Feb. 26, 1924. 1,484,830

N. B. HURD

DRILL PROOF CYLINDER LOCK

Filed March 19, 1923

Fig. 1.

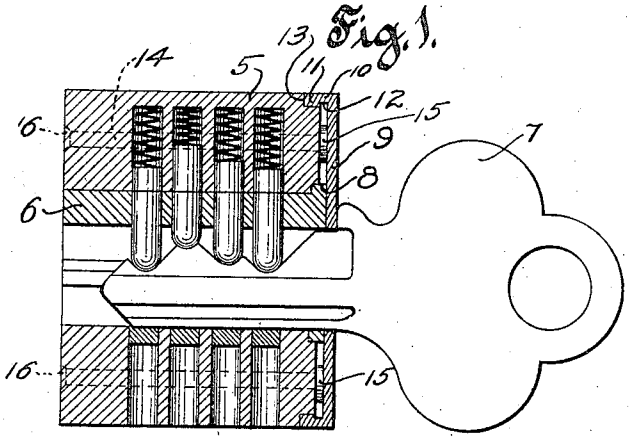


Fig. 3.

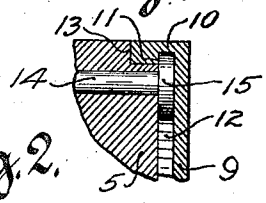
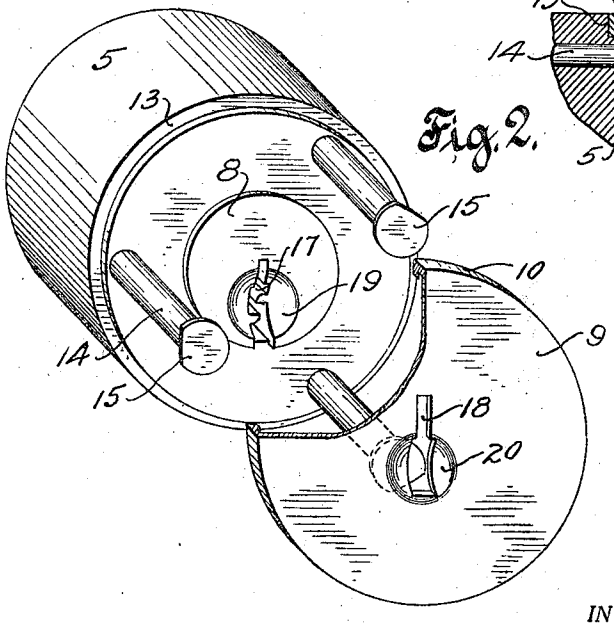


Fig. 2.



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Patented Feb. 26, 1924. 1,484,830

UNITED STATES PATENT OFFICE.

NORMAN B. HURD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE AMERICAN HARDWARE CORPORATION, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

DRILLPROOF CYLINDER LOCK.

Application filed March 19, 1923. Serial No. 626,051.

To all whom it may concern:

Be it known that I, NORMAN B. HURD, a citizen of the United States of America, residing at New Britain, Connecticut, have invented a new and useful Drillproof Cylinder Lock, of which the following is a specification.

My invention relates to a cylinder lock, and more particularly to a so-called burglar proof or armored lock.

It is an object of the invention to provide a cylinder lock with a hardened steel face plate so as to prevent damage to the pin tumblers by drilling from the front end of the lock.

It is a more specific object to provide novel means for holding a hardened steel face plate to a cylinder lock.

In the drawings, which show for illustrative purposes only, a preferred form of my invention,

Fig. 1 is a longitudinal central sectional view through a cylinder lock embodying features of my invention.

Fig. 2 is a perspective view of the lock shown in Fig. 1, parts being relatively displaced to illustrate the invention.

Fig. 3 is a fragmentary sectional view of a detail.

In said drawings, 5 designates a cylinder constituting part of a so-called cylinder lock. As is usual in locks of this character, a plug 6 is rotatably mounted therein and the pin tumblers lying in passages in the cylinder and plug serve to lock the cylinder and plug against relative rotation until moved by the key 7, to the positions shown in Fig. 1. In the particular form shown, the plug 6 is provided with a flanged head 8, fitting into a recess in the front of the cylinder 5 and projecting slightly above the surface thereof.

