

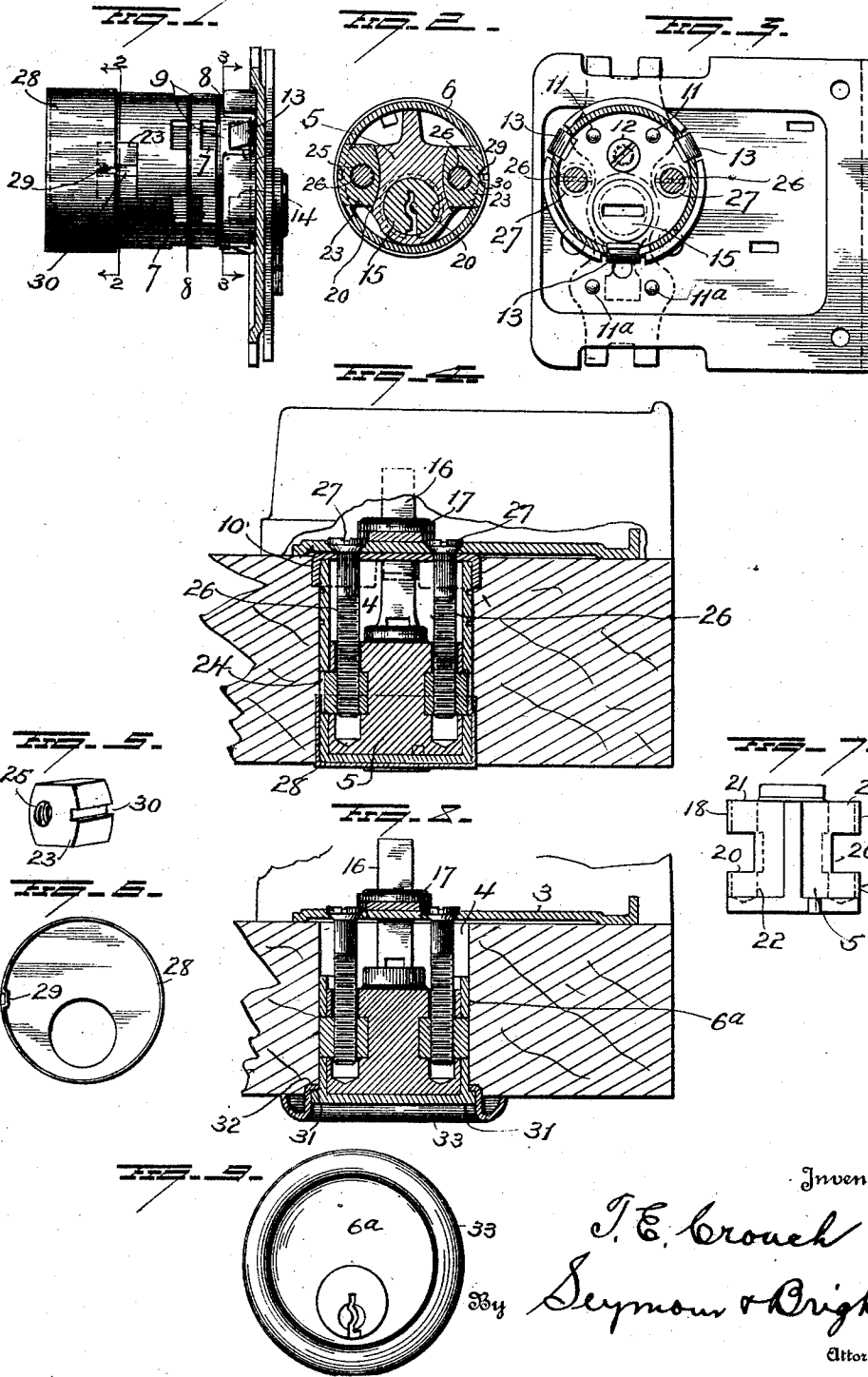
July 21, 1925.

