

1,024,371.

Patented Apr. 23, 1912.

2 SHEETS—SHEET 1.

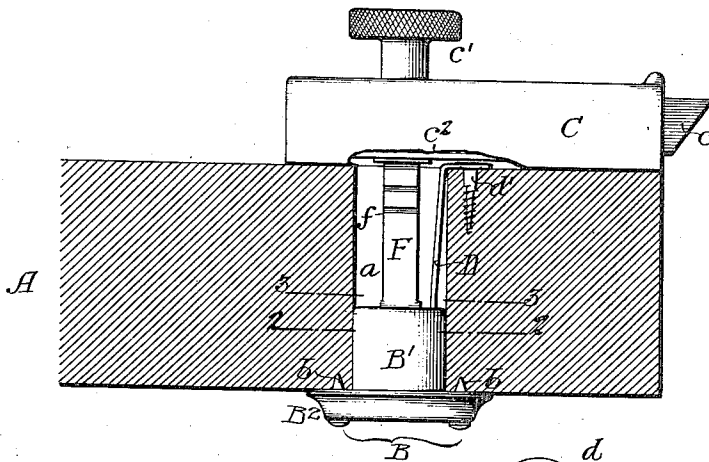
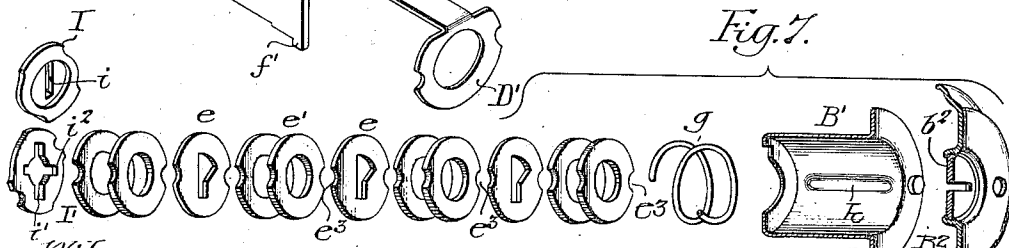
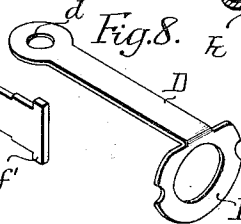
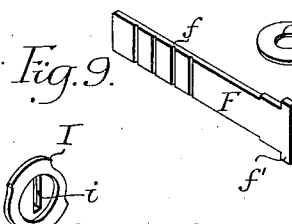
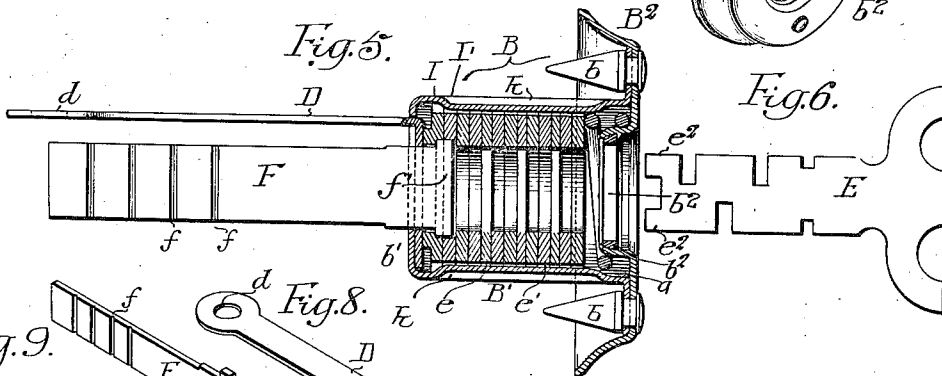
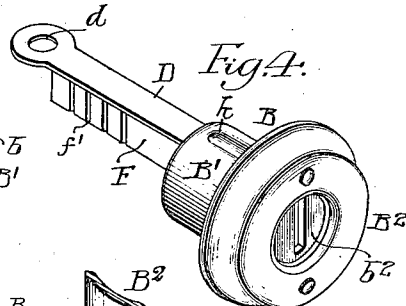
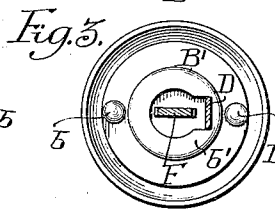
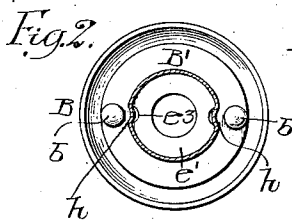


Fig. 1.



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2 SHEETS-SHEET 2.

Fig. 11.

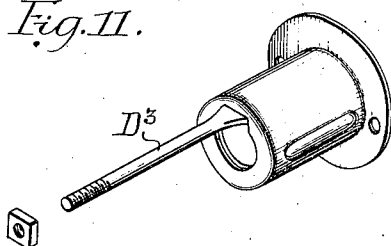


Fig. 12.

