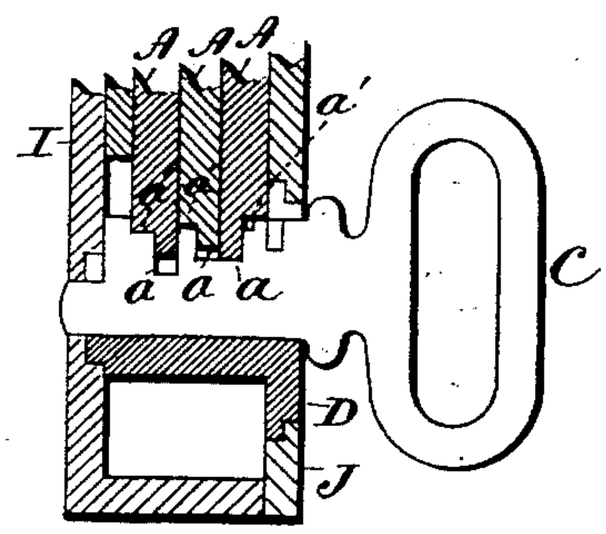


Fig. 5

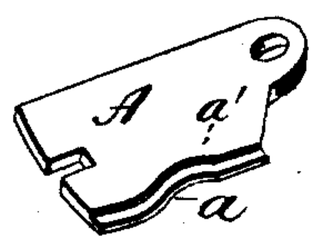
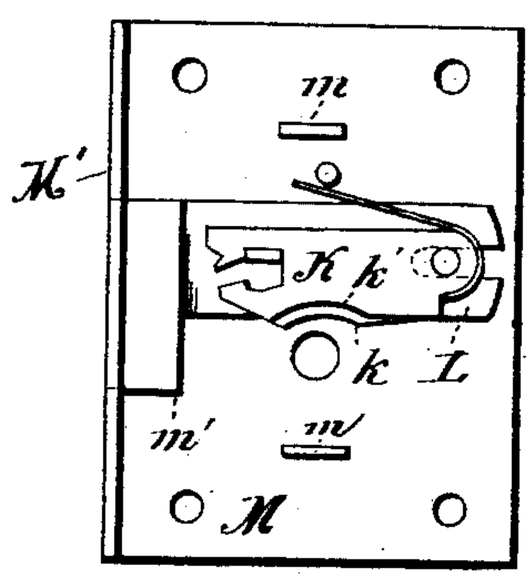


Fig. 6



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MASTER-KEY LOCK.

SPECIFICATION forming part of Letters Patent No. 520,121, dated May 22, 1894.

Application filed July 10, 1893. Serial No. 480,025. (No model.)

To all whom it may concern:

Be it known that I, JAMES ROCHE, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new Improvement in Master-Key Locks, (Case A;) and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in inside elevation of a padlock constructed in accordance with my invention; Fig. 2, a detached view of the cover of the said padlock; Fig. 3, a sectional view of the lock showing the co-operation of its individual or special key with its tumblers; Fig. 4, a similar but less comprehensive view showing the co-operation of the master-key with its tumblers; Fig. 5, a detached perspective view of one of the tumblers of the lock; Fig. 6, a view in inside elevation of a desk-lock constructed in accordance with my invention.

My invention relates to an improvement in that class of locks known as master-key locks, which are locks constructed in series, and adapted to be individually operated by special keys, and collectively operated by a universal key known as the master-key, so that while the special key will not lock any other lock of the series, the master-key will unlock every lock in the series, the object being to produce a simple, compact and effective lock, of few parts, and not liable to derangement.

With these ends in view my invention consists in a flat-tumbler master-key lock having one or more of its tumblers constructed with two distinct operating faces, respectively adapted to co-operate with two different keys and arranged parallel with each other upon one of its edges.

My invention further consists in a master-key lock having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

My invention may be applied to flat-tumbler master-key locks of whatever form or construction, but I have thought it sufficient to illustrate its application to pad- and desk locks.

