Sept. 30, 1930. A. L. BIRDSALL 1,776,881

LOCKING LATCH

Filed June 25, 1928

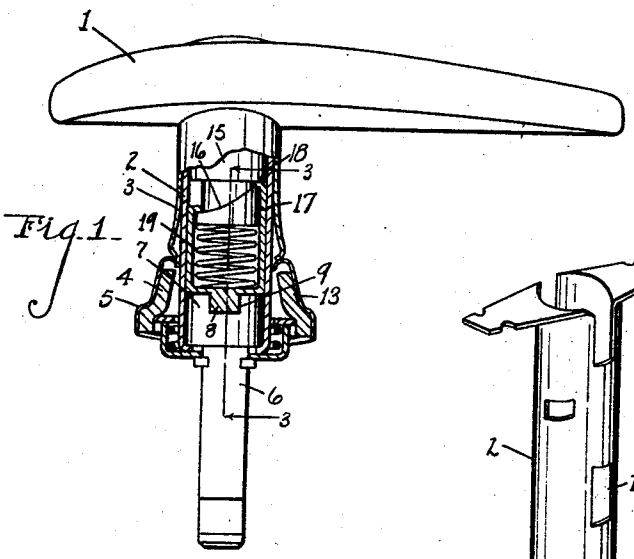


Fig. 1.

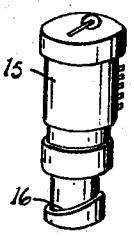


Fig. 6.

Fig. 5.

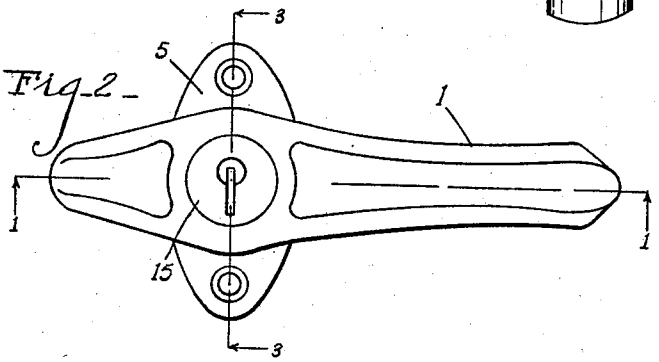


Fig. 2.

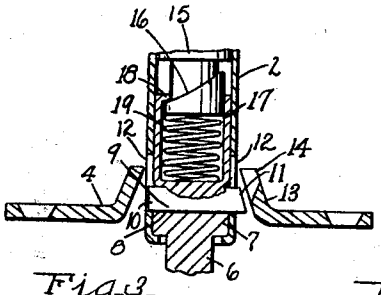


Fig. 3.

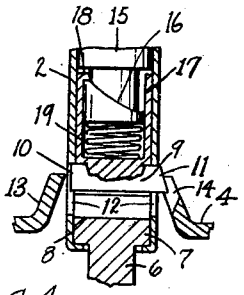


Fig. 4.

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UNITED STATES PATENT OFFICE

ALBERT L. BIRDSALL, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO KEELER BRASS COMPANY, OF GRAND RAPIDS, MICHIGAN

LOCKING LATCH

Application filed June 25, 1928. Serial No. 288,017.

The main object of this invention is to provide an improved locking latch well adapted for automobiles and the like which is simple and economical in its parts and at the same time is comparatively strong and durable.

Objects pertaining to details and economies of my invention will definitely appear from the detailed description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a side view partially in longitudinal section on line 1—1 of Fig. 2.

Fig. 2 is a front view.

Fig. 3 is a detail view mainly in section on line 3—3 of Figs. 1 and 2.

Fig. 4 is a detail section corresponding to that of Fig. 3 with the bolt in locking position.

Fig. 5 is a perspective view of the sleeve and a portion of the handle.

Fig. 6 is a perspective view of the locking cylinder or locking unit.

The structure illustrated in the accompanying drawing comprises an elongated handpiece 1 provided with a barrel or sleeve 2. A finishing housing 3 is provided for this sleeve. The escutcheon plate 4 is also provided with a finishing housing 5.

The sleeve is rotatably associated with the escutcheon plate and also with a spindle 6 which is provided with a head 7 disposed within the sleeve and transversely slotted at 8 to receive the bolt 9. The bolt 9 is provided with lugs 10 and 11 which project through longitudinal slots 12 in the sleeve so that the bolt is secured to the sleeve to rotate therewith but longitudinal movement is permitted.

The escutcheon plate is provided with an out-turned flange 13 having a slot or notch 14 therein with which the lug 11 engages when the bolt is in locking position or disengaged from the spindle as shown in Fig. 4. When in this locking position shown in Fig. 4 the sleeve is locked against rotative movement by this engagement of the bolt with the escutcheon plate.

The locking cylinder or locking unit 15 is provided with a cam member 16 disposed within the cup-like recess 17 on the bolt to be engaged by the lug 18 on the bolt, so that as the locking member is actuated to locking position the cam is rotated, thereby retracting the bolt from engagement with the spindle and bringing it into engagement with the escutcheon plate. In the embodiment illustrated the cup portion of the bolt is formed as a separate stamping but is fixedly secured thereto and becomes an integral part thereof.

A coiled spring 19 is arranged between the end of the locking unit and the bolt so that it acts to urge the bolt to spindle engaging position.

My improved lock is very simple in its parts and the parts may be readily assembled. Should an attempt be made to open the door by forcibly turning the handle when in locked position, this movement is not imparted to the spindle and, therefore, the latch is not affected.

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

1. The combination of a handpiece provided with a sleeve having longitudinal slots adjacent its inner end, a spindle provided with a transversely slotted head, rotatable within the inner end of said sleeve and provided with a transverse bolt receiving groove, an escutcheon plate having an opening to receive said sleeve, said opening being provided with an outwardly projecting flange having a notch therein, a bolt within said sleeve provided with lugs engaging said longitudinal slots therein whereby the bolt is supported for longitudinal movement within said sleeve whereby it may be engaged or disengaged from said spindle, one of said lugs being adapted to engage said notch in said escutcheon plate when the bolt is retracted, a locking unit mounted within said sleeve and provided with a cam coacting with said bolt, and a spring acting to urge said bolt to spindle engaging position.

2. The combination of a handpiece provided with a sleeve having longitudinal slots

adjacent its inner end, a spindle provided with a transversely slotted head rotatable within the inner end of said sleeve and provided with a transverse bolt receiving groove, an escutcheon plate having an opening to receive said sleeve, said opening being provided with an outwardly projecting flange having a notch therein, a bolt within said sleeve provided with lugs engaging said longitudinal slots therein whereby the bolt is supported for longitudinal movement within said sleeve whereby it may be engaged or disengaged from said spindle, one of said lugs being adapted to engage said notch in said escutcheon plate when the bolt is retracted, and a locking unit mounted within said sleeve and operatively associated with said bolt whereby it may be moved from spindle to escutcheon engaging position.

3. The combination of a handpiece provided with a sleeve, a spindle rotatable within the inner end of said sleeve and provided with a transverse bolt receiving groove, an escutcheon plate through which said sleeve is disposed, a bolt mounted for longitudinal movement within said sleeve and adapted when in one position to engage said spindle and when in another position to release said spindle and engage said escutcheon plate, a locking unit mounted within said sleeve and provided with a cam acting to disengage the bolt from said spindle, and a spring acting to urge said bolt to spindle engaging position.

In witness whereof I have hereunto set my hand.

ALBERT L. BIRDSALL.