Aug. 18, 1925. 1,550,435

W. GANZ

LOCK

Filed Feb. 13, 1922

Fig. 1

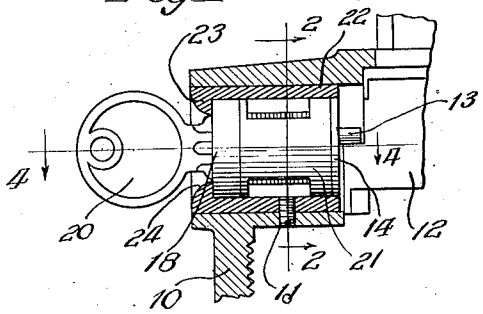


Fig. 2

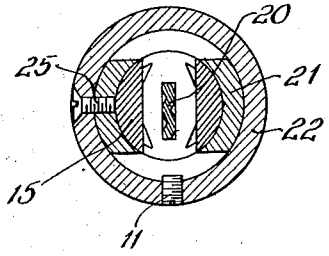


Fig. 3

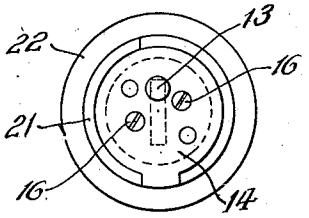


Fig. 4

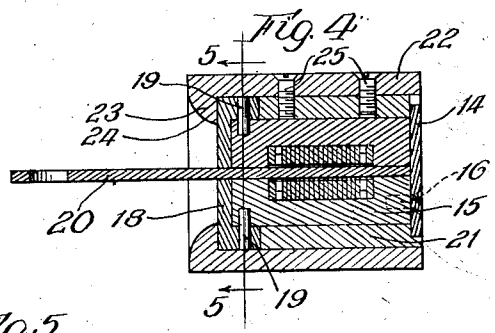
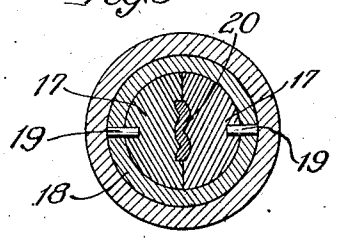


Fig. 5



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Patented Aug. 18, 1925. 1,550,435

UNITED STATES PATENT OFFICE.

WILLIAM GANZ, OF CHICAGO, ILLINOIS.

LOCK.

Application filed February 13, 1922. Serial No. 535,979.

To all whom it may concern:

Be it known that I, WILLIAM GANZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Locks, of which the following is a specification.

The object of this invention is to protect locks from drilling, cutting or other destructive attacks by which criminals have heretofore been able to release them without the aid of a proper key.

More specifically, it is an object of the invention to cover the parts exposed to attack with hardened steel so as to render the tools customarily used so ineffective as to be practically useless.

Another object of the invention is to provide faces of both the barrel and the plug of a cylinder lock with a hardened armor that will make it practically impossible to use a drill in the manner heretofore customary in opening locks of this kind.

Further objects will become apparent as the description is read in connection with the accompanying drawing illustrating a selected embodiment of the invention in which—

Fig. 1 is a longitudinal section showing a cylinder lock equipped with my invention and applied to the steering gear of an automobile;

Fig. 2 is a transverse section on the line 2—2 of Fig. 1;

Fig. 3 is an end elevation from the right of Fig. 1;

Fig. 4 is an enlarged longitudinal section showing the improved structure in detail; and

Fig. 5 is a transverse section on the line 5—5 of Fig. 4.

Referring to the drawing, 10 indicates a casing or other element in which the lock is adapted to be mounted and secured in place by screws 11 or the like. 12 indicates a bolt adapted to be shifted by the eccentric pin 13 carried by the back-plate 14 secured to the rear end of the plug 15 by screws 16.

The plug 15 is preferably made of two semi-cylindrical pieces 17 secured together at their rear ends by the back plate 14 and at their front ends by the cap 18. In the ordinary construction, this cap 18 is replaced by a collar of the same material as the pieces 17, usually brass or bronze. According to my invention, this cap is of hardened steel and is secured to the pieces 17 by the pins 19 or any other suitable fastenings. This cap covers the entire face of the plug except for the narrow slot necessary to admit the key 20.

The plug is mounted in a barrel 21 as usual, and I preferably provide the barrel with a hardened steel jacket or a casing 22 having a flange 23 fitting down over the face of the cap 18 and presenting a curved outer surface 24. This jacket or casing may be secured to the barrel by screws 25 or the like.

The plug is here shown concentric with the barrel but it may be eccentric to the barrel, in which case the opening in the flange 23 will be concentric with the plug.

The presence of the hardened steel cap 18 makes it practically impossible to attack the plug from the front with any of the tools ordinarily available for criminal purposes, and the jacket 22 surrounding the plug and barrel throughout their entire length and presenting the curved, hardened face 24 at the front, makes it practically impossible to attack the lock from any direction except the rear which ordinarily is inaccessible.

By applying the cap 18 to the pieces 17 of the plug in place of the customary collar, the plug may be manufactured with but slightly more expense than the plugs at present in use. In some instances the cap 18 will afford all the protection that the lock requires, but in other cases it will be very desirable to make use of the hardened casing 22 also, in order to protect the entire face of the lock and the sides. The plug and barrel can be made up and furnished in the usual manner, and the casings or jackets 22 may be made in standard sizes and supplied in cases where the protection afforded by the cap 18 is thought to be insufficient.

I am aware that changes may be made in the form, construction and arrangement of the invention, as set forth in the selected embodiment herein, without departing from the scope or sacrificing any of its material advantages, and I therefore reserve the right to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. In a lock, the combination of a barrel, a plug rotatably mounted in the barrel and comprising a plurality of longitudinal

pieces, a hardened steel cap embracing the plug pieces at one end of the plug, and fastening means securing the cap to the plug.

2. In a lock, the combination of a barrel, a plug rotatably mounted in said barrel and comprising two semi-cylindrical pieces, a back-plate, fastening means securing the back-plate to the rear ends of said pieces, and a hardened steel cap enclosing the front ends of said pieces and secured thereto.

3. In a lock, the combination of a barrel, a plug rotatably mounted therein, a protecting face of hardened steel secured to the front end of said plug, and a hardened steel jacket surrounding said barrel and plug and having an inwardly directed flange at its front end overlapping said protecting face.

4. In a lock, the combination of a barrel, a plug rotatably mounted therein, a protecting face of hardened steel secured to the front end of said plug and overlapping the face of said barrel, and a jacket of hardened steel surrounding said barrel and plug and having a front flange overlapping said protecting face.

WILLIAM GANZ.