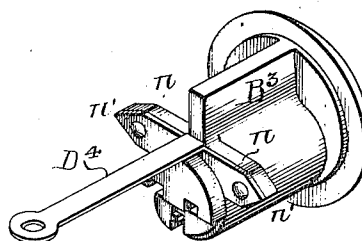


Fig. 10.

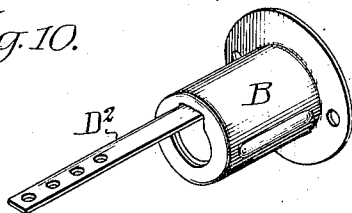


Fig. 13.

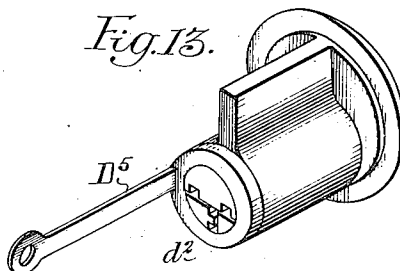


Fig. 14.

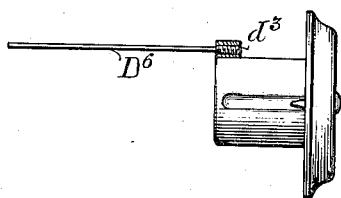


Fig. 15.

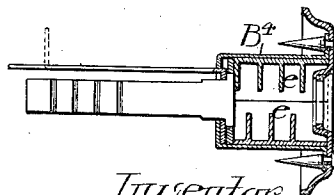
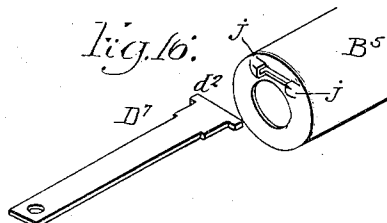


Fig. 16.



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UNITED STATES PATENT OFFICE.

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NIGHT-LATCH.

1,024,371.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed November 8, 1910. Serial No. 591,220.

To all whom it may concern:

Be it known that I, FRANK SOLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Night-Latches, of which the following is a specification.

My invention relates to certain improvements in latches or locks commonly known as "night latches" and this type of lock is usually made with a bolt section and section containing the locking mechanism; the two parts being connected by a tongue piece which can be made of any length desired according to the thickness of the door. The bolt section is usually secured to one side of a door and the lock section to the opposite side; the tongue piece extending through the opening.

Heretofore, a plate and bolts were used to secure the lock section in position.

The main object of my invention is to provide a lock of this type with a simple means for attaching the lock section to the door which can be quickly applied and which forms a permanent part of the lock section.

My invention also relates to certain improvements whereby the cost of manufacture of the lock is appreciably lessened.

In the accompanying drawings:—Figure 1, is a view illustrating my improved night latch; the door being in section; Fig. 2, is a transverse sectional view on the line 2—2, Fig. 1; Fig. 3, is a transverse sectional view on the line 3—3, Fig. 1; Fig. 4, is a detached perspective view of the lock section; Fig. 5, is a longitudinal sectional view of the lock casing; Fig. 6, illustrates one form of key used; Fig. 7, is a detached perspective view showing the casing of the lock section and the washers and wards; Fig. 8, is a perspective view of the device for attaching the lock section to the door; Fig. 9, is a perspective view of the adjustable tongue piece; Figs. 10, 11, 12, and 13, are perspective views illustrating modifications of the attaching means; Fig. 14, is a side view illustrating another modification of the attaching means; Fig. 15, is a view illustrating my invention as applied to a lock section in which the wards are cast integral with a casing, and Fig. 16, is a detached perspective view illustrating a modification of the means of securing the attaching device to the casing.

A is the door, or other element, to which the latch is to be applied. This door has a cylindrical opening *a* in the present instance extending from one side of the door to the other.

B is the section containing the locking mechanism and C is the section containing the bolt and the means for operating the bolt without the use of a key.

c is the bolt and *c'* is the knurled knob for operating the bolt from the bolt side of the door.

The bolt mechanism can be of any of the ordinary constructions and forms no part of the present invention.

Connecting the bolt with the locking mechanism is an adjustable tongue piece F having notches *f* in the present instance arranged at intervals so that the tongue piece can be broken at different points to accommodate doors of different thicknesses.

D is the attaching device by which the lock casing B is secured to the door and this is one of the main features of the invention. The lock section B is made, as shown in Fig. 5, and consists of a casing B' and a face plate B²; the face plate being secured to the flange of the casing by rivets *b*, pointed at the inner ends, as illustrated in the drawings, to form pins, which are driven into the wood as illustrated in Fig. 1, to prevent the lock section turning in the opening in the door.

Within the casing B are the wards *e* and washers *e'*. These wards and washers can be arranged in any manner desired to form certain combinations to aline with the notches in the key E. The tongue piece has a head *f'*, illustrated in Fig. 9, and passes through a slot *i* in the disk I; the head piece entering a slot *i'* in the disk I' so that the tongue piece must turn with the disk. The disk has a slot *i*² at right angles to the slot *i'*, in the present instance, for the reception of the ends *e*² of the key E so that when the key is in position in the lock the ends will extend on each side of the head *f'* of the tongue piece and when the key is turned the disk I' and the tongue piece to which it is connected also turn.

