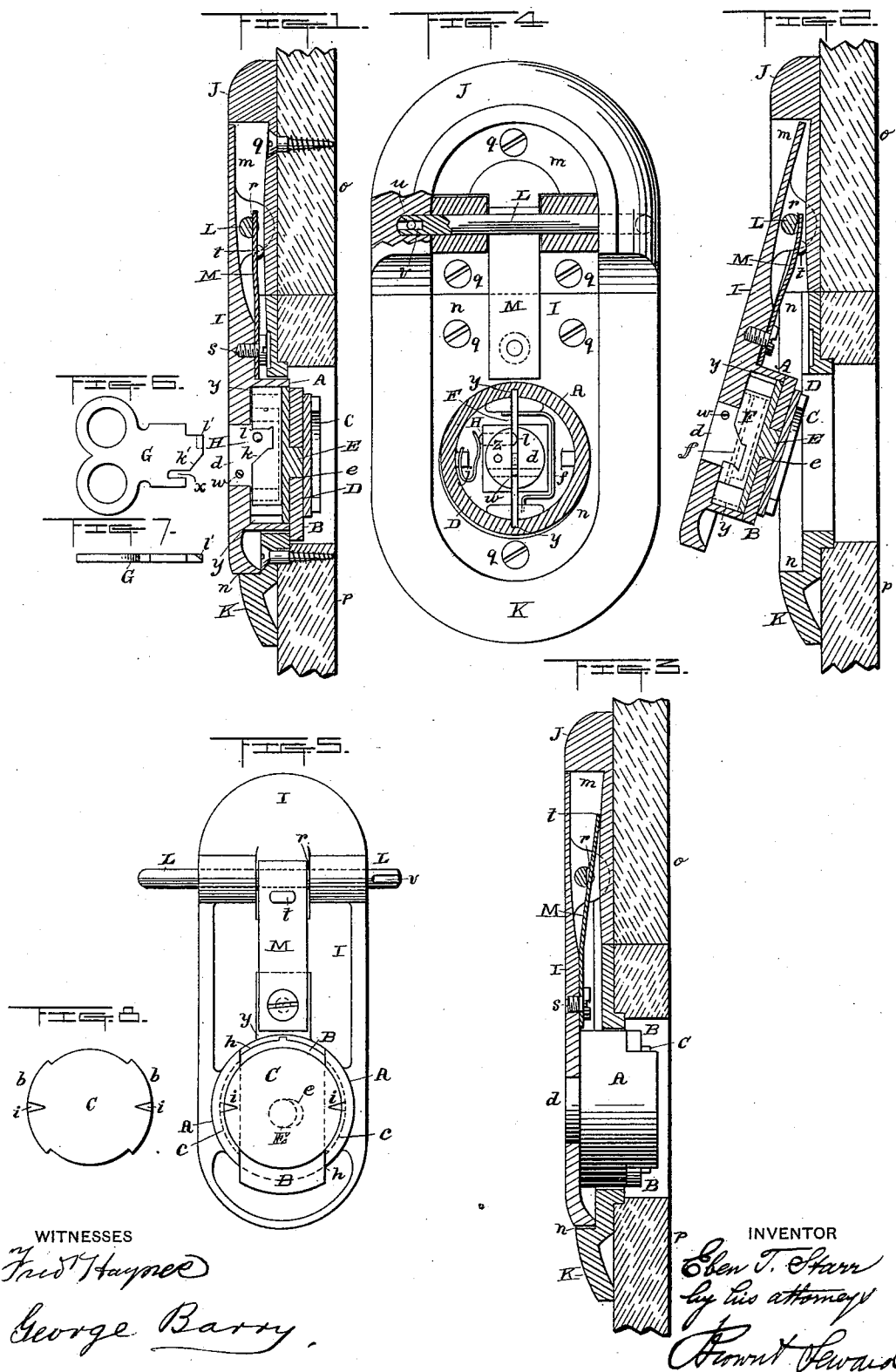


(No Model.)

E. T. STARR.
LOCK.

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UNITED STATES PATENT OFFICE.

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LOCK.

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To all whom it may concern:

Be it known that I, EBEN T. STARR, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Locks, of which the following is a specification, reference being had to the accompanying drawings.

I will proceed to describe my invention with reference to the accompanying drawings, which represent it embodied in a hasp-lock suitable for trunks or other purposes, and I will afterward point out the novelty in the claims.

