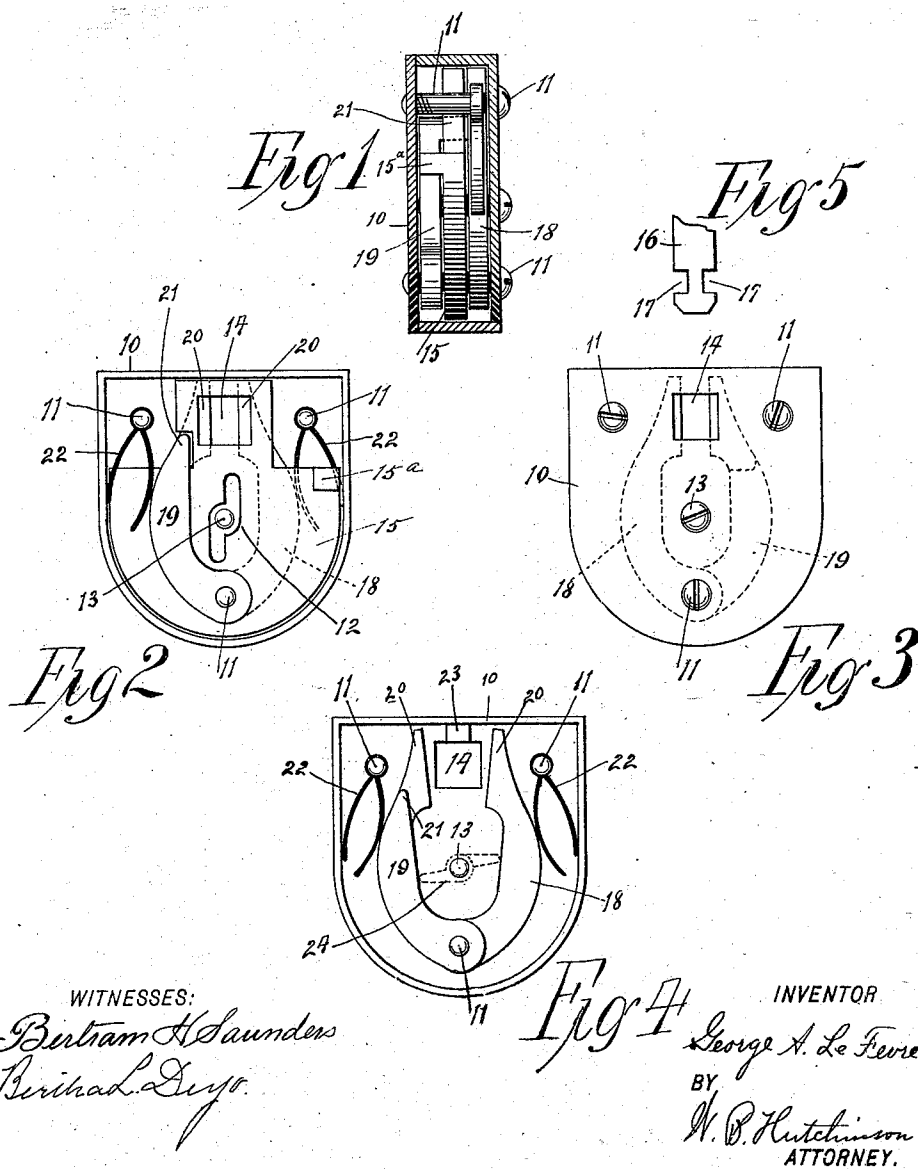


(No Model.)

G. A. LE FEVRE.
LOCK.

No. 558,084.

Patented Apr. 14, 1896.



UNITED STATES PATENT OFFICE.

GEORGE A. LE FEVRE, OF NEW YORK, N. Y.

LOCK.

SPECIFICATION forming part of Letters Patent No. 558,084, dated April 14, 1896.

Application filed June 29, 1895. Serial No. 554,424. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. LE FEVRE, of New York, in the county and State of New York, have invented certain new and useful
5 Improvements in Locks, of which the following is a full, clear, and exact description.

My invention relates to improvements in locks; and the object of my invention is to produce an extremely cheap and simple lock
10 which is especially adapted for use on mail-bags and similar portable things, but which may be used on a great variety of articles; also to produce a lock which is constructed in such a manner that it is positive in operation,
15 is not likely to get out of repair, and while being simple is yet constructed in such a way that it is not easily picked.

To these ends my invention consists of certain features of construction and combinations of parts which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, in which similar figures of reference refer to corresponding parts throughout
25 the several views.

