Nov. 8, 1927. 1,648,251

C. ZYGMUNT

LOCK

Filed March 4, 1926

Fig. 1.

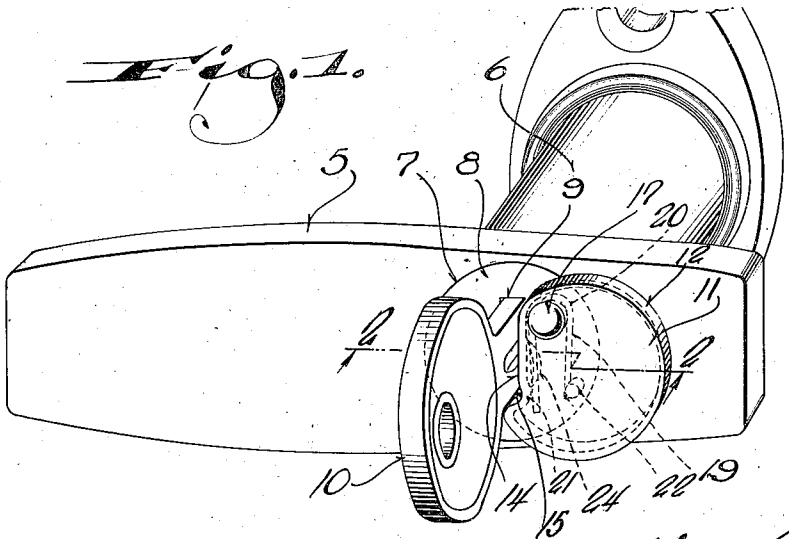


Fig. 3.

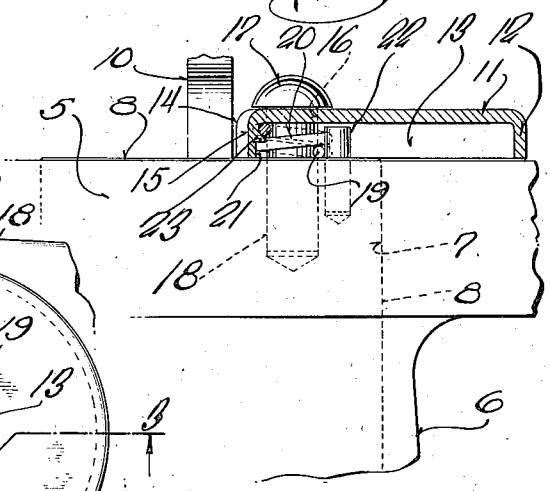


Fig. 2.

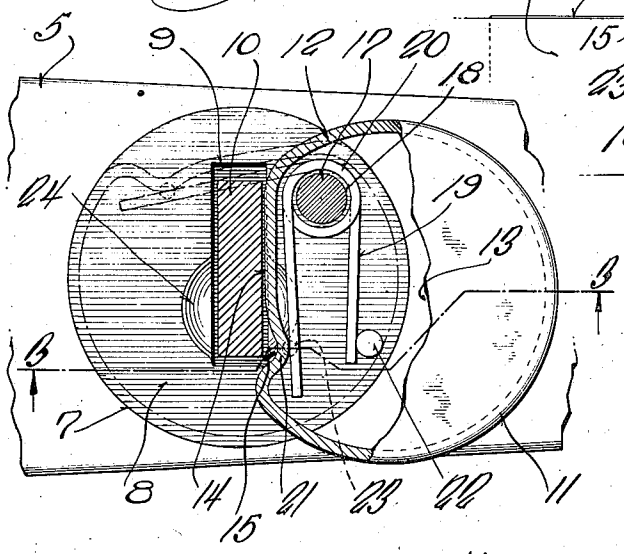
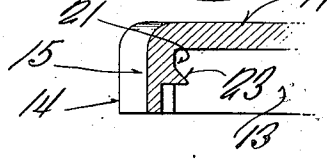


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LOCK.

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Heretofore it has been customary to pivotally mount the dust cap or cover for the rotatable lock plug from the stationary part of the lock and as a result the spring of the cover resists the opening movement of the lock, and this invention contemplates as one of its objects the mounting of the dust cap or cover directly on the rotatable plug, so that the same readily turns with the plug in the opening of the lock.

A further object of this invention resides in the provision of an improved lock construction, wherein the dust cap or cover is pivotally mounted directly on the rotatable plug and is normally spring urged to a position over the plug, but may be readily moved free of the key opening, the same turning with the plug after the key has been inserted and the lock operated.

And a still further object of this invention resides in the provision of an improved dust cap for the rotatable lock plug, having means formed therein at its time of manufacture to retain its spring member in position.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of an automobile door handle having a lock embodied therein and equipped with my invention;

Figure 2 is an enlarged view taken through Figure 1 on the plane of the line 2—2, parts thereof being in section and parts in elevation;

Figure 3 is an enlarged fragmentary view, partly in section and partly in elevation, taken through Figure 2 on the line 3—3, and

Figure 4 is a fragmentary sectional view taken through Figure 2 on the plane of the line 3—3 and illustrating the projections pressed therefrom to retain the spring in position.