T. E. CROUCH

LOCK

Filed Aug. 21, 1922

1,546,626



UNITED STATES PATENT OFFICE.

THOMAS E. CROUCH, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

LOCK.

Application filed August 21, 1922. Serial No. 583,382.

To all whom it may concern:

Be it known that I, THOMAS E. CROUCH, a citizen of the United States, and a resident of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in 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.

This invention relates to improvements in locks and more particularly to means for securing a cylinder lock and its enclosing shell in place, one object of the invention being to provide a simple structure whereby a cylinder lock and its enclosing shell may have interlocking connection with each other and be secured in place relatively to a door and the casing of a rim latch thereon, through the medium of fastening means engaging the interlocking connecting means between the cylinder and shell and a part of the casing of a rim latch.

A further object is to provide simple and efficient means for connecting one end of a shell which encloses a cylinder lock, with the cover plate of a rim latch casing.

With these and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation with the cover plate of a rim latch casing shown in section, illustrating an embodiment of my invention; Figure 2 is a transverse sectional view on the line 2—2 of Figure 1; Figure 3 is a view in section on the line 3—3 of Figure 1; Figure 4 is a sectional view showing an application of my improvements to a door and a rim latch casing, a portion of the latter being shown in elevation; Figures 5, 6 and 7 are detail views and Figures 8 and 9 are views illustrating a modified construction.

In the drawings, I have shown in Figure 4, a fragmentary part 1 of a door having applied thereto, a rim latch, the casing of which is represented at 2 and the cover plate of said casing is shown at 3. The door is

shown as being provided with a bore or opening 4 which receives a cylinder lock 5 and its enclosing shell 6, and the latter may, if desired, be made of hardened steel so that it will provide a protecting armor for the cylinder lock.

In the embodiment of the invention shown in Figures 1 to 4, the shell 6 (which may be made adjustable in length to accommodate doors of different thicknesses, by the provision of openings 7 and peripheral grooves 8 to form breakable sections 9), enters a holder 10 secured by dowel pins 11 and a screw 12 to the cover plate 3 of the rim latch casing. The holder 10 is provided with a series of projections 13 (preferably three such projections being employed) which enter notches or openings 14 in the inner end portion of the shell 6, and one of said projections will preferably be made larger than the others to insure the proper location of the shell in the holder, so as to bring the cylinder plug 15 and connecting bar 16 in line with the slot in the roll-back 17. If it be desired to use the latch on a door of the opposite hand, the screw 12 for the holder 10 may be removed and the holder turned to engage the opposite pair of dowel pins indicated at 11^a Figure 3, after which the screw 12 would be replaced.

By connecting the shell with the cover plate of the latch casing as above described, the latch casing and shell may be applied as a unit to the door.

The casing of the cylinder lock is provided with diametrically opposite pairs of bosses 18, 19, the bosses of each pair forming recesses 20, and said bosses are provided with openings 21 and sockets 22 respectively. Blocks 23 are located in the recesses 20 of the cylinder lock casing and the wall of the shell 6 is provided with diametrically opposite openings 24 into which said blocks project, said blocks thus effecting interlocking connections between the casing of the cylinder lock and the enclosing shell.

The locking blocks 23 are made with threaded bores 25 to receive screws 26 which pass through the openings 21 and partially enter the sockets 22, said screws also passing through the holder 10 and the cover

plate 3 and having heads 27 countersunk in the latter.

From the construction and arrangement of parts above described, it will be seen that the casing of the cylinder lock and the enclosing shell have interlocking connection with each other and that these parts are secured to the casing of the rim latch through the medium of screws which engage the means whereby said interlocking connection between the cylinder locking casing and the enclosing shell is effected.