9 designates an armor or face plate preferably of hardened steel. This face plate, which is preferably of substantially the same diameter as the cylinder 5, is provided with a peripheral flange 10 at the base of which there is an in-turned continuous lip 11, leaving a continuous annular recess 12 on the inside of the face plate. The front end of the cylinder 5 is shouldered as at 13 for receiving the bottom of the flange 10 and lip 11 and forming a seat therefor.

A plurality of holding devices such as the pins 14—14 are provided, and in the form shown extend longitudinally through passages in the cylinder 5. Each of these pins is provided with a head 15 which is received in the annular recess 12, and bears against the lip 11. When the pins 14 are riveted or otherwise secured to the cylinder as indicated at 16 in Fig. 1, the face plate 9 will be securely held against removal from the cylinder 5 but will be permitted to rotate relatively to said cylinder, this rotation of course being permitted by reason of the continuous annular recess 12 in the face plate. The plug 6 and face plate 9 are each provided with registering key slots 17—18 respectively, and in the preferred form the plug and face plate are each cupped as shown at 19—20 respectively. This cupping serves to hold the face plate and plug against any substantial relative rotation, and insures continuous registration of the key slots in the two members.

It will be seen that when the proper key is inserted through the key slots, the pin tumblers will be moved to their proper positions and the plug may then be rotated by means of the key. The face plate 9 will be rotated with the plug, this rotation, as before stated, being permitted by reason of the continuous annular recess 12 in which the heads 15 fit.

Since the front faces of the cylinder and plug are covered by the armor or hardened steel face plate, and the securing pins are entirely covered by the face plate, it will be impossible to remove the armor while the lock is in place and it will be impossible to destroy the tumblers by drilling from the front end.

While I have disclosed a preferred form of my invention, I wish it understood that changes may be made within the scope of the appended claims.

I claim:

1. In a cylinder lock, a cylinder, a plug rotatable therein, a hardened steel face plate for said cylinder and plug and rotatably secured to said cylinder and rotatable with said plug, said plug and said face plate having registering key slots therein, and means to hold said face plate and plug against independent rotation relatively to each other to insure continuous registration of the key slots in said members,

2. In a cylinder lock, a cylinder, a plug therein, a hardened steel face plate for said cylinder and plug, said face plate having a peripheral flange and continuous in-turned lip thereon, and a plurality of devices secured to said cylinder and having flanges overstanding said in-turned lip for securing the face plate on the cylinder, said inturned lip and securing flanges permitting rotation of said face plate on said cylinder; said plug and cylinder having registering key slots therein.

3. In a cylinder lock, a cylinder, a plug therein, a hardened steel face plate for said cylinder and plug and completely covering the face of said cylinder, a plurality of pins secured to said cylinder and having heads thereon, said face plate having means coacting with the heads of said pins for holding the face plate against movement longitudinally of said cylinder but permitting relative rotation between said face plate and cylinder, said plug and face plate having registering key slots therein.

4. In a cylinder lock, a cylinder, a plug therein, one of said members having a plurality of pins secured thereto, a hardened steel face plate for said cylinder and plug, said face plate and said pins having coacting means for holding said face plate in place over said cylinder and plug, said means permitting relative rotation between said face plate and said member carrying said pins, said plug and face plate having registering key slots therein.

5. In a cylinder lock, a cylinder having a continuous peripheral shoulder on the front end, a plug in said cylinder, a plurality of pins extending through and secured to said cylinder, each of said pins having a head thereon at the front of said cylinder, a hardened steel face plate of substantially the same diameter as said cylinder and having a depending peripheral flange thereon fitting the peripheral shoulder on said cylinder, said depending flange having a continuous in-turned lip thereon leaving a continuous annular recess on the inside of said face plate for the reception of the heads on said pins, whereby the face plate will be rotatably secured to said cylinder by means of said lip and said heads, said face plate and plug having registering key slots therein.

NORMAN B. HURD.