Referring now more particularly to the accompanying drawing, in which like numerals designate like parts throughout the several views, the numeral 5 designates the handle member for an automobile door or the like, the body or shank portion 6 of which forms the normal stationary part of a lock, having a bore 7 extended therethrough, in which a rotatable lock plug 8 is mounted. The plug in 8 has a key opening or slot 9 therein and is equipped with the usual lock tumblers, drivers and springs not shown, which are actuated by the insertion of a key 10 into the plug to permit its free rotation and the actuation of the lock proper, not shown, connected therewith.

The key slot or opening is protected against the entrance of foreign matter by a pivotally mounted cap or cover 11 adapted to be readily moved free of the key opening to permit the insertion of a key. The cover 11 is preferably pressed from bendable metal and is provided with a peripheral depending flange 12, forming an internal recess or opening 13 at its underside. The cover is preferably of circular shape, having one edge portion flattened as at 14, one termination of the flat portion 14 being approximately hook shape, as illustrated in Figures 1 and 2 to provide a recess with which the end of the key can be readily engaged to swing the cover free of the opening 9. An opening 16 is formed in the cover adjacent the other end portion of the flat part 14 to receive the cover pivot 17 having its inner end secured in a recess or opening 18 formed in the plug 8 adjacent the upper end portion of the key slot 9.

A spring 19 is concealed in the recess of the cover 11 and has its medial portion coiled about the pivot 17, as at 20, one end thereof abutting the indented portion 21 formed by the recess 15 and the other end thereof bearing against a stud or pin 22 set in the face of the plug 8. The spring 19 is constantly under pressure and tends to swing the cover 11 to the dotted line position illustrated in Figure 2.

At the time of forming the cover 11, the inner surface of its flange 12 at the indented portion 21 is swedged inwardly, as at 23, to form a hook or projection, between which

and the outer wall of the cover the adjacent end of the spring 19 is confined. This construction facilitates the assembly of the device and retains the spring 19 in position against accidental dislodgement.

In the operation of the device, the key 10 has its inner end, which is usually pointed, engaged with the cover 11 at its recess 15. The cover is then swung on its pivot 17 against the spring 19 to free the key opening 9, which is provided with a tapered recess 24 to facilitate the entrance of the key thereinto. With the key in the slot, the dust cover assumes the position illustrated in Figures 1 and 2, with its flat surface 14 in engagement with the adjacent flat of the key and the tumblers of the plug 8 being moved to proper alignment permit the ready turning of the plug, the dust cover 11 turning therewith offering no resistance to the opening of the lock.

From the foregoing description taken in connection with the accompanying drawing, it will be readily evident to those skilled in the art to which an invention of the character described appertains, that I provide an improved and simplified cover for lock plugs, which offers no resistance to the opening of the lock, and which is so designed as to be capable of ready manufacture.

What I claim as my invention is:

1. In a lock of the character described including a rotatable lock actuating plug having a key receiving opening, a cover for the plug outer end, said cover being of substantially circular shape, a flange depending from the periphery of the cover to form a recess at the under side thereof, said flange having one flattened side, a pin pivotally mounting the cover on the lock plug for movement to and from a position over the key opening, a spring concealed within the recess of the cover, and means whereby said spring normally positions the cover over the plug concentric therewith, the cover being movable against the spring and free of the key opening to permit the insertion of a key therein and the flat of the cover engaging the flat of the key and turning with the plug when rotated by the key.

2. In a lock of the character described including a rotatable lock actuating plug having a key receiving opening, a cover for the plug outer end, said cover being of substantially circular shape, a flange depending from the periphery of the cover to form a recess at the under side thereof, said flange having one flattened side, a pin fixed to the plug eccentrically of the plug and adjacent one end of the key opening, means pivotally supporting the cover from the pin at a point adjacent one end of the flattened side thereof, a spring concealed within the recess of the cover, and means whereby said spring normally positions the cover over the plug concentric therewith, the cover being movable against the spring and free of the key opening to permit the insertion of a key therein and the flat of the cover engaging the flat of the key and turning with the plug when rotated by the key.

3. In a lock of the character described including a movable lock plug having a key receiving opening and a cover for the plug, the cover being of substantially circular shape, having a peripheral side flange to form a recess at the under side thereof, a pin pivotally mounting the cover whereby the same is movable to and from a position over the plug, a spring having its medial portion coiled about the pivot pin, a stop against which one end of the spring bears, the other end of the spring bearing against the cover flange, and a projection formed from the wall of the flange and confining the last mentioned spring end between it and the inner face of the cover.

4. In a lock of the character described including a normally stationary part, a lock actuating plug rotatable in the stationary part and having a key receiving opening and a cover for the plug, said cover being of substantially circular shape having a peripheral side flange formed with one flattened side, a pin pivotally mounting the cover on the lock plug and so arranged that when the cover is moved free of the key opening the flattened portion thereof aligns with one side of the opening, a spring concealed within the recess formed by the cover flange and having its medial portion coiled about the pivot pin with one end bearing against the inner surface of the peripheral flange at the flat side, a stop fixed to the plug and located within the cover recess and against which the other end of the spring bears, whereby the spring normally urges the cover to a position over the plug and closing the key opening, and a projection pressed from the wall of the cover flange and confining the adjacent end portion of the spring between it and the inner face of the cover, the cover being movable against the spring to free the key opening and permit the insertion of a key therein, the flat of the cover engaging the flat of the key and turning with the plug when rotated by the key.

In testimony whereof I hereunto affix my signature.

CONRAD ZYGMUNT.