H. G. VOIGHT.

MORTISE LOCK.

APPLICATION FILED DEC. 17, 1910.

1,003,956.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.

Fig. 2.

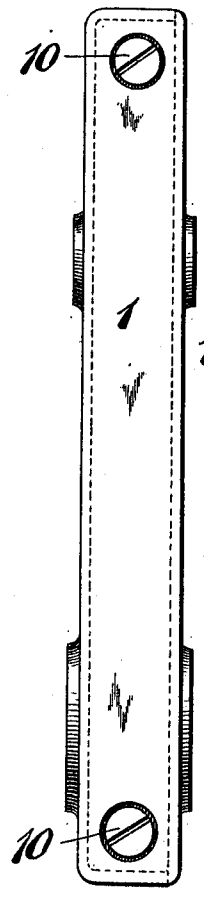


Fig. 1.

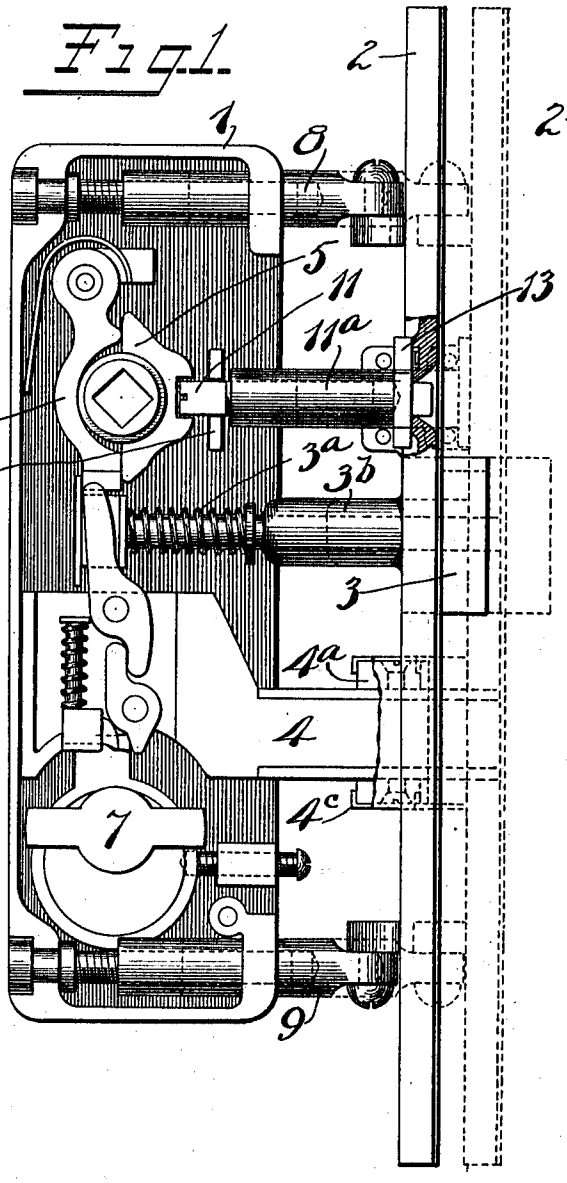
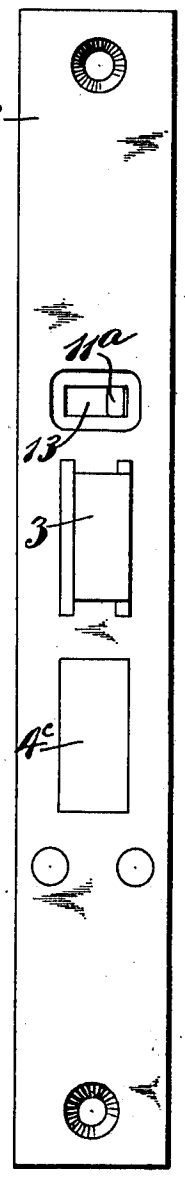


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

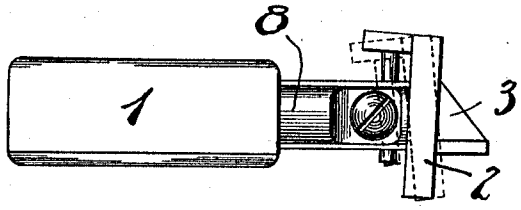


Fig. 5.

