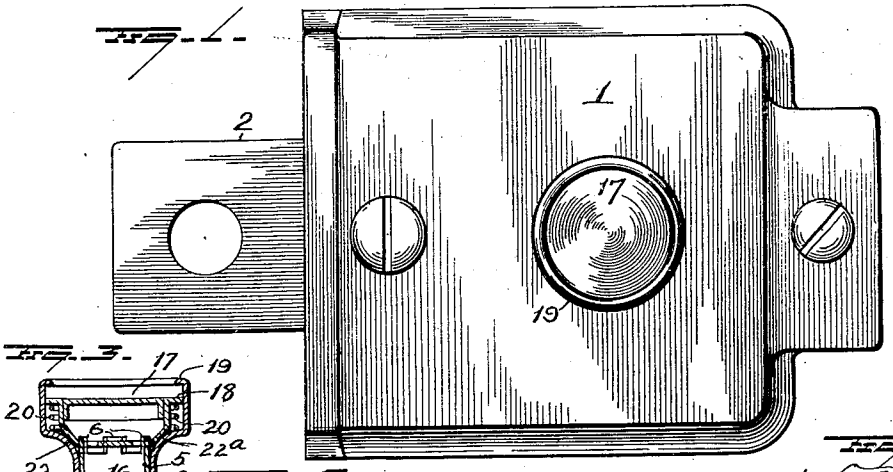
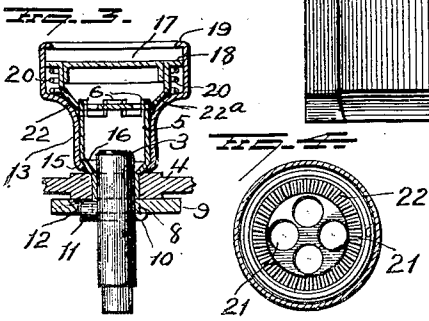
April 7, 1925. 1,532,765

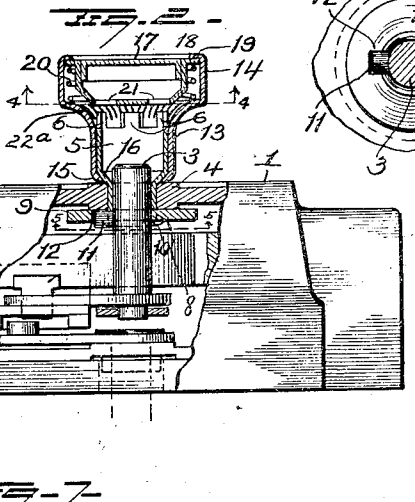
C. LEDIN

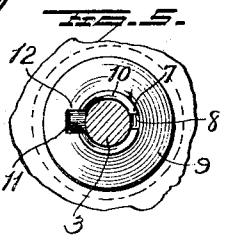
LOCK

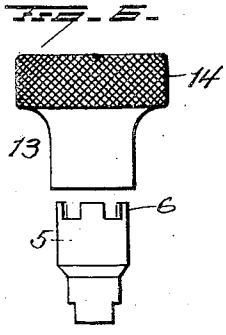
Filed Sept. 7, 1923

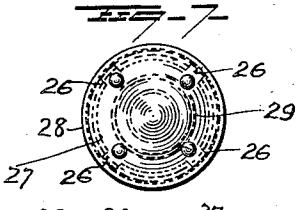


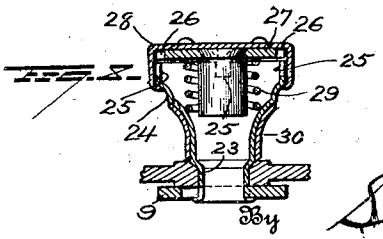












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Patented Apr. 7, 1925. 1,532,765

UNITED STATES PATENT OFFICE.

CHARLES LEDIN, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

LOCK.

Application filed September 7, 1923. Serial No. 661,417.

To all whom it may concern:

Be it known that I, CHARLES LEDIN, a citizen of the United States, and resident of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in locks and latches and more particularly to the construction and manner of coupling the inside knob for a door lock or latch with the bolt operating spindle.

Attempts have been made by burglars to operate locks having inside knobs, by reaching through a transom over the door and lower a knotted cord in a manner to engage the inside knob and turn the same to effect retracting of the bolt.

An object of my present invention is to couple the knob to the knob spindle in such manner that it shall be normally loose or disconnected from operative relation to the spindle and thus prevent the latter from being turned by an unauthorized person in the manner above described, but which may be operatively coupled to the spindle when the knob is grasped and operated under normal conditions by persons having a right to unlock the door from the inside.

