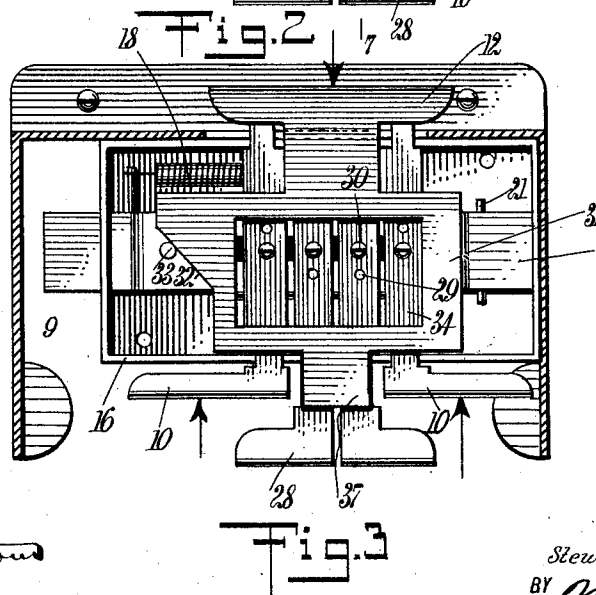
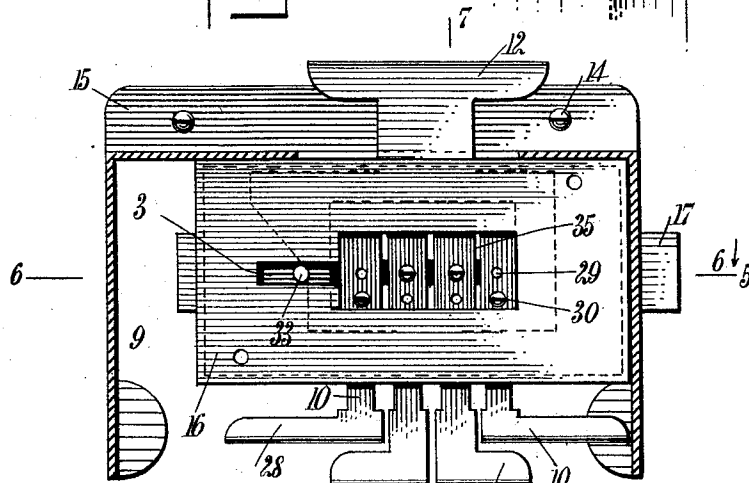
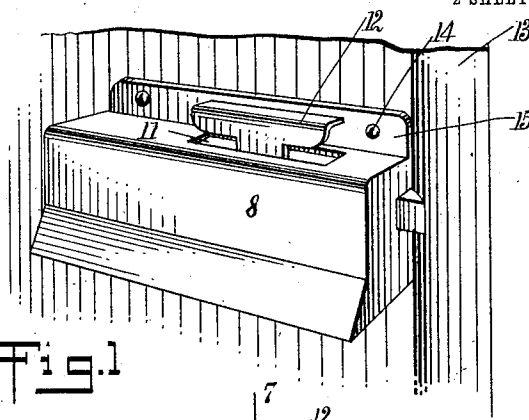


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S. BROWN.
KEYLESS LOCK.
APPLICATION FILED DEC. 20, 1911.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 1.