Figure 1 is a side elevation of the lock mechanism with the inclosing case in section. Fig. 2 is a plan view of the lock with one side of the case removed and with the tumblers in
30 locked position. Fig. 3 is an inverted plan of the lock. Fig. 4 is a view similar to Fig. 2, but with the keeper-plate removed and the tumblers in unlocked position; and Fig. 5 is a detail view of a form of locking-bolt to be
35 used in connection with the lock.

The lock is provided with a suitable case 10, which may be of any preferred design, but which is preferably made of the shape shown to provide for the shape and movement of the
40 tumblers, and the case has one side removable, as is usual, the two parts being held together by screws 11, which are disposed in such a way as to also serve as a pivot for the tumblers and supports for the tumbler-
45 springs, as will appear below.

The case is provided with a keyhole 12, adapted to receive a double-bitted key, and with the usual key-guide 13, which, as shown, is in the form of a screw, but which may be
50 cast on the case. The case has also at a point preferably near one end a hole 14, which ex-

tends through the keeper-plate 15, and is adapted to receive the locking-bolt 16, which has recesses 17 to receive the bits of the tumblers, as hereinafter described. This bolt 16
55 is fastened to the part which is to be secured to the lock, and the lock is of course made fast to some other opposite part in the ordinary way, and the lock is fastened so that the heads of the screws 11 will not be exposed. 60
It will of course be understood that the bolt 16 may be made in any form which will permit it to engage the lock-tumblers, and the bolt itself forms no part of the invention.

The keeper-plate 15 is arranged longitudinally in the case 10 and forms practically a division of the case, being suitably supported and having on one side a lug 15^a to press against one wall of the case and brace the plate. The keeper-plate serves to separate
65 the lock-tumblers 18 and 19, which will be presently described in detail, thus enabling them to move freely without interfering with each other, and it serves more especially as a guard against picking the lock, as one tumbler is arranged above the keeper-plate and the other below, (see Fig. 1,) and consequently
70 the lock can only be operated by means of a double-bitted key, the bits of which are suitably disposed. 80

The lock-tumblers 18 and 19 are oppositely curved and at one end are pivoted to the screw 11, while at the opposite end they terminate in bits 20, which slide on one wall of the case 10 and are adapted to close toward each other
85 from opposite sides of the hole 14, so as to enter the recesses 17 of the bolt 16 and thus fasten the bolt to the lock-case. The tumbler 19, which is placed above the keeper-plate 15, has an offset 21 near its free end, which thus
90 brings its bit 20 on the same plane as the bit of the tumbler 18, and near this offset the keeper-plate is cut away, as shown clearly in Fig. 2, to provide for the free movement of the tumbler. 95

The two tumblers are pressed toward each other by springs 22, which are fastened to opposite screws 11 and having their end portions arranged between the tumblers and the walls of the case 10. The inward movement
100 of the tumblers is limited by a lug 23, (see Fig. 4,) which is arranged in the path of the

tumbler-bits 20, and the tumblers are separated by means of a double-bitted key, which is inserted in the keyhole 12 and the bits of which when the key is turned separate the tumblers and release the bolt 16, as shown at 24 in Fig. 4.

The operation of the lock is as follows: When the bolt 16 is to be locked to the case, it is simply pushed into the hole 14, the bolt operating to separate the bits 20 of the tumblers 18 and 19, which tumblers swing on a pivot-screw 11, and when the bolt is pushed inward far enough to bring the recesses 17 opposite the bits 20 of the tumblers the bits immediately spring into the recesses and fasten the bolt. When in this position, the inner end of the bolt is in that part of the hole 14 which extends through the keeper-plate 15, and thus the bolt is not only fastened so that it cannot be pulled out, but is held at its inner end in such a way as not to wobble and strain the lock. When the bolt is to be released, the key 24 is inserted and turned so as to separate the tumblers, after which the bolt can be withdrawn.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A lock, comprising a case having a bolt-hole and keyhole therein, a keeper-plate arranged longitudinally in the case and practically dividing it into two compartments, and oppositely-arranged tumblers, one being placed above the keeper-plate and the other below it, the said tumblers having bits which swing into the bolt-hole, substantially as described.

2. The combination with the lock-case and the keeper-plate arranged parallel with the upper and lower walls of the case, the said keeper-plate and case being provided with a keyhole and bolt-hole, of a pair of oppositely-arranged swinging spring-pressed tumblers, one being held above and the other below the case, and having bolt-engaging bits held on essentially the same plane and adapted to swing into opposite sides of the bolt-hole, substantially as described.

GEORGE A. LE FEVRE.

Witnesses:

WALTER C. MANN,

ALBION L. MITCHELL, Jr.