(No Model.)

S. C. HOUGHTON.

LOCK.

No. 588,747. Patented Aug. 24, 1897.

Fig. 6.

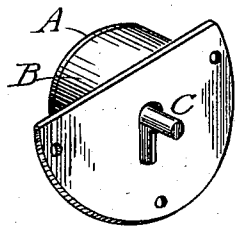


Fig. 1.

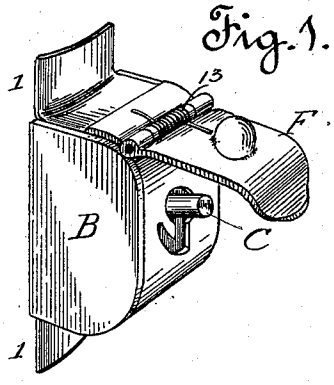


Fig. 4.

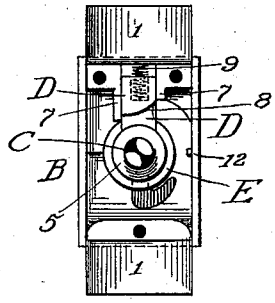


Fig. 5.

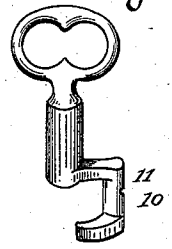
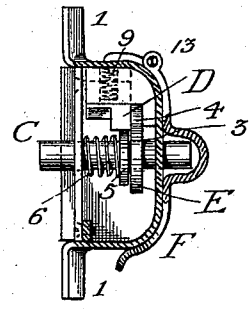


Fig. 2.



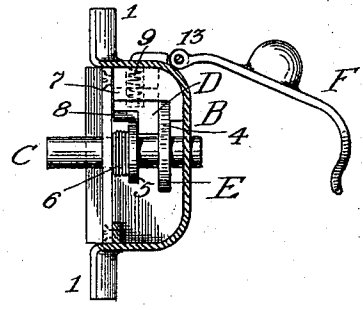


Fig. 3.

Witnesses.

F. L. Montevercle.

Marie J. Dick

Inventor.

Stephen C. Houghton

by Spear & Seely

Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

STEPHEN C. HOUGHTON, OF SAN FRANCISCO, CALIFORNIA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 588,747, dated August 24, 1897.

Application filed May 15, 1897. Serial No. 636,774. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN C. HOUGHTON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to improvements in locks, and its object is to provide a secure and effective lock of light weight and of cheap and simple construction, comprising few parts and not liable to easily get out of order.

My lock is particularly adapted to secure the covers of trunks, boxes, &c., to lock the crank-shafts or steering-heads of bicycles, and to be used in other positions and with other structures where a small, cheap, and yet secure lock is desirable.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view to show the exterior appearance of the lock. Fig. 2 is a vertical longitudinal section. Fig. 3 is a similar section in unlocked position. Fig. 4 is a rear elevation with the lock-plate removed. Fig. 5 is a separate view of a key adapted to unlock the lock shown in the other figures. Fig. 6 is a modification showing in perspective the lock particularly adapted to trunks.

The lock-casing is composed of a back plate A, having means, such as the ears 11, for securing the lock to any structure to which it is to be attached, and a shell B, firmly secured to the back plate. This shell is preferably, although not necessarily, of curvilinear form, and may be a section of a sphere or a cylinder, if desired. In the drawings, Fig. 1 to 3, it is shown as of approximately D shape in side elevation, while in Fig. 6 it is shown as cylindrical.

C is a sliding bolt which extends entirely through the casing from front to rear in line with a keyhole in the front of the casing and through a hole 2 in the back plate. The bolt is guided partly by the hole 2 and partly by a hole 3 in a guard-plate E, depending from a hanger 4, secured in the casing just back of and slightly separated from the casing front. The bolt carries a collar or projection 5, between which and the back plate is a pressure-spring 6, which tends to throw the bolt toward the front, and hence to unlock the device. Between guides 7 7 is a movable tumbler D, having a shoulder 8, which is pressed by a spring 9 toward the bolt C, its movement being at an angle to that of the bolt.

The bolt C is locked by pushing it directly inward against the pressure of spring 6, moving the collar 5 far enough to permit spring 9 to throw the tumbler D in front of the collar, as in Fig. 2. In unlocked position the tumbler D is withdrawn and rests upon the edge of the collar C, as shown in Fig. 3. To unlock the device, the tumbler D must be positively retracted by means acting independently of the locking-bolt, and hence it is immaterial whether the bolt can turn in its guides or whether it is squared wholly or partially to hold it from turning. Access to the tumbler D, except by the proper key, is prevented by the combined guard and bearing plate E.

In unlocking the device a key is used having an ordinary hollow barrel, which fits and turns upon the bolt C and provided with a bit 10, which enters a slot extending from the keyhole and passes inward below the locking-bolt. The curved bit bears as a cam against the shoulder 8 of tumbler D and moves it positively far enough to allow the spring 6 to act and retract the bolt C. The space between the casing front and the guard-plate affords a passage for the key-bit to pass, while the guard-plate hanger acts as a stop for the key, which can be removed, after turning it backward, to a line with the key-slot. The key-bit can be provided with one or more wards 11 for greater security, if preferred, and the casing with projections, as 12, to fit such wards.

I prefer to provide the lock-casing with a front cap or plate F to exclude dust, which is preferably attached to the casing by a spring-hinge 13, as shown, and which is self-closing.

In using the device shown in Fig. 6 and intended more especially for a trunk-lock I prefer to secure the lock in place by the front

plate of the casing instead of the back plate, so as to avoid a forward projection of the lock-casing.

Having thus described my invention, what I claim is—

1. In a lock, a casing, a sliding bolt having a retracting-spring, and means for locking said bolt projected, in combination with a rotary or turning key adapted to fit upon the end of said bolt and to disengage said locking means; the bolt extending through opposite faces of the casing whereby it may be projected by pressure upon its exposed end.

2. In a lock, a casing, a sliding bolt having a retracting-spring, means for locking said bolt projected, in combination with a rotary or turning key adapted to fit upon the end of said bolt and to disengage said locking means; the tail of the bolt extending outside of the front of the casing when such bolt is held retracted, whereby it may be projected by pressure upon its exposed end, substantially as described.

3. In a lock and in combination, a casing, a sliding bolt having a retracting-spring, and provided with a projection or collar, a spring-actuated tumbler having a beveled key-engaging shoulder and adapted to bear upon the side of said projection when the bolt is projected and upon its edge when the bolt is retracted, and a turning key adapted to turn upon the end of said bolt and engage said beveled shoulder whereby the bolt is automatically retracted, substantially as described.

4. In a lock the combination with a casing, of a sliding spring-bolt having a bearing in the wall of the casing, a spring-actuated tumbler adapted to engage with said bolt and lock it, a guard-plate having a bearing for said bolt and secured in the casing in front of said sliding tumbler, and a key for disengaging said tumbler to permit the bolt to be automatically unlocked.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 17th day of April, 1897.

STEPHEN C. HOUGHTON.

Witnesses:

L. W. SEELY,

GEO. T. KNOX.