Between the disk I and the inner end *b'* of the casing is a disk D', forming part of the attaching device D as illustrated in Fig. 8. The opposite end of this attaching device is enlarged in the present instance and

has an opening d for the passage of a screw d' , as illustrated in Fig. 1. The disk D' is held between the disk I and the end of the casing, and the casing is slotted for the passage of the portion D , as shown in Fig. 3, so that the disk cannot turn with the other disks of the locking mechanism.

The several washers and wards are held in position by a spring g located between the face plate B^2 and the first washer. The wards and washers are prevented from turning by projections h formed by indenting the casing B' and these projections enter notches e^3 in the wards and washers. Inserted in the face plate B^2 is a key plate b^2 , which turns with the key E .

In the present instance the attaching means is made of flexible material and of a length sufficient to extend through the thickest door, and it can be readily bent down when the lock is being placed in position. In securing the lock to a door, for instance, a hole a is bored through the door of a size to receive the casing B' of the lock section B . This casing is made as illustrated in Fig. 4, and has the projecting pins, as well as the attaching device, secured thereto and the adjustable tongue piece. The tongue piece is cut to the length desired, depending upon the thickness of the door, so that the tongue will enter a notch in the bolt-actuating means located in the casing of the latch C . The lock section is then placed in position and the pins b driven into the wood of the door, as illustrated in Fig. 1, and that portion of the attaching device extending through the opening of the door is bent away from the edge of the opening, as illustrated in Fig. 1, and a screw d' is driven through the opening d and into the wood of the door. Thus the lock section is firmly and quickly secured to the door.

After the lock section is in position, the bolt section C can be secured to the door by screws or other fastenings in the ordinary manner; the tongue entering a slot in the bolt operating device mentioned above.

The attaching device may be made in many different ways, but I prefer the form illustrated in Fig. 8, as it can be cheaply made and readily attached.

In Fig. 10, I have shown an attaching device D^2 having a series of perforations. The device can be bent over the edge of the opening in the door, as illustrated in Fig. 1, and a screw or nail inserted in any one of the openings, or the device can be cut, if it is found to be too long.

In Fig. 11, I have shown the attaching device D^3 terminating in a screw thread to which a nut can be applied; the attaching device extending in this instance through the rear plate c^2 , Fig. 1, of the lock of the bolt section and held thereto by a nut.

In Fig. 12, I have illustrated another

form of lock casing B^3 to which the tongue D^4 is attached. This lock casing has projecting ears $n-n$ at each side and one end of the tongue piece has projections which aline with the ears and the two parts are secured together by rivets or screws. The ends n' of the ears are preferably pointed in the present instance so that the lock casing can be driven into the opening a in the door and the pointed ends n' will cut their way, forming grooves in the walls of the opening so as to prevent the casing from turning.

In Fig. 13, I have shown another form of attaching device applied to a lock of the type illustrated in Fig. 12. In this instance, the attaching device D^5 terminates in a threaded ring d^2 , which is adapted to the threaded end of the lock casing.

In Fig. 14, I have shown the attaching device D^6 provided with a screw threaded end d^3 adapted to a threaded opening in a lug projecting from one side of the lock casing.

In Fig. 15, I have shown my invention applied to a lock made in two parts, each part B^4 being cast with the wards e made integral with it; the washers being dispensed with in this instance. The same form of attaching device is used as in Fig. 5. The two parts B^4 may be riveted together, but I prefer to mount them in a sheet metal casing, as shown in Fig. 15.

In Fig. 16, a modification is shown in which sockets j are formed on the casing B^5 for the reception of head d^2 on the attaching device D^7 .

I claim:

1. The combination in a door having an opening, of a locking device mounted in one end of the opening, a projection on the locking device extending through the opening forming an adjustable attaching device adapted to be bent over the wall of the opening at the opposite side of the door and secured to the door.

2. The combination in a lock, of a casing inclosing locking mechanism adapted to be inserted in an opening in a door, and having a flexible projection at its inner end of such a length as to extend through the opening and to be turned down on the opposite side of the door to hold the lock casing in place.

3. The combination in a lock, of a casing, locking mechanism therein, an attaching device having a disk at one end located within the lock casing, and perforated at its opposite end.

4. The combination in a lock, of a casing, locking mechanism contained therein, an attaching device having a disk bent at right angles to the body portion of the locking device and mounted within the casing of the lock, a headed tongue, the head of the tongue

mounted within the casing, and a disk in which the head is mounted, said tongue extending through the disk of the attaching device.

- 5 5. The combination of a door, a latch casing secured to one side of the door, latch mechanism in the casing, said door having an opening, a lock casing mounted in the opening, wards within the said casing controlling the movement of a key, means for
- 10

attaching the said casing to the door, and means connecting the locking mechanism with the latch mechanism.

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

FRANK SOLEY.

Witnesses:

WM. E. SHUPE,
WM. A. BARR.