In Figs. 1 to 5 inclusive of the drawings, I have shown the application of my invention to a padlock which is of ordinary construction, except as to its flat tumblers A, each of which is constructed with two distinct parallel operating faces a a', extending, as herein shown, throughout its outer edge. The faces a of the respective tumblers are constructed to be operated upon by the bits of the individual key B, while the faces a' of the respective tumblers are designed to be operated upon by the universal or master-key C. Of course, if desired, this arrangement might be reversed, for the operation of the bits of the individual key upon the faces a', and the bits of the master-key upon the faces a. When the two operating faces of the tumblers are arranged parallel with each other, as shown, each key may be rotated in the lock through a full rotation. One or more of these tumblers may be employed, and if desired all of them may be of the special construction described. As herein shown, the lock is provided with three tumblers, all of which are constructed with two operating faces. The inner operating face a, may be set within the upper or lower face of the tumblers, as desired. As shown herein, it is set within the upper face of the outer tumbler, but within the lower face of the two inner tumblers. The padlock comprises besides these tumblers, a slotted key-cylinder D, a bolt E, a locking-dog F, a hasp G, a hasp-spring H, a case I, and a cover J, all of the parts last mentioned being of ordinary construction, and not needing specific description. It will be understood that a series of these padlocks are made, and that the bearing surfaces a of their tumblers will be constructed or combined dissimilarly, so that a special key will be required to open the individual locks, while on the other hand, the operating surfaces a' of the whole series of locks will be constructed and combined in the same way, so that one universal or master-key will operate all of the locks. That is, as before mentioned, the principle on which locks of this class are made.

In Fig. 6 of the drawings I have shown a desk-lock of ordinary construction except as to its tumblers K, one or more of which have two distinct parallel operating surfaces k and

k' formed upon its outer edge, and arranged to co-operate on the principle described for the padlock, with special and master-keys. The lock in question also has a bolt L, a plate M, having a selvage M', and is further provided with a cover, which is not shown, but which is secured in place by being provided with lugs, which enter the elongated openings *m* in the said plate. A detailed description of this lock is thought to be unnecessary, in view of the fact that its construction is well known. It will be seen, too, that it is not essential that more than one of the tumblers be provided with two operating faces, although by preference all of them will be so constructed, as it increases the complexity and efficiency of the lock without materially adding to its expense, greatly enlarging the range of combination or differentiation.

The two locks shown and described will illustrate my invention, which it is apparent may be applied to other types of locks belonging to the same class of flat-tumbler locks.

Although I have used the term parallel to indicate the relative arrangement of the two operating faces of the tumblers, I do not wish to be understood as meaning that the two faces of each tumbler are parallel in the sense that they coincide with each other, but use the term in a broad sense to mean that they are parallel in their general direction or extend alongside of each other on the same edge of the tumbler. It will be apparent that in differentiating between locks constructed in accordance with my invention for securing different combinations, the particular forms of the operating faces will be varied, and that they may depart from the coincidence shown, for instance, in Fig. 5. It will be readily understood that either of the faces of the same tumbler may be widely varied without in any way interfering with the other face, which is an advantage I derive from having the faces arranged parallel or alongside of each other instead of in line and merging into each other at their inner ends. I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. I am aware, however, that a master-key lock having tumblers adapted to be operated upon at different points by special and master-keys respectively, is old, and I do not claim that construction broadly.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A flat-tumbler master-key lock having one or more of its tumblers constructed with two distinct parallel operating faces formed upon its outer edge, substantially as described.

2. A flat-tumbler master-key padlock having a case, hasp, bolt, dog, key-cylinder and tumblers, one or more of the latter being constructed with two distinct parallel operating faces, respectively adapted to co-operate with two different keys, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES ROCHE.

Witnesses:
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GEO. W. CROSLEY.