Oct. 16, 1923. 1,470,858

M. C. MAXWELL

LOCK STRUCTURE

Filed June 2, 1922

Fig. 1.

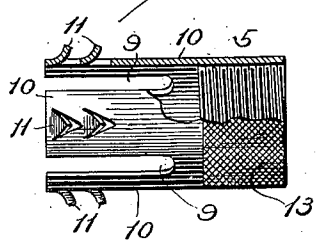


Fig. 2.

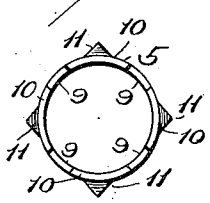


Fig. 3.

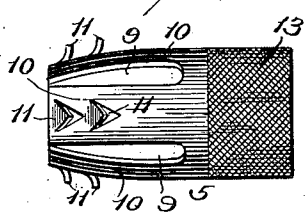


Fig. 4.

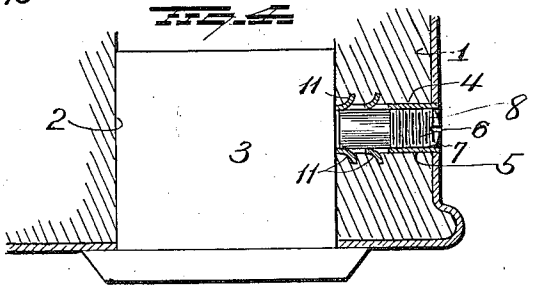


Fig. 5.

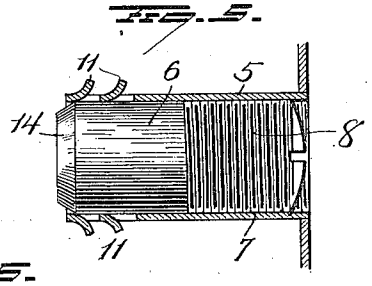


Fig. 6.

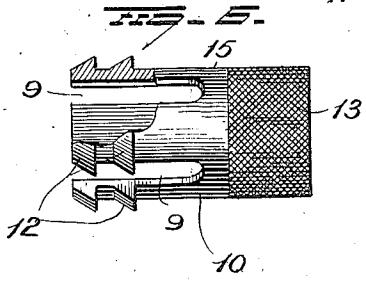
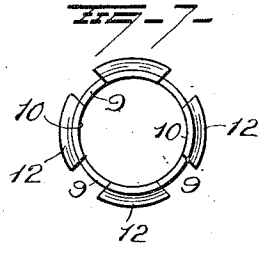


Fig. 7.



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UNITED STATES PATENT OFFICE.

MAXWELL C. MAXWELL, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

LOCK STRUCTURE.

Application filed June 2, 1922. Serial No. 565,303.

To all whom it may concern:

Be it known that I, MAXWELL C. MAXWELL, 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 Lock Structures; 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 lock structures, and more particularly to securing means for locks, especially those of the cylinder type, the object of the invention being to provide simple and efficient means whereby a lock casing mounted in an opening in the wood of a door shall be securely held in place, and the securing means be firmly and effectually held against displacement in an opening in the door at right angles to the wall of the cylinder lock casing.

With this 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, partly in section and partly in elevation of the sleeve or bushing which receives the securing set-screw for the lock casing; Figure 2 is an end view of the same; Figure 3 is a view in elevation of the sleeve or bushing with its fingers bent inwardly to facilitate insertion into an opening in the door; Figure 4 is a sectional view showing the application of my improvements in securing a lock casing in place in an opening in a door; Figure 5 is an enlarged sectional view, and Figures 6 and 7 are views illustrating a modification.

In Figure 4 of the drawings, a fragmentary portion of a door is represented at 1 which may be made of wood and the same is provided with an opening 2 which receives a lock of the cylinder type as indicated at 3.

A cylindrical bore or opening 4 is made in the door so as to extend from the edge face of the latter to the wall of the opening 2 and be disposed at right angles to the wall of the lock cylinder or casing in said opening 2.

The bore 4 in the door receives a sleeve or bushing 5 and the latter serves as a mounting for a set screw 6 to engage the lock cylinder and secure the latter in place in the opening 2 in the door.

The sleeve or bushing 5 may conveniently be made from a section of tubing and is threaded interiorly near its rear end portion, as indicated at 7, for the accommodation of the threaded exterior portion 8 of the set screw 6. The forward portion of the sleeve or bushing is made with a plurality of slots 9 open at one end and forming a plurality of fingers 10, each of which has punched from the metal thereof, two (more or less) lateral projections forming spurs or pointed teeth 11 to become embedded in the wood of the door as indicated in Figure 4.

Instead of making the wood-engaging projections by punching pointed spurs from the metal of the sleeve or bushing fingers 10 as above described, the wood-engaging projections may be made in the form of beveled ribs 12 as shown in Figures 5 and 6, and these ribs may be segments of concentric rings or they may be arranged spirally to form, in effect, screw threads.

The sleeve or bushing 5 is made with an exterior knurled or otherwise roughened portion as indicated at 13, so that it will be prevented from turning in the bore 4 during the insertion of the set screw.

Before the sleeve or bushing is inserted into the bore 4 in the door, the fingers 10 will be bent inwardly so that the spurs or projections may not interfere with the driving of said sleeve or bushing into place in the bore 4 in the wood of the door. The set screw 6 will be inserted into the sleeve or bushing and as said screw is turned and thus fed forwardly to engage the lock cylinder 3, it will engage the fingers 10 and force them outwardly, causing the wood-engaging projections or spurs to become embedded in the wooden wall portion of the bore 4. If desired, the leading end of the set screw may be beveled as indicated at 14.

With my improvements, the metal mounting for the set screw will be firmly secured in the bore 4 in the wood of the door, and the set screw may be made to engage the lock cylinder with sufficient pressure to secure the same rigidly and immovably in place.

Various slight changes might be made in

the details of construction of my invention without departing from the spirit thereof 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. In lock securing means of the character described, the combination with a lock casing, of a sleeve or bushing having fingers provided with laterally projecting wood-engaging means to engage the wall portion of a bore in which said sleeve or bushing may be located, said sleeve or bushing having an internal threaded portion, and a set screw to pass through said sleeve or bushing and engage the lock casing.

2. In a lock structure of the character described, the combination with a lock casing, of an internally threaded sleeve or bushing having a plurality of fingers, said fingers having laterally projecting wood-engaging members, and a set screw to enter said sleeve or bushing and engage the lock casing, said set screw being cooperable with said fingers to force them laterally and embed said laterally projecting members into the wall of a bore in which said sleeve or bushing may be located.

3. In a lock structure of the character described, the combination with a lock casing, of a sleeve or bushing to enter a bore in a wooden part in which latter the lock casing may be located, said sleeve having a series of fingers provided with laterally projecting punched spurs and a set screw to pass through said sleeve or bushing and engage the lock casing, said set screw being cooperable with said fingers to force them laterally and embed said spurs in the wall of the bore in which said sleeve or bushing may be located.

4. In a lock structure, the combination with a lock casing, of a sleeve or bushing to enter a bore in a wooden part in which latter the lock casing may be located, said sleeve being internally threaded and having a plurality of fingers provided with wood engaging members, said sleeve or bushing also having an externally roughened portion, and a set screw to pass through said sleeve or bushing and engage the lock casing.

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

MAXWELL C. MAXWELL.

Witnesses:
L. M. SAISFIELD,
CHARLES A. BERRY.