The outer end of the steel shell 6 might be left exposed if desired, but in the embodiment of the invention shown in Figures 1 and 4, I prefer to provide the outer end of said steel shell with a cap 28 of a different metal, such as bronze for example. The cap 28 may be made of sheet metal and drawn over the end portion of the shell 6, said cap being held in position by the engagement of punched bosses 29 in its peripheral wall in notches 30 in the locking blocks 23.

In the embodiment of the invention shown in Figures 8 and 9, the enclosing shell (6^a) is made shorter than the corresponding shell 6 in the construction shown in Figure 4 and is not connected at its inner end with the cover plate 3 of the rim latch casing. The shell 6^a is provided with a head at its outer end, forming an annular flange 31 having a bearing against a shoulder or flange 32 formed within a recessed facing ring 33 applied to the door. With this construction, tightening of the screws 26 will draw the flanged or headed end of the shell firmly against the shoulder of the facing ring and the latter tightly against the door, and the shell and lock casing will be secured firmly to the cover plate 3 of the rim latch casing.

Other changes might be made in details of construction of my invention without departing from the spirit of the latter or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.

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

1. The combination of a shell having a seat, a cylinder lock entering said shell and having a seat, a member entering the seats in the shell and in the cylinder lock and constituting means to positively interlock said shell and cylinder lock to prevent relative longitudinal movement, and securing means for securing the interlocked shell and cylinder lock to a part to be carried by a door.

2. The combination with a latch casing, of a shell, a cylinder lock within said shell, means for interlocking the cylinder lock to the shell, and securing means engaging said interlocking means and the latch casing.

3. The combination of a shell to enter a bore in a door, a cylinder lock within said shell, means for interlocking the lock to the shell, and fastening means engaging said interlocking means.

4. The combination of a shell, a cylinder lock within said shell, the casing of said lock having recesses and the shell having openings, blocks located in the recesses of the lock casing and entering the openings in the shell, and fastening means engaging said blocks for securing the shell and lock to a door.

5. The combination with a rim latch casing, of a shell to be inserted in a bore in a door, said shell having openings, a cylinder lock within said shell and having recesses, blocks located in said recesses and entering the openings in the shell, and screws engaging said blocks and the rim lock casing.

6. The combination of a shell having openings, a cylinder lock within said shell and having recesses and openings communicating therewith, blocks located in the recesses of the cylinder lock and entering the openings in the shell, said blocks having threaded bores, and securing screws passing through the openings in the cylinder lock and entering the threaded bores of said blocks.

7. The combination of a shell, a cylinder lock therein, blocks forming interlocking means for locking the cylinder lock to the shell, said blocks having notches, a cap embracing the outer portion of the shell and having bosses to enter the notches of said blocks, and fastening means engaging said blocks for securing the shell and cylinder lock in a door.

8. The combination with a cover plate of a rim latch casing, of a holder secured thereto, said holder having projections, a shell having openings adjacent to its inner end, said shell entering said holder and the projections on the latter entering said openings in the shell, a cylinder lock within the shell, and means for securing said cylinder lock and shell to said cover plate.

9. The combination with the cover plate of a rim latch casing, of a holder, means for adjustably securing said holder to said cover plate, a shell having openings adjacent to its inner end, said shell entering said holder, said holder having a plurality of projections, one larger than the others, entering said openings in the shell, a cylinder lock in said shell, and securing means connecting said cylinder lock and shell with said cover plate.

10. The combination with the cover plate of a rim latch casing, of a shell connected with said cover plate, a cylinder lock located within said shell, and securing means connecting said cylinder lock to the cover plate.

11. The combination with a cover plate

of a rim latch casing, of a shell connected therewith, a cylinder lock within said shell, interlocking means between the cylinder lock and the shell, and securing means between said interlocking means and said cover plate.

In testimony whereof, I have signed this

specification in the presence of two subscribing witnesses.

THOMAS E. CROUCH.

Witnesses:

CHARLES A. BERRY,
EDMUND R. MEUZEL.