With this and other objects in view, the invention consists in certain novel features of construction as hereinafter set forth and pointed out in the claims.

In the accompanying drawings,—

Figure 1 is a face view of a lock structure to which my improvements may be applied.

Figure 2 is a view partly in side elevation and partly in section showing the knob uncoupled from the spindle.

Figure 3 is a sectional view showing the knob coupled in operative relation to the spindle.

Figure 4 is a view in section on the line 4—4 of Figure 2.

Figure 5 is a sectional view on the line 5—5 of Figure 2.

Figure 6 is a view in elevation of the knob and the member which is adapted to connect it with the lock spindle, and

Figures 7 and 8 illustrate a modification.

In the drawings I have shown the casing 1 of a rim lock and the spindle for the inside knob and for imparting movement to the operating mechanism for the bolt 2, as shown at 3. The neck portion 4 of a tubular member 5 (which latter projects beyond the casing 1 and is provided at its free end with a plurality of teeth or fingers 6) is mounted on the spindle 3 and provided at its inner end with a notch 7 to receive a lug 8 on a disk 9,—said inner end of the neck portion 4 of member 5 being also flanged as at 10 to engage the inner face of said disk. The disk 9 is provided with a notch 11 which receives a pin 12 projecting laterally from the spindle 3. In this manner, the member 5 is permanently connected with the spindle. The tubular shank 13 of a knob shell 14 is freely mounted on the member 5 and its inner end portion is spun or flanged inwardly as at 15 to engage under a shoulder 16 at the juncture of the neck portion 4 with the body portion of the member 5, and thus the knob 14 is prevented from longitudinal displacement but is permitted to be freely rotated on the said member 5. The knob shell 14 is closed by a hollow button member 17 having a flange 18 to engage under an inwardly projecting flange 19 at the outer end of the knob shell, in which position the button member is normally retained by the action of a spring 20. The hollow button member 17 is provided at its inner end with a plurality of perforations 21 to receive the fingers 6 on the member 5 when the button member is depressed. The button member 17 is also provided with an annular series of teeth 22 to engage similar teeth 22^a within the knob shell.

When the parts are in the position shown in Figure 2, the knob will be freely rotatable and cannot be operated in the unauthorized manner hereinbefore mentioned to turn the lock spindle and withdraw the bolt, but when the button member 17 is depressed by the thumb of the operator, said button member will receive the fingers 6 of the member 5 but as the tubular shank 13 of the knob shell 14 turns freely on the tubular member 5, the lock cannot be operated until the button member 17 is forced inward still farther to also connect it with the shank 13 by means of the teeth 22 and 22^a. In other words the button member forms an intermediate

coupling member to operatively connect the loose knob 14 with the tubular member 5.

In the modified construction shown in Figures 7 and 8, the shank portion 23 of the knob is connected with the disk 9 in a manner substantially such as hereinbefore described for connecting the member 5 with said disk. The body portion 24 of the knob is made hollow and provided at its free end with notches 25 to receive fingers or projections 26 on a disk 27 secured to the head member 28 of the knob when said head member is depressed. The head member 28 of the knob and the disk 27 carried thereby are normally held out of operative relation to the body portion of the knob by the action of a spring 29. With this construction, the body portion of the knob is normally in operative relation to the lock spindle and in order to prevent the unauthorized turning of the body portion of the knob by means of a knotted cord, said body portion of the knob is surrounded by a freely rotatable sleeve 30.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:

1. The combination with a lock spindle and a member operatively connected therewith, of a knob shell rotatably mounted on said member and means carried by said knob shell for operatively coupling the same to said member.

2. The combination with a lock spindle, of a member operatively connected therewith and provided at its free end with a finger, a knob shell rotatably mounted on said member, a button member carried by and forming part of the knob, said button member provided with a hole to receive said finger, means for coupling said button member to the knob shell, and a spring normally holding said button member out of operative relation to the member connected with the lock spindle.

3. The combination with a lock spindle, of a member operatively connected therewith and provided at its free end with fingers, a knob shell rotatably mounted on said member and engaging the same to prevent longitudinal displacement of said knob shell, a button member disposed in said shell and having holes to receive said fingers, means for coupling said button member to the knob shell, and a spring normally holding said button member out of operative relation to said first mentioned member.

4. The combination with a lock spindle, of a member operatively connected therewith and provided at its free end with fingers, a knob shell rotatably mounted on said member, a button member disposed in said shell and having holes to receive said fingers, a spring normally holding said button member out of operative relation to said first mentioned member, and teeth on said button member to engage similar teeth in the knob shell when the button member is depressed.

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

CHARLES LEDIN.

Witnesses:
WILLIAM H. DONALDSON,
CHARLES A. BERRY.