P. F. AUGENBRAUN.

SWITCH LOCK.

APPLICATION FILED SEPT. 9, 1909.

962,936. Patented June 28, 1910.

Fig. 1.

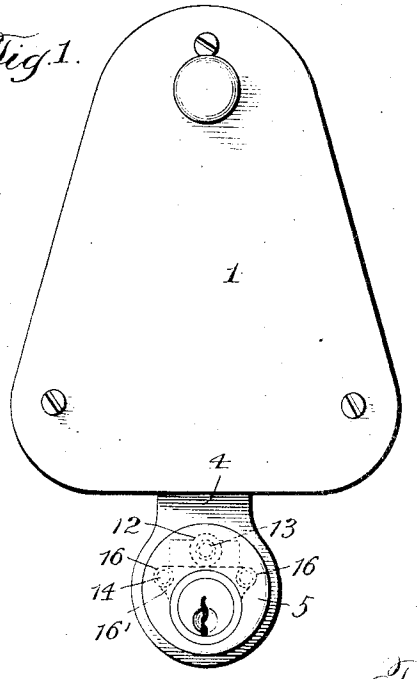


Fig. 2.

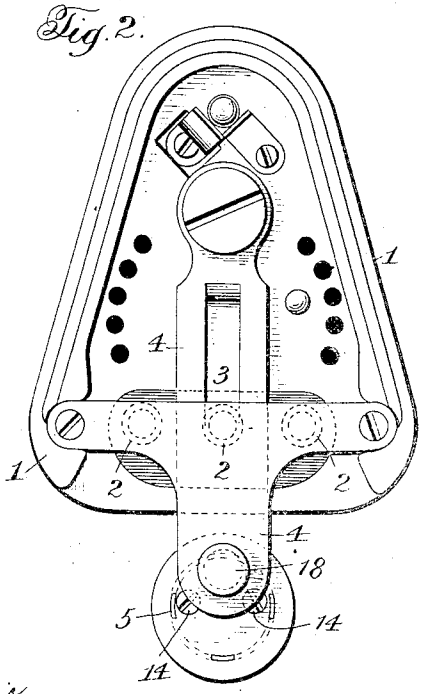


Fig. 3.

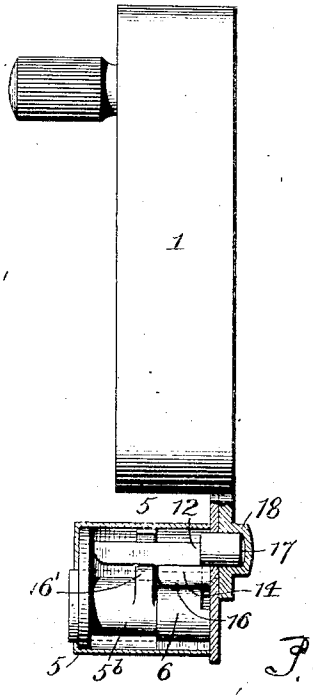


Fig. 4.

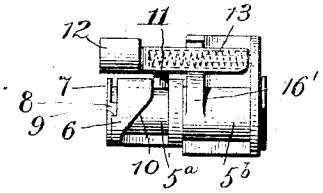


Fig. 5.

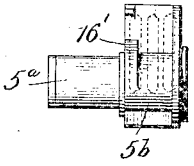
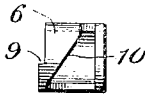


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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SWITCH-LOCK.

962,936.

Specification of Letters Patent. Patented June 28, 1910.

Application filed September 9, 1909. Serial No. 516,980.

To all whom it may concern:

Be it known that I, PETER F. AUGENBRAUN, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Switch-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.

My invention relates to an improvement in switch locks, the object being to provide means for positively locking the switch arm against movement, and it consists in the parts and combination of parts, and in the details of construction as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in front elevation of the switch showing my improvement applied thereto. Fig. 2 is a view in rear elevation of the same. Fig. 3 is a view in side elevation of the base member, and in section through the switch arm, keeper, and lock. Fig. 4 is a view of the key cylinder, cam sleeve, and bolt removed from the lock case, but in their proper relative position. Fig. 5 is a view of the cylinder and plug detached the end plate 7 being removed and Fig. 6 is a view of the cam sleeve.