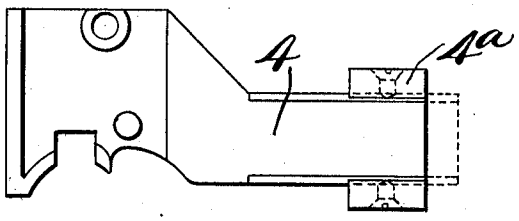
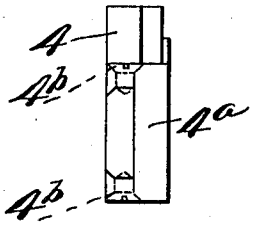


Fig. 7.



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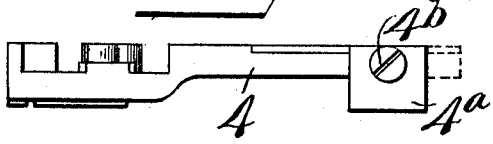


Fig. 8.

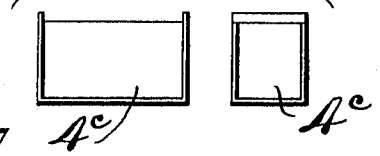


Fig. 10.

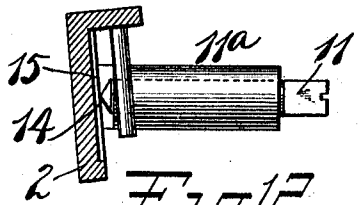


Fig. 9.

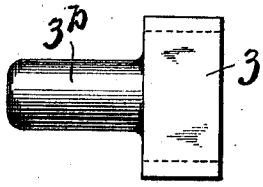


Fig. 11.

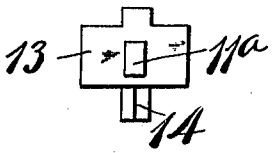
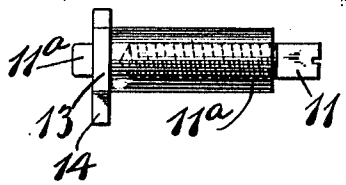


Fig. 12.



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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO RUSSELL & ERWIN MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

MORTISE-LOCK.

1,003,956. Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed December 17, 1910. Serial No. 597,928.

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, Connecticut, have invented certain new and useful Improvements in Mortise-Locks, of which the following is a full, clear, and exact description.

My invention relates to locks, the main object being to provide in a lock of the "mortise" type a convenient and simple means of adjustment whereby a single lock may be adapted to door-stiles of different widths, wherein varying "back sets", so called, are required. Under present existing conditions, it is customary for hardware dealers to carry different sizes of the same lock to meet these varying dimensions. By my improvement, a dealer may carry a very much smaller stock, and yet supply the varying needs as called upon.

In the accompanying drawings Figure 1 is a side elevation of my improved lock, certain parts being removed and broken away. Fig. 2 is a rear elevation of the complete lock case shown in Fig. 1. Fig. 3 is a front elevation of the lock shown in Fig. 1. Fig. 4 is a top plan view of the complete lock. Figs. 5, 6 and 7 are respectively a side, top and end elevation, of the dead-locking bolt. Fig. 8 is a scalp covering for the dead-locking bolt. Fig. 9 is a side elevation of the spring latch-bolt. Fig. 10 is a plan view of a stop-work device, the face-plate of the lock being shown in section. Fig. 11 is a front elevation of the stop-work device. Fig. 12 is a side elevation thereof.

1 represents the body of the lock-case containing the bolt actuating mechanism, the particular design of which is immaterial to this invention.

2 represents the face-plate of the lock, and, as will be observed, this face-plate is spaced apart from the lock-case body 1, being adjustably connected thereto and to the various parts associated therewith for the purpose of permitting said face-plate to be adjusted to and fro relatively to the lock-case body.

3 represents a spring latch-bolt arranged to project in the usual way through the face-plate 2. 4 represents a dead-locking bolt also projecting through the face-plate in the usual way.

5 represents a roll-back hub for the latch bolt, the same having the usual knob spindle passage, the hub ends of said roll-back being mounted to rotate or oscillate in the sides of the lock-case body 1. In this particular instance, the roll-back hub is connected with the tail of the latch-bolt through the medium of a lever 6.

