

No. 659,484.

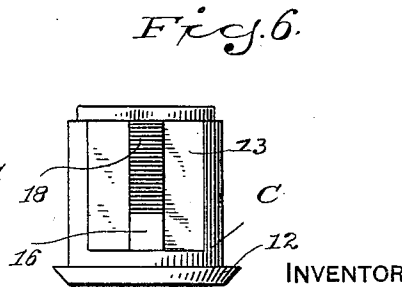
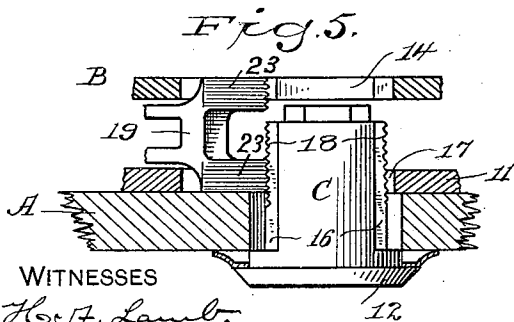
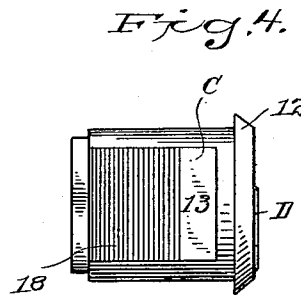
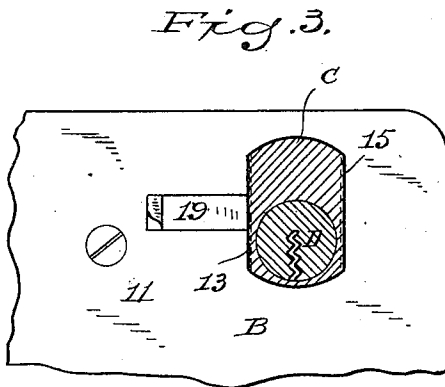
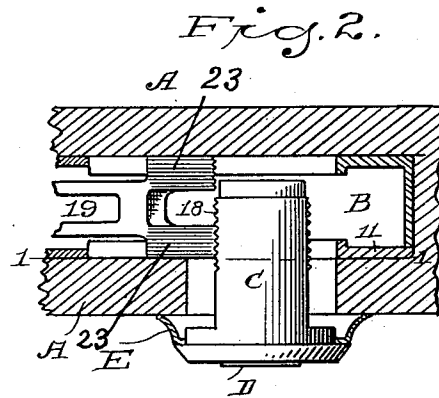
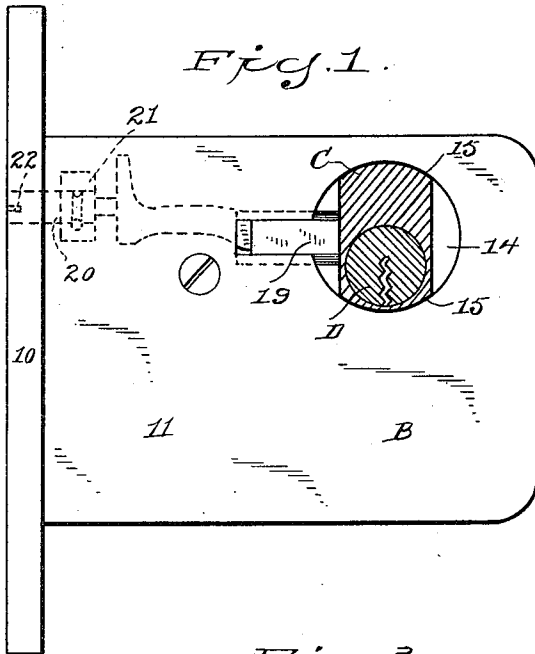
Patented Oct. 9, 1900.

H. S. LOCKWOOD.

CYLINDER LOCK.

(Application filed May 28, 1900.)

(No Model.)



WITNESSES
H. F. Lamb.
J. H. Atcherson.

INVENTOR
Henry S. Lockwood
By
A. M. Wooster
Atty.

UNITED STATES PATENT OFFICE.

HENRY S. LOCKWOOD, OF SOUTH NORWALK, CONNECTICUT.

CYLINDER-LOCK.

SPECIFICATION forming part of Letters Patent No. 659,484, dated October 9, 1900.

Application filed May 23, 1900. Serial No. 17,677. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. LOCKWOOD, a citizen of the United States, residing at South Norwalk, county of Fairfield, State of Connecticut, have invented a new and useful Cylinder-Lock, of which the following is a specification.

My invention relates to the class of locks commonly known as "cylinder-locks," and has for its object to provide a mode of attaching the "locking-cylinders," so called, or tumbler-cases to the lock-cases that will reduce the cost of construction to the minimum, will hold the tumbler-case against the possibility of rotation or withdrawal except in the proper manner and when the door is open, and will render the attachment of the tumbler-case to the lock-case when the latter is in place in a door so simple that a lock of this class may be put on by any person and without special tools, the difficulties heretofore existing in the putting on of this class of lock being wholly done away with by my present improvement.