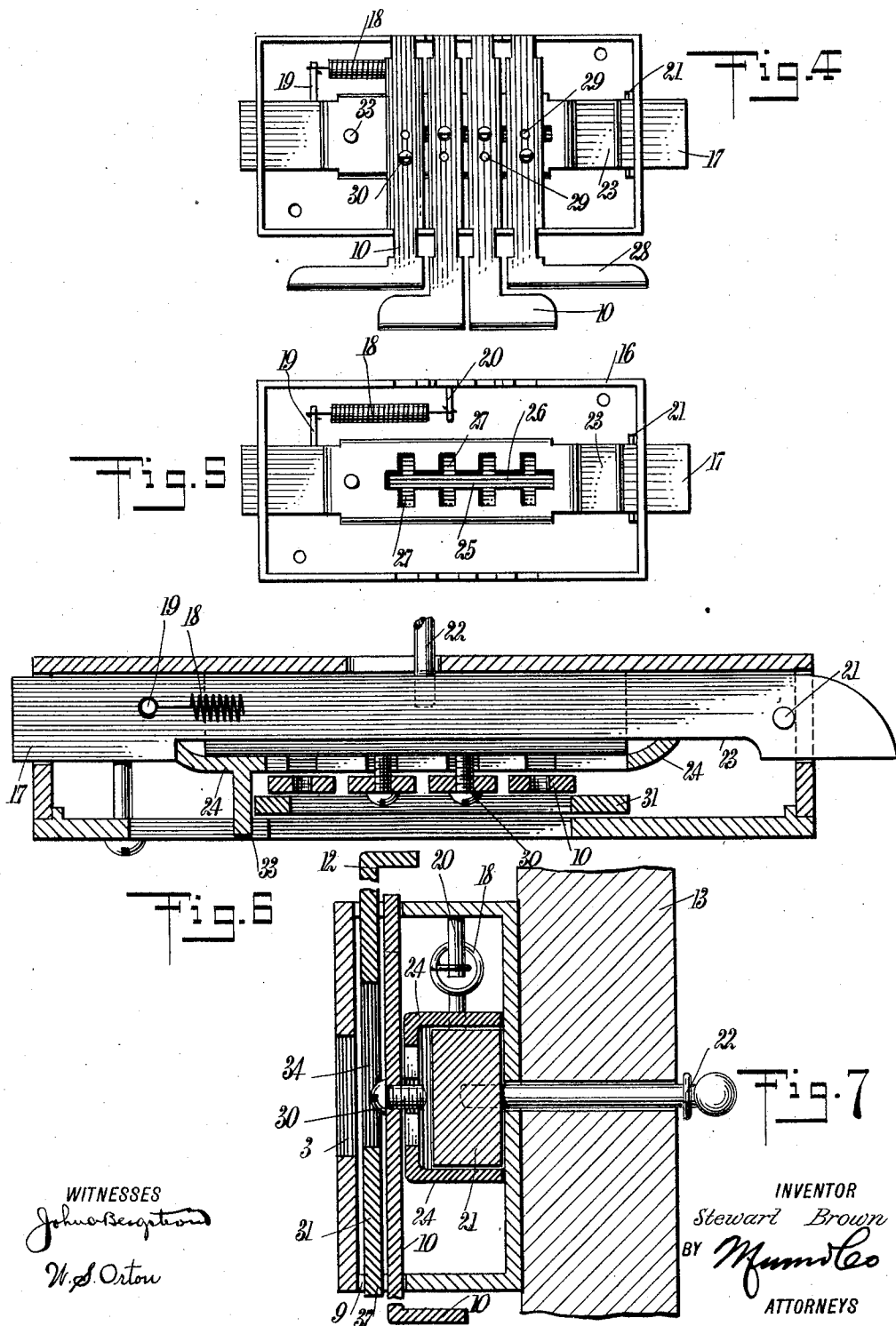
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UNITED STATES PATENT OFFICE.

STEWART BROWN, OF CHICAGO, ILLINOIS.

KEYLESS LOCK.

1,050,719.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed December 20, 1911. Serial No. 666,956.

To all whom it may concern:

Be it known that I, STEWART BROWN, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Keyless Lock, of which the following is a full, clear, and exact description.

My invention relates to a keyless lock, and is particularly applicable to a door or the gate of an office railing, where it is desirable to have the same locked, but, at the same time, to afford a means for readily opening the door or gate without the necessity of stopping to insert a key or to work a combination.

While this invention will be described with reference to a door lock, it will be understood, of course, that it may be applied to actuate electric switches or at other similar places where it is desired that only authorized persons knowing the particular combination can actuate the mechanism.

The lock as described, comprises a series of finger keys and a hand key, so arranged that by grasping the lock in a certain way, will permit the actuation of the bolt, but grasping the lock in any other way than the combination for which it is set, will lock the bolt and prevent its actuation.

A further object of my invention is to provide in a device of this character, means for changing the combination.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a perspective view showing a preferred embodiment of my invention applied to a door; Fig. 2 is a face view of the lock with the outer casing removed; Fig. 3 is a view similar to Fig. 2, with the top of the inner casing removed; Fig. 4 is a face view of the inner casing with its cover and bolt-actuating key removed to show the finger keys; Fig. 5 is a view similar to Fig. 4, with the finger keys removed to show the bolt; Fig. 6 is a longitudinal transverse sectional view taken on the line 6—6 of Fig. 2, looking in the direction of the arrow, and Fig. 7 is a transverse sectional view taken on the line 7—7 of Fig. 2.

Described more in detail, the lock com-

prises an outer casing 8 of a general rectangular construction, having an open bottom 9, through which project the finger keys 10 hereinafter described in detail, and through an aperture 11 in the top edge thereof projects the bolt-actuating key 12 also hereinafter described. The lock is fastened to the door or support 13 by any suitable means, as, for instance, screws 14 passing through the upturned flanges 15. Disposed within the casing 8 and fastened thereto in any suitable manner, is an inner casing 16 in the form of a rectangular box, which box has projecting through one end thereof, a bolt 17, held in projected position by means of a coil spring 18, one end of which is attached to the pin 19 projecting from the bolt 17 and the other end of which spring is attached to a pin 20 depending from the casing 16. The fully projected position of the bolt is limited by suitable pins 21. This bolt may be actuated by a knob 22 extending through the door or support 13, when it is desired to use the device as an ordinary lock, without making use of the combination.

The front face of the bolt has a recess therein, positioned within which recess and slidably disposed relative to the bolt is an elongated plate 24, U-shaped in cross section, as shown more particularly in Fig. 7. This U-shaped plate incloses the bolt on three sides and has a slot 25 extending through the face thereof. This slot comprises a longitudinal member 26 and a series of transverse members 27 extending at right angles to the length of the member 26 and on opposite sides of the same. Resting on the face of the plate 24 and slidable transversely of the same, are the finger keys 10, in this case shown to be four in number, corresponding to and disposed in alinement with the transverse members 27 of the recessed plate 24. The lower ends of the keys 10 projecting through the opening 9 are preferably broadened to form feet 28, so that the keys may be readily engaged by the fingers of the operator.

