

H. G. VOIGHT.

LOCK.

APPLICATION FILED SEPT. 25, 1911.

1,013,524.

Patented Jan. 2, 1912.

Fig. 1.

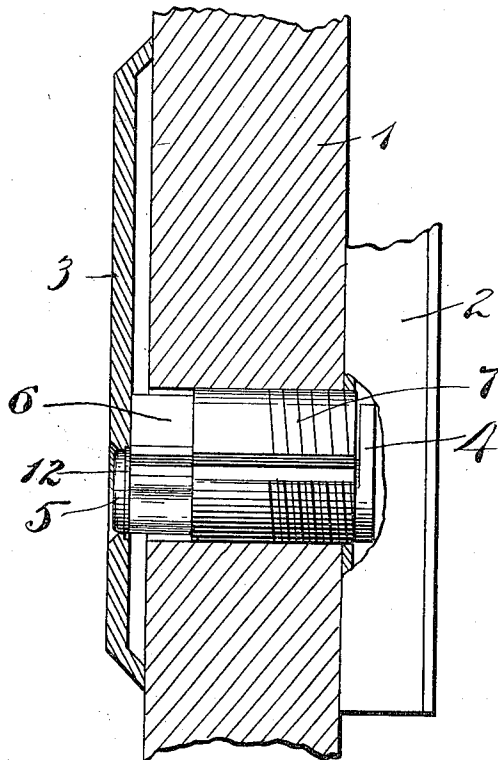


Fig. 2.

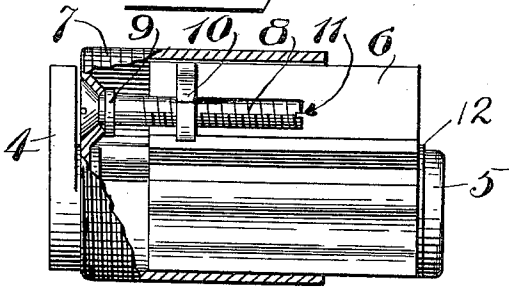
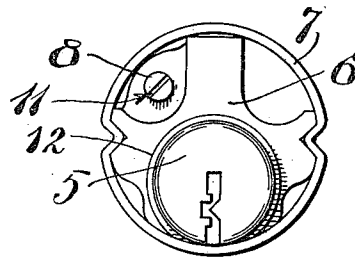


Fig. 3.



Witnesses:
Chas. A. Heard
Edw. W. Hunsicker

Inventor
H. G. VOIGHT
By *his Attorneys*
Randall, Rumrill & Sturges

UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE AMERICAN HARDWARE CORPORATION, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LOCK.

1,013,524.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed September 25, 1911. Serial No. 651,070.

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Locks, of which the following is a full, clear, and exact description.

My invention relates to improvements in locks.

The main object of my invention is to provide an improved construction and combination of parts in that type of lock in which the lock case has applied thereto a cylinder lock, so that lock mechanism within the case may be operated by the use of the ordinary flat pin cylinder lock key.

Incidentally there are other objects, such as facilitating the accurate adjustment of the cylinder lock and furnishing for the outside of the door to which the lock is applied a neat and attractive finishing plate, which exposes only the plug portion of the cylinder lock, covering and hiding from view the balance of the lock. Ordinarily pin cylinder locks, when applied to rim locks or mortise locks are inserted from the outside of the door through the escutcheon, a clearance hole being provided in the escutcheon of sufficient size to permit the entire cylinder lock to pass therethrough, while the outer end of the cylinder lock is provided with a flange which overstands the edge of the lock opening in the escutcheon plate. This is not only, as I have found, needlessly extravagant, but, as a matter of fact, impairs in many instances the design sought. By my present improvement the design is not impaired, and the entire construction is materially cheapened without sacrifice to quality.

Another advantage in the present case and by my improved construction and combination relates to convenience of adjustment. In all previous constructions much labor is required to secure the proper adjustment to adapt the lock to doors of different thicknesses. By the present construction precisely the adjustment proper can be at once determined.

In the drawings Figure 1 is a vertical section of a door equipped with my invention and showing certain parts in elevation. Fig. 2 is a relatively enlarged view, mainly in section, of the cylinder lock detached.

Fig. 3 is a view of the outer end of said cylinder lock.

1 represents a door.

2 represents the case of an ordinary lock, such as a rim or mortise lock.

3 represents an escutcheon arranged to be applied to the outer side of the door 1.