With these ends in view I have devised the novel construction which I will now describe, referring by reference characters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of a lock-case with a tumbler-case secured in place, the lock-case being provided with a round tumbler-case opening and being in section on the line 1 1 in Fig. 2; Fig. 2, a horizontal section of a door with a lock-case therein, the tumbler-case and retaining-slide appearing in plan; Fig. 3, a view corresponding with Fig. 1, except that the tumbler-case opening in the lock-case is made to correspond in outline with the tumbler-case in cross-section; Fig. 4, an elevation of a tumbler-case detached; Fig. 5, a view corresponding with Fig. 2, except that the bearings of the tumbler-case are provided with ribs in which the transverse grooves are formed and the tumbler-case opening in the lock-case is made to correspond with the cross-section of the tumbler-case; and Fig. 6 is an elevation of a tumbler-case of the type shown in Fig. 5 detached.

A denotes a door; B, a lock-case, having the usual face-plate 10 and removable side plate

11; C, a tumbler-case, having the usual flange 12; D, a hub, and E an escutcheon-ring.

The gist of my invention lies in making the tumbler-case of other form than circular in cross-section, in providing said tumbler-case with a bearing having grooves transverse to the tumbler-case, and in providing the retaining-slide with a corresponding bearing, also having grooves, so that when the grooves on the retaining-slide and tumbler-case are firmly in engagement the tumbler-case will be locked both against rotation and withdrawal without additional devices. It will of course be apparent that there is no limit to the variations that may be made in the shape of the tumbler-case and still the same result be attained. For example, the tumbler-case may be made triangular, hexagonal, or of any polygonal form in cross-section, or it may be a cylinder with one or more sides not necessarily flat or with one or more projections or depressions, so long as a suitable bearing is provided, which when engaged by the retaining-slide will prevent rotation. The opening in the lock-case, moreover, need not necessarily correspond in configuration with the configuration of the tumbler-case in cross-section, but is necessarily provided with a bearing against which the tumbler-case is held by the retaining-slide. I can best define the scope of my invention, so far as relates to the shape of the tumbler-case, by saying that it may be of any form other than circular in cross-section. In the present instance I have shown the tumbler-case as provided (on opposite sides in order to make the tumbler-case reversible) with bearings 13, consisting simply of flattened sides, although the special contour of the sides—that is, whether flat, concave, or convex—is a matter of no importance whatever so long as a solid bearing is provided for the corresponding bearing upon the retaining-slide, as will be more fully explained.

14 denotes the tumbler-case opening in the lock-case, which may be round, as shown in Figs. 1 and 2, or shaped to correspond approximately with the shape of the tumbler-case in cross-section, as in Figs. 3 and 5, the sole requirement being that the wall of the opening provide a bearing for the tumbler-

case, as at 15, on the side opposite to the retaining-slide, against which the tumbler-case is held by the retaining-slide when the latter is moved inward, as will be more fully explained. In Figs. 5 and 6 I have shown the bearings 13 as provided with ribs 16 and the tumbler-case opening as having slots 17 leading therefrom to receive said ribs.

18 denotes transverse grooves in the bearings of the tumbler-case. In Figs. 5 and 6 I have shown the grooves as formed in the ribs only. This, however, is a mere detail of construction and is not of the essence of my invention.

19 denotes a retaining-slide, (bifurcated in order that the tumbler-case may be reversible,) the forward end of which comprises a bearing 23, adapted to engage one of the bearings 13 and which is provided with grooves corresponding with the grooves 18 in the tumbler-case. Suitable ways are of course provided in the side plates of the lock-case in order to hold the retaining-slide in place. The retaining-slide may be operated to grip or release the tumbler-case in any ordinary or preferred manner. In the present instance I have shown the retaining-slide as operated by means of an adjusting-screw 20, which passes through a lug 21, projecting from the lock-case, and whose head lies in an opening in the face-plate and is provided with an operating-slot 22. The portion of the adjusting-screw which passes through the lug is provided with a groove, which is engaged by a pin passing through the lug. (See dotted lines, Fig. 1.) This pin holds the adjusting-screw against longitudinal movement, so that the retaining-slide will be moved in or out when the adjusting-screw is rotated. This being a perfectly well-known construction in locks is not thought to require illustration in detail.

In use, in order to provide for variation in the thickness of doors, escutcheon-rings of different heights may be provided. The lock-case is mortised into the door in the usual

manner and a hole bored in one side for the insertion of the tumbler-case. The operation of attaching the tumbler-case to the lock-case is made perfectly simple by my present invention. The operator passes the tumbler-case through the escutcheon-ring, inserts the inner end of the tumbler-case into the opening in the lock-case, placing one of the bearings 13 in position to be engaged by the retaining-slide, and pushes the tumbler-case in until the escutcheon-ring lies against the face of the door, as clearly shown in Figs. 2 and 5. The retaining-slide is then moved inward until the corresponding grooves in the retaining-slide and the tumbler-case are firmly in engagement, and the tumbler-case is pressed firmly against bearing 15 in the side plate of the lock-case. It will be readily understood from the drawings that when the tumbler-case is secured in place in the manner above described it will be impossible to apply sufficient power to the tumbler-case when the door is closed to withdraw it or force it in or to rotate it.

Having thus described my invention, I claim—

In a lock the combination with a tumbler-case irregular or non-circular in cross-section to form a bearing-surface, said bearing-surface having transverse grooves, of a lock-case having an opening free from internal projections or threads adapted to receive the tumbler-case, and a retaining-slide adapted to directly engage the said bearing-surface of the tumbler-case and having grooves corresponding with the grooves in the said bearing-surface, whereby the tumbler-case may be locked both against rotation and withdrawal by means of the single slide.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY S. LOCKWOOD.

Witnesses:

L. D. AINSWORTH,
L. E. BODWELL.