Adjacent the longitudinal member 26 of the slot 25, the keys 10 have a pair of spaced-apart apertures 29 extending there-through, and spaced-apart a distance equal to or slightly in excess of the depth of that

portion of the transverse member 27, to one side of the longitudinal member 26. Removable screws 30 are inserted in one or the other of these apertures, depending upon the combination at which it is desired to set the device. As shown in Figs. 2 and 4, the combination is so set that the outside fingers must be raised, as shown by the lower arrows in Fig. 3, in order to bring the inner projecting end of each of the screws 30 into the longitudinal slot 26. It is to be understood that all of the screws 30 must be in the longitudinal part of the slot before the bolt is in position to be actuated. Thus, when the correct keys have been raised to place all of the pins in alinement, as shown in Fig. 3, pressure is brought to bear on the top of the hand plate or bolt-actuating key 12, which key forms the upper part of the bolt-actuating plate 31, the rear end of the key being beveled, as shown at 32, which beveled end is permanently in engagement with a pin 33 projecting forwardly from the plate 24.

Referring more particularly to Fig. 3, it will be noted that depressing the plate 31 in the direction shown by the upper arrow in said figure, the bolt will be drawn to the left against the action of the spring 18. Releasing the pressure on the outside keys 10 and hand key 12, the bolt will then respond to the action of the spring 18 and will be projected forward and the outside keys 10 will fall by gravity into the lower portion of the transverse slots 27. In order to obtain access to the screws 30, the plate 31 has a centrally-disposed aperture 34 and the covering of the inner casing has an opening 35 superimposed on the aperture 34, which opening 35 has an extension 36 in line with the bolt, in which extension 36 is disposed the outer end of the pin 33, to assist in maintaining the plate 24 in line with the bolt. Preferably, the lower end of the plate 31 has an extension 37 projecting through the lower side of the casing 16, in order to maintain the plate transversely of the casing when said plate is actuated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A bolt having an apertured plate slidably mounted thereon, said apertured plate having a slot therein parallel with the length of said bolt, said slot having extensions transversely of the same, a series of finger keys disposed on said plate, one key disposed over each of said transverse extensions from the slot, an extension from each of said keys movable in said slot, means for actuating said bolt when said extensions on all of the keys are disposed in said longitudinal slot, said actuating means permitting movement of said bolt independently

thereof, and means directly attached to said bolt to actuate the same.

2. In a lock, a bolt having a recessed face, an apertured plate disposed on said bolt and within said recess, said plate constituting part of a bolt-locking mechanism, and means for actuating said bolt independently of said plate.

3. A lock having a bolt and a series of bolt-unlocking finger keys projecting from the under side thereof and a hand-engaging bolt-actuating key projecting from the upper side thereof, whereby actuating certain of said finger keys and said hand key simultaneously, will retract said bolt.

4. In a lock having a bolt, a series of bolt-unlocking fingers depending therefrom, means carried by said fingers whereby the raising of certain of said fingers will permit the actuation of the bolt, and the raising of certain other of said fingers will lock said bolt, and means carried by said first-mentioned means for changing the same from bolt-locking means to means permitting the actuation of the bolt.

5. In a lock, in combination, a bolt, means directly attached to said bolt to actuate the same, and a slotted member slidably mounted upon said bolt and adapted to permit the actuation of said bolt by said means, and locking fingers in operative engagement with said member, whereby the actuation of said fingers will unlock said bolt.

6. In a lock, in combination, a bolt, means directly attached to said bolt to actuate the same, a slotted member movably mounted on said bolt and adapted to permit the actuation of said bolt by said directly attached means, said slotted member being in operative engagement with said bolt, and locking fingers in operative engagement with said slotted member, whereby the actuation of said fingers and slotted member will retract the bolt.

7. In a lock, a bolt, a plate carried by the bolt and provided with a longitudinal slot having a series of oppositely arranged lateral members, a plurality of finger keys disposed on the said plate over the transverse members of the said slot, each key having a member projecting into said slot, and a sliding hand operated member operatively engaging the plate carried by the bolt for operating the latter.

8. In a lock, a sliding and spring pressed bolt, a member carried by the bolt and slidable therewith, a sliding hand operated member, means for operating the member carried by the bolt from the hand operated member, finger keys, and a connection between the keys and the member carried by the bolt for controlling the movement of the bolt from said keys.

9. In a lock, a spring pressed bolt, a mem-

ber carried by the bolt and provided with a lateral projection, a sliding hand operated member having a beveled end engaging the projection of the member carried by the bolt, finger keys arranged between the said members, and means for controlling the movement of the member carried by the bolt from the keys.

In testimony whereof I have signed my name to this specification in the presence of 10 two subscribing witnesses.

STEWART BROWN.

Witnesses:

DAVID M. STEWART,
ADOLPH FRAISL.

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