7 represents a roll-back for the dead-bolt 4, the same being operatively connected therewith in any suitable manner.

8—9 are adjustable links between the face-plate 2 and the lock-case body 1, said links making operative connection between said parts at or near the ends thereof so as to avoid interference with the intervening mechanism. Each of these links is preferably hinged to the rear of the face-plate 2, and each has a sliding connection with the lock-case body 1. In this particular instance, each link projects into the front edge of said lock-case body, and may be adjusted therein by means of a screw 10, the head of which is exposed at the rear edge of the case so that by turning said adjusting screws 10—10, said case may be moved toward or away from the face-plate, thus providing a simple yet positive means of connection between the face-plate and the lock-case.

The latch-bolt 3 is made adjustable by making the tail of the latch-bolt in two pieces, 3^a—3^b, one of said pieces being threaded into the other, whereby said tail may be lengthened or shortened at will. Beyond this, this adjustable connection also permits the latch-bolt head to be reversed for a right, or a left hand, door.

The dead-bolt, as shown, is provided with a head-block 4^a which is adjustable upon the shank of the dead-bolt, as best seen in Figs. 5, 6 and 7. The shank of the dead-bolt, being comparatively thin, may have its end easily sawed off should the head-block be adjusted somewhat to the rear end thereof, as shown in Fig. 5. To secure the head-block on the shank of the dead-bolt, a dove-tail connection may be made to prevent lateral separation of the parts, while suitable set screws 4 may be employed to lock the head at the desired position of adjustment.

4^c is a scalp piece which may be applied to the head-block of the dead-bolt to give the proper finish thereto after the parts have been adjusted to the desired length so that no unsightly seam, or rough end, will show

beyond the face-plate when the parts are ready for use.

The stop-work device is also adjustable as to length, and in this particular instance, the form of stop-work employed comprises a swinging lever, made up of two parts 11—11[a], one part being threaded into the other. This lever is pivoted at 12 in the lock-case, its inner end being arranged to engage in a notch in the roll-back hub 5 when the outer end of said stop-work is in one position, said inner end being free of said roll-back hub when the outer end is in another position. The outer end of said lever projects through a horizontally disposed slot in the face-plate 2, the rear of said slot being covered by a plate 13, which may be formed separately from, or integrally with the stop-work lever.

14 is a friction-latch nose operating against a spring 15, or other suitable device, the function of which is merely to hold the lever in its dogging or non-dogging position.

Obviously the above details may be modified in a variety of ways without departing from the spirit or scope of this invention, my main object being to provide in a lock of the "mortise" type an adjustment whereby varying "back sets" may be obtained as required. By hinging the face-plate to the lock-case, it is obvious that said face-plate may be adapted to a door having a square edge or a beveled edge, it being immaterial whether the bevel is right or left hand, whereby, in this respect also, the lock is made universal.

What I claim is:

1. In a mortise lock, a lock-case, bolt actuating mechanism carried therein, a face-plate adjacent to one edge of said lock-case and adapted to be spaced apart therefrom, adjustable means of connection between said lock-case and face-plate, said means including a hinge connection between said adjusting mechanism and said face-plate.

2. In a mortise lock, a lock-case, a face-plate adjustably connected to said lock-case at one edge thereof, and means for adjusting said adjusting mechanism accessible at the opposite edge of said case.

3. In a mortise lock, a lock-case, a face-plate adjustably connected to said lock-case at one edge thereof, means for adjusting said adjusting mechanism accessible at the opposite edge of said case, and including a screw.

4. In a mortise lock, a lock case, a face plate adjustably connected to said lock case at one edge thereof, and means accessible at the opposite edge of said case for varying the distance of said face plate from said case.

5. In a mortise lock, a lock case, a face plate, means extending through said lock case from edge to edge and projecting beyond one edge thereof and carrying said face plate, and a latch bolt carried by the face plate and projecting into the lock case, said latch bolt being adjustable.

6. In a mortise lock, a lock case, a face plate, means extending through said lock case from edge to edge and projecting beyond one edge thereof and carrying said face plate, a latch bolt carried by the face plate and projecting into the lock case, said latch bolt being adjustable, and a dead bolt also carried by said face plate and extending into said lock case, the same also being adjustable.

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