H. G. VOIGHT.

PANIC LOCK.

APPLICATION FILED JUNE 1, 1911.

1,025,102.

Patented Apr. 30, 1912.

3 SHEETS—SHEET 1.

Fig. 1.

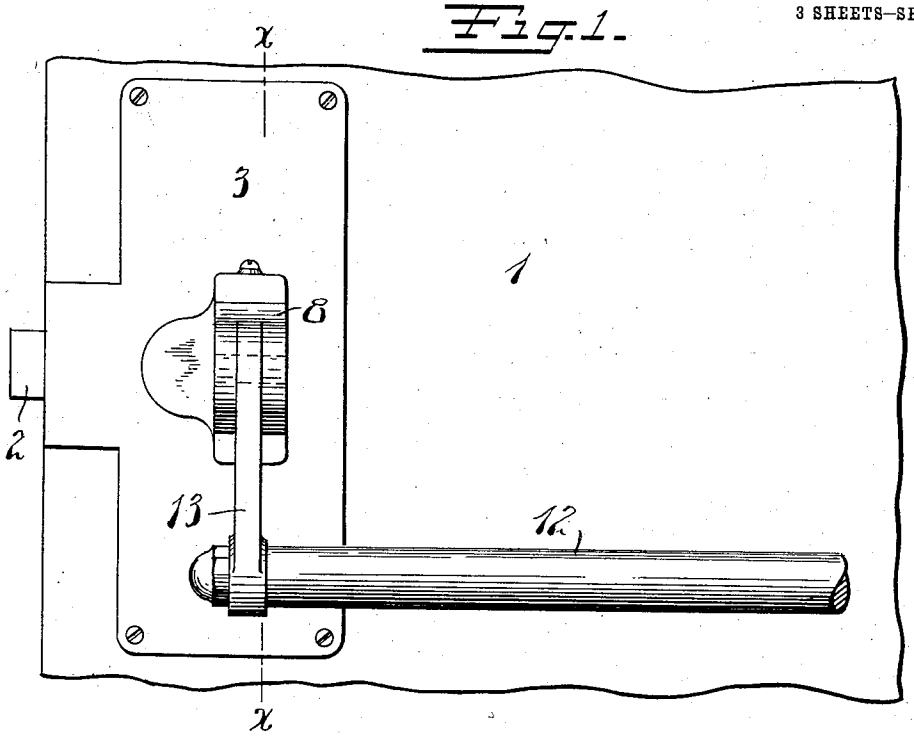


Fig. 4.

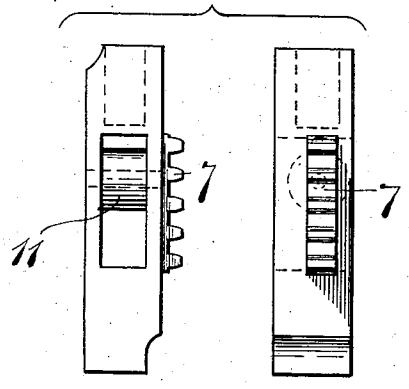
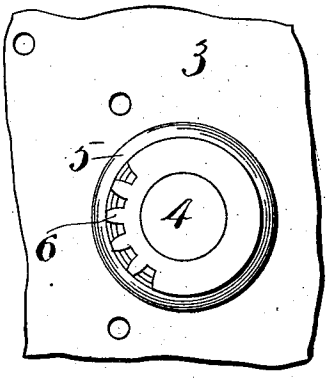


Fig. 5.



Witnesses:

Chas. M. Cary Jr.

Geo. M. Hungerford

Inventor

H. G. VOIGHT

By his Attorneys

Dickerson, Brown & Wheeler.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

H. G. VOIGHT.

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3 SHEETS—SHEET 2.

Fig. 2.

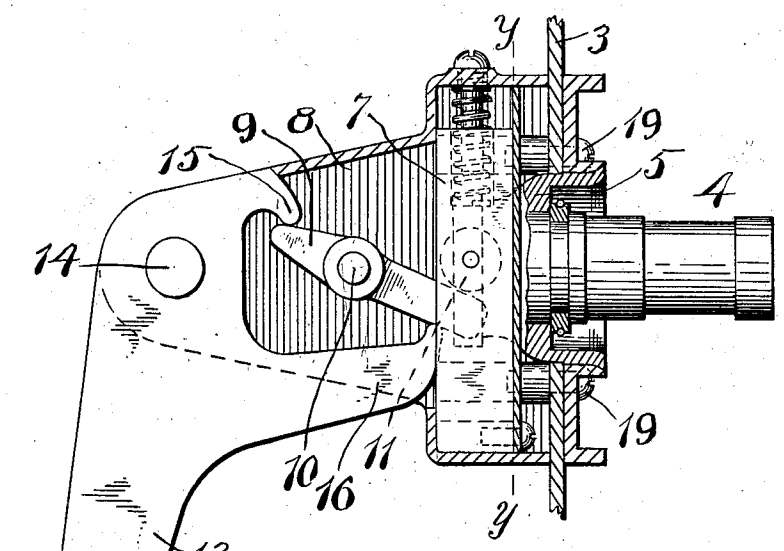