In the drawings, Figure 1 represents a sectional view of a hasp-lock embodying my improvement and also portions of the parts which are secured together by it. Figs. 2 and 3 represent sectional views of the same or a similar hasp-lock and parts slightly modified in certain details. Fig. 4 represents a front view, part section, corresponding with Fig. 1. Fig. 5 represents a back view of the hasp and other details of Fig. 1; Fig. 6, a side view, and Fig. 7 an edge view of the key for the lock represented in Fig. 1. Fig. 8 is a view of a cap-plate.

Like letters of reference indicate corresponding parts in all the figures.

A designates a lock-case having a sliding main bolt B fitted therein. A revolving or key-actuated disk is arranged within the case A, having a portion exposed through an opening in the face of the case to receive the key G. The said disk D engages with the sliding main bolt B by an eccentric for operating the latter.

F designates a secondary key-actuated bolt carried and movable lengthwise within a slot in disk D, and f a spring for forcing the secondary bolt F into engagement with the interior of case A to prevent the moving of the disk until the said secondary bolt is withdrawn from engagement with said case.

H designates a supplementary key-actuated bolt working within disk D at an angle to the secondary bolt F to prevent bolt F from being withdrawn from engagement with the casing until the key is inserted.

j designates a spring for forcing the supplementary bolt into engagement with the secondary bolt.

In the examples of my invention repre-

sented in the drawings the secondary bolt F is notched to receive the key and presents an inclined edge or face *k*, against which the key presses to withdraw the bolt from engagement with the casing, and the supplementary bolt has an inclined face *l* for the key to act upon to force it out of engagement with the secondary bolt before the secondary bolt can be withdrawn from its said engagement with the casing.

In the drawings the disk is represented as provided with a hub or boss *d*, projecting through a central opening in the face of the casing to receive the key, and the casing is represented as circular in form to receive and guide the disk fitted to its circular interior. The hub or boss *d* and the opening through which it projects are represented as circular and concentric with the disk and case. The eccentric by which the disk drives the main bolt is represented as consisting of an eccentric-pin E, projecting from the disk and operating in a transverse slot *e* in the main bolt B.

The case or casing A is represented as having recesses *h* in the back to receive and guide the main bolt B and to receive the cap-plate C and permit it to pass into the grooves *c*. (Indicated by dotted lines in Fig. 5.)

The cap-plate C is represented as circular in form and provided with notched projecting rings *b*, secured in grooves *c* by indentation of the metal outside of the grooves *c* into the notches *i* of the cap-plate. When the parts of the lock are all together, the rings of the cap-plate being within the grooves *c*, the metal of the casing just over the notches *i* may be indented in the notches by driving or setting in the same by a blow of a hammer against a hard-pointed instrument placed with its point on the metal of the casing immediately over a notch *i*.

y y are notches in the interior of the case A, into which the projecting ends of the secondary bolt enter, thus engaging the interior of the case and preventing the disk from turning therein until the said secondary bolt is withdrawn by the key.

In the drawings a hasp-lock is represented in which the face or front of casing A is a part of a hasp I.

J designates a hasp-plate, and K a body-plate. The hasp-plate has a recess *m* and the

body-plate a recess *n*. The hasp *I* fits snugly into recesses *m* and *n* and is pivotally attached to hasp-plate *J*. The backs of recesses *m* and *n* are perforated to receive rivets or screws for attaching the hasp-plate and body-plate to the parts to be secured together by the hasp-lock. The said perforations being covered by the hasp, the said attaching devices will be entirely concealed thereby, and be inaccessible from the front or outside—as, for example, of a trunk to which the said hasp-lock may be applied.

o and *p* designate the parts to be secured together by the hasp-lock, and *q* screws which may be employed in the perforations to attach the hasp-plate and body-plate severally to the parts *o* and *p*.

L designates a hinge-bolt by which the hasp *I* is pivotally attached to the hasp-plate *J*.

M designates a plate or piece of metal placed between the hasp and hasp-plate and engaging a notch *r* in the hinge-bolt, whereby the said hinge-bolt is prevented from moving endwise.

When it is considered desirable to have a spring so placed that it will have a tendency to throw the lower part of the hasp outward or inward, I make the plate *M* to consist of a spring, arranged between the hasp and hasp-plate to press against the back of the recess in the hasp-plate above the hinge-bolt to force the lower end of the hasp inwardly, as represented in Fig. 3, and to press against the hasp below the hinge-bolt to press its lower end outwardly, as represented in Figs. 1, 2, 4, and 5. In Fig. 3 the plate *M* consists of a flat spring attached by a screw *s* to the back of the hasp, resting in the notch *r* of the hinge-bolt and having a projection *t* near the end, which bears against the back of the recess in the hasp-plate above the hinge-bolt. In Figs. 1, 2, 4, and 5 the plate *M* consists of a similar flat spring attached to the back of the hasp by a screw *s*, the projection *t* bearing against the hasp-plate below the hinge-bolt, whereby the pressure of the spring below the hinge-bolt tends to throw the lower part of the hasp outward. The hinge-bolt is represented as located at a distance from the upper end of the hasp, in order that when *M* is not a spring, or when no spring is employed to press or force the lower end of the hasp either outward or inward, or when a spring is employed to force the said lower end inward, pressure, as of a finger of the hand, may be applied above the hinge-bolt to press the upper end of the hasp back into the recess and thereby throw out the lower end of said hasp.