1 represents the base member of the switch provided on its rear face with a series of contact members 2, with which the spring tongue 3 on the switch arm 4 makes contact. This switch arm 4 is pivotally secured at one end to the base member 1, and projects at its other end beyond said base, and carries on said projecting end a pin tumbler lock, the shell 5 of which forms a knob or handle for the switch arm 4. The rotating plug 5^a of this pin tumbler lock, projects beyond the cylinder 5^b carrying the tumbler pins and drivers as shown in Fig. 5, and carries the cam sleeve 6, the latter being held in place by the end plate 7 secured to the plug 5^a. The end plate 7 is provided with a forwardly projecting lug 8 adapted to engage shoulders 9 on the rear end of sleeve and impart to the sleeve a partial rotation, during the rotation of the plug 5^a.

The cam sleeve 6 is provided with a slot having a cam shoulder 10 engaged by the lug 11 on the bolt 12. The shank of bolt 12 is forked to receive the springs 13, which latter tend to normally hold the bolt projected, and it is retracted by the rotation of the cam shoulder 10 of the cam sleeve 6, in contact with the lug on the bolt. With this construction, the bolt is simply a spring bolt, it being held projected by a spring and held retracted by the cam sleeve.

The cylinder 5^b, plug 5^a, bolt 12 and cam sleeve 6 are located within the cylinder shell 5, and the latter is secured to the switch arm 4 by screws or otherwise. In the present instance I have shown it secured by screws 14 passing through the arm 4, and sleeves 16, and engaging threaded holes formed in the projection 16′ integral with cylinder 5^b.

The switch arm 4 is provided with an opening for the passage of the cylindrical end of the bolt 12, and the latter is adapted to enter the recessed seat 17 in the keeper 18 secured at its ends to the base member 1.

In the drawing I have shown the seat in the keeper located centrally, or in the neutral position of the switch arm, and if desired I can provide the keeper with recessed seats for each of the contacts so that the lever can be locked in each of its positions. As shown it is designed to be locked in its neutral position, and when so locked, the bolt is wholly covered and concealed and cannot be reached from the outside, hence to release the switch arm the proper key must be introduced into the plug 5^a and the latter turned. This rotation of the plug rotates the cam sleeve 6, which as previously explained retracts the bolt thus leaving the lever 4 free to be moved over to make contact with either of the side contacts. If desired, after the bolt has been retracted and before withdrawing the key, the arm 4 may be moved by grasping the lock which serves as a handle for the switch, and the key turned to project the bolt, so that when it is desired to again lock the lever in its neutral position, it may be accomplished by simply pushing in the bolt with one finger, and then moving the lever, thus avoiding the necessity of using the key to lock the lever.

The shell of the lock forms a convenient handle for the lever, and is provided on its outer face with a hole corresponding in size and position to the key plug of the lock.

This switch lock while applicable to any switch, is specially designed for electric

switches used on automobiles, and is always under the absolute control of the holder of the key.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,

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

1. The combination with a switch arm and a fixed keeper, of a lock carried by the switch arm and having a bolt adapted to enter the keeper and lock the switch arm against movement.

2. The combination with a base member having contact members, a switch arm pivoted to said base member and adapted to make contact with said contact members, and a lock carried by said switch arm, of a fixed keeper adapted to be engaged by the bolt of the lock for locking the switch arm against movement.

3. The combination with a switch arm and a fixed keeper, of a lock carried by the switch arm and provided with a bolt normally projected by a spring and retracted by key mechanism, whereby the switch arm may be moved to its locking position without the use of a key.

4. The combination with a base member having contact members, a switch arm pivoted to said base member, and a pin tumbler lock carried by said switch arm, the shell of the lock forming a handle for the switch arm, of a keeper fixed to the base member and adapted to be engaged by the bolt of the lock when the latter is in its neutral position.

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

PETER F. AUGENBRAUN.

Witnesses:
JOSEPH A. HORNE,
ELLIS H. JONES.