It is unnecessary for me to illustrate the type of lock or latch mechanism contained in the case 2, it being sufficient merely to state that the roll-back 4 is designed to operate said mechanism or parts of said mechanism, as desired. The roll-back 4 is operable by a key-controlled plug 5, which constitutes part of the cylinder lock. The cylinder lock in this instance has a telescopic body portion composed of the two sections 6—7. The section 7 carries the roll-back 4. The section 6 carries the rotatable plug 5. The plug 5 and the roll-back 4 are suitably connected so that when the two sections 6—7 are adjusted to and fro, operative connection between the plug 5 and the roll-back 4 will not be disturbed. The parts 6 and 7 of the cylinder lock are made adjustable to enable the cylinder lock to be applied to doors of different thicknesses, and also to cause the plug 5 to take its proper position in an opening in the escutcheon plate 3, as shown in Fig. 1. The section 7 of the cylinder lock is provided with a screw-thread at its inner end, whereby the same may be screwed into the lock case 2 to cause the roll-back 4 to assume the proper position therein. The operating device for adjusting the sections 6—7 of the cylinder lock is so constructed that it may be operated from the outer end, and in the particular form shown in the drawings this operating device comprises a screw 8, which passes through the inner end wall of the section 7 and is suitably held against independent longitudinal movement relatively to the section 7 by the head of the screw 8 and by an internal collar 9. The threaded part of the screw 8 passes through a threaded abutment 10 carried by the section 6. The outer end of the screw 8 is provided with a transverse slot 11, to receive the end of a screw-driver, which may constitute one effective tool for adjusting the length of the cylinder lock to the particular door to which the lock is applied.

In assembling the parts thus far described, the practice would be as follows: Assuming the lock 2 is a rim lock, the part 7 of the

cylinder lock would be screwed into place in the case 2, preferably before the lock 2 is applied to the door 1. The proper position of the roll-back 4 may be easily determined under such conditions. When properly positioned, the cylinder lock section 7 is clamped in any suitable way against movement relatively to the lock case 2. A transverse passage is then bored through the stile of the door 1, of a sufficient size to freely permit the passage of the cylinder lock. The lock 2 is then applied to the door, the cylinder lock being passed through the aforesaid bore. The escutcheon 3 is then placed against the outside of the door and an observation taken as to whether the plug 5 stands in the proper position in the opening in the escutcheon designed to receive the same. If it stands out too far, or if it does not stand out far enough, the operator simply removes the escutcheon, inserts a screw-driver into the slot 11 and turns it in the proper direction to advance or retract the section 6 of the cylinder lock to the desired degree, whereupon the escutcheon is applied and another test made. This work occupies but a few moments and may be accomplished without the exercise of any special skill. As soon as the proper adjustment is effected, the escutcheon plate 3 may be secured in place.

From the foregoing it is at once apparent that a very substantial economy is effected in the combination of parts herein described. Assuming the cylinder lock were of the old type having a flange on the part 6, and assuming the escutcheon 3 were provided with a passage of sufficient size to permit the entire cylinder lock to be passed therethrough, it is obvious that the accurate adjustment of the several parts could not be effected excepting at the expense of much labor. For example, it would be necessary on each test to first apply the rim lock and the escutcheon and to then pass the cylinder lock through the escutcheon from the outside, enter it into the case 2 and secure it into position. Repeated tests would have to be made to determine whether all of the adjustments were correct. For example, great care would have to be taken to determine that the outer end of the cylinder lock is spaced apart from the roll-back 4, so that when the roll-back 4 is screwed in to a sufficient extent to give to the same its proper position within the case 2, the flange at the outer end of the cylinder lock will rest snugly against the escutcheon 3. If it is found that in either respect the adjustment is incorrect, the entire cylinder lock will have to be removed and the length of said cylinder lock re-adjusted and another trial made, and so on. By the present construction, as already pointed out, much of this labor is eliminated. Not only has my improvement the advantage of economy, but the finished arti-

cle possesses in many respects advantages over the old type of lock well known and referred to herein, in which the cylinder lock itself is provided with an external flange arranged to rest on the escutcheon 3, for in that form the presence of the flange and the projection of the outer end of the cylinder lock above the surface of the escutcheon in many instances destroys the design thereof. In the present instance, the only visible portion of the cylinder lock is the end of the plug 5, which may lie flush or substantially flush with the surface of the escutcheon.

12 represents a shoulder around the exposed end of the plug 5, said shoulder being formed on the section 6. The shoulder 12 operates in effect as a centering device for the escutcheon plate 3 so that it will not bind upon that part of the plug 5 which passes through the plate since if any binding occurred, it would prevent the free rotation of said plug. Obviously, this centering means may be modified in a variety of ways, but this particular form has special advantages, because, as shown, it is concentric with the plug.

What I claim is:

1. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case.

2. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, the outer end of said key plug projecting beyond the outer end of the outer section.

3. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, in combination with a lock case secured to the inner section of said cylinder lock.

4. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by

the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, in combination with a lock case secured to the inner section of said cylinder lock, and an escutcheon plate arranged to cover all of the outer end of said cylinder lock excepting the outer end of said plug.

5. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, an operating device

carried by the inner section, a rotatable key plug carried by the outer section and adjustably connected with said operating device, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation from the outer end of the cylinder lock whereby said two sections may be adjusted relatively to each other.

HENRY G. VOIGHT.

Witnesses:

CHAS. A. PEARD,
E. E. MORSE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."