T. A. Auberlin,

Lock.

No. 53,941. Patented Apr. 17, 1866.

Fig. 1.

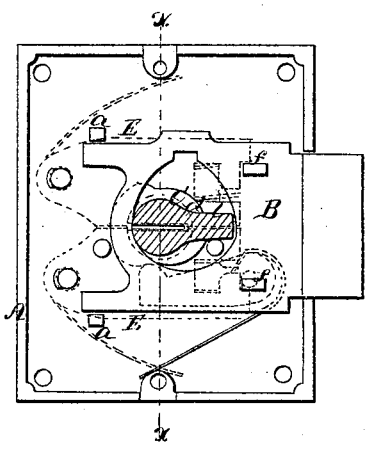


Fig. 2.

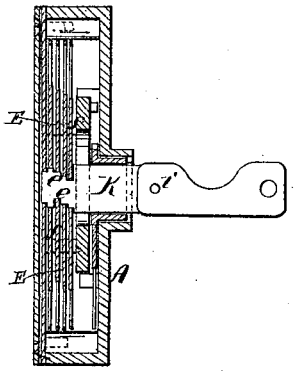


Fig. 3.

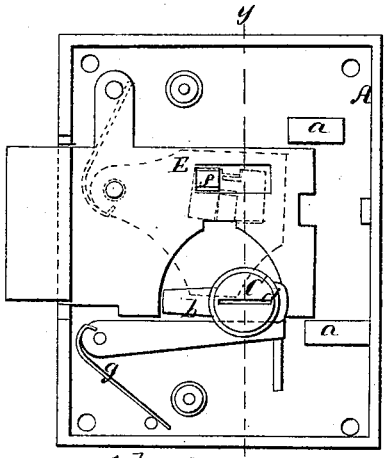
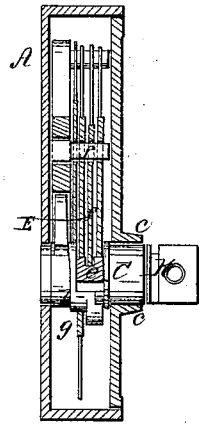
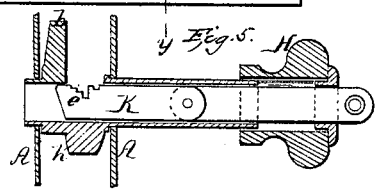


Fig. 4.



y Fig. 5. H



Witnesses;
B. B. Livingston
Wm. Redern

Inventor;
C. A. Auberlen
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

T. A. AUBERLIN, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. **53,941**, dated April 17, 1866.

To all whom it may concern:

Be it known that I, THEOPHILUS A. AUBERLIN, of San Francisco, in the county of San Francisco and State of California, have invented a new and useful Improvement in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a front elevation of a lock constructed according to this invention, with a double set of tumblers, the lock-plate having been removed so as to expose the internal mechanism. Fig. 2 is a transverse section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a front elevation of a lock with a single set of tumblers, the front plate having been removed to expose the internal mechanism. Fig. 4 is a transverse section of the same, taken in the plane indicated by the line *y y*, Fig. 3. Fig. 5 is a sectional elevation of a key and knob combined, to be used with one of my locks.

Similar letters of reference indicate like parts.

This invention relates to a lock the bolt of which is thrown in or out by the action of a bit which projects from a nut revolving in a suitable socket or sockets in the front or back plate of the lock, or in both. Said nut is provided with a flat slot or hole to receive the key, which consists of a flat piece of sheet-steel or other suitable material, and which serves to bring the tumblers in the proper position to allow of moving the bolt. If desired, the nut and bit may be rigidly connected to a handle or knob, through which in that case the key is inserted, and which when the key is in serves to lock and unlock the door, and the key may also be hinged to a suitable case, which serves as a handle to lock and unlock, and which protects the key when the same is carried in the pocket.

A represents the case of my lock, which may be made of brass or iron or of any suitable metal, either wrought or cast, and which forms the guide and protection for the various working parts of the lock.

B is the bolt, the head of which is guided in a slot in the front of the case A, whereas its shank is held in the proper position by two studs, *a*, bearing on its edges, as shown, or in any other suitable manner. Said bolt is thrown in and out by the action of a bit, *b*, which projects from a nut, C, and this nut is fitted in a socket, *c*, in the case A, as shown in Figs. 1 and 2, or it may be fitted between the front and back plates of the case, as shown in Figs. 3 and 4. This nut is provided with a narrow slot or hole, *d*, to receive the key K, which is made of a piece of sheet-steel or other suitable material, and provided with a suitable handle, by which it can be turned after it has been inserted into the key-hole. The edges of this key are provided with notches *e*, corresponding to a series of tumblers, E, so that by turning the key said tumblers are brought in the proper position to allow the bolt being moved in or out.

When two sets of tumblers are used, as shown in Figs. 1 and 2, they are arranged on opposite sides of the key-hole, and the key, on being inserted, passes in between them. Before the key acts on said tumblers their noses bear against studs *f*, rising from the shank of the bolt; but if the key is turned round in the proper direction the notches *e* in its edges throw the tumblers in such a position that the noses of the same clear the studs *f*, and the bolt is free to move in or out. This arrangement is applicable for locks which are locked from one side only; but for such locks which are locked and unlocked from both sides I use only one set of tumblers, as shown in Figs. 3 and 4. In this case only one edge of the key need be notched, although it does no harm to notch both edges, so as to mislead persons not acquainted with the internal arrangement of the lock.

The operation of the key on the tumblers is the same whether one or two sets of tumblers are used, and in either case the bit of the nut bears against a segmental or semicircular shoulder of the shank of the bolt, and thereby the possibility of "feeling" the tumblers is rendered extremely difficult or almost impossible.

The nut C is held in position by a spring, *g*, which bears on a nose, *h*, projecting from that side of the same opposite the bit *b*. This spring may be applied in various different ways, and I do not wish to confine myself to the precise arrangement shown in the drawings, but reserve the right to change the same as I may find desirable or convenient. With the

nut may be combined a knob or handle, H, through which the key is inserted, as shown in Fig. 5, and which serves to open and close a door and also to lock and unlock the bolt when the key is in.

If desired, the key K may be connected to its handle by a pivot, *i*, so that it can be turned down and carried conveniently in the pocket. By the application of a suitable hook-catch to the key on the inside of a door said key can be secured so that it cannot be pushed out and the lock cannot be tampered with.

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

The nut C, with the bit *b*, bearing against a shoulder of the bolt, and with a narrow key-hole, *d*, in combination with the key K and tumblers E, constructed and operating substantially as and for the purpose described.

The above specification of my invention signed by me this 28th day of October, 1865.

THEOPHILUS A. AUBERLIN.

Witnesses:
LOUIS CHELY,
J. BURKHARD.