u designates a steady-pin fixed in the hasp-plate to enter a groove *v* in the end of the hinge-bolt to prevent its turning while putting the parts together before the plate *M* is placed. This groove and steady-pin may be conveniently employed when the hinge-bolt has slanting faces, as represented in Figs. 4 and 5.

w designates a baffle-pin inserted transversely through and fixed within the stem of

the revolving disk *D* and crossing the key-slot in said stem to make it more difficult to fit a false key to the lock.

The key *G* (represented in Figs. 6 and 7) has a slot *x* to fit over the baffle-pin *w*. By changing the position of the pin *w* a different key is rendered necessary, and hence many changes may be made in a number of locks by simply arranging the said pin in different positions without changing other parts of the lock.

k' is a slanting face in the key *G* to press against the inclined face *k* of the secondary bolt, and *l'* designates a slanting face (represented by dotted lines in Fig. 6) for forcing back the supplementary bolt *l* when the key is inserted in the lock.

z is a depression or mark in the face of the boss or projection *d* to indicate to the eye whether the main bolt is drawn or not.

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

1. The combination, with a lock-case, a sliding main bolt fitted therein, and a revolving disk arranged within the case but having a portion exposed through an opening in the face thereof to receive the key and engaging with said bolt by an eccentric for operating the same, of a secondary key-actuated bolt carried and movable lengthwise within a slot in said disk, and a spring for forcing said secondary bolt into engagement with said case to prevent the moving of the said disk until the said secondary bolt is withdrawn by the key, substantially as specified.

2. The combination, with a lock-case, a main bolt working therein, and a key-actuated disk fitted to revolve in said case, of a secondary key-actuated bolt movable lengthwise in a slot in said disk, a spring for forcing said bolt into engagement with the interior of said case to prevent the moving of said disk until the said secondary bolt is withdrawn by the key, a supplementary key-actuated bolt working within said disk at an angle to the secondary bolt to prevent the said bolt from being withdrawn until the key is inserted, and a spring for forcing said supplementary bolt into engagement with the secondary bolt, substantially as specified.

3. The combination, with a lock-case, a main bolt working therein, and a key-actuated disk fitted to revolve in said case, of a secondary key-actuated bolt movable lengthwise in a slot in said disk, a spring for forcing said bolt into engagement with the case, a supplementary key-actuated bolt working within said disk, and a spring for forcing said supplemental bolt into engagement with the secondary bolt, said supplementary bolt having an inclined face for the key to act upon to force it out of such engagement before the secondary bolt can be withdrawn, substantially as specified.

4. The combination, with a circular lock-case *A* and a sliding main bolt *B*, fitted therein, of a revolving disk *D*, arranged within said case and concentric therewith and having a

- hub or boss *d* projecting through a central opening in the face thereof to receive the key, an eccentric-pin *E*, projecting from the back of the disk and engaging a transverse slot *e* in the main bolt for operating the same, a secondary key-actuated bolt *F*, movable lengthwise in a slot in said disk, and a spring *f* for forcing said bolt *F* to engage slots *y* of the case, substantially as specified.
5. The combination, with a circular lock-case *A*, having recesses *h* in the back and grooves *c* in the sides thereof, of a circular cap-plate *C*, provided with notched projecting wings *b* to pass into said recesses *h* and thence into grooves *c*, substantially as specified.
6. The combination, in a hasp-lock, with a

hasp-plate, a hasp, and a hinge-bolt by which the latter is pivotally attached to the former, of a piece placed between the hasp and hasp-plate and engaging a notch in the hinge-bolt, whereby the said hinge-bolt is prevented from moving, substantially as specified.

7. The combination, with the revolving disk *D*, having a key-slot, of the baffle-pin *w*, inserted transversely and fixedly through the said disk and crossing the key-slot therein, substantially as and for the purpose herein set forth.

EBEN T. STARR.

Witnesses:

HENRY T. BROWN,
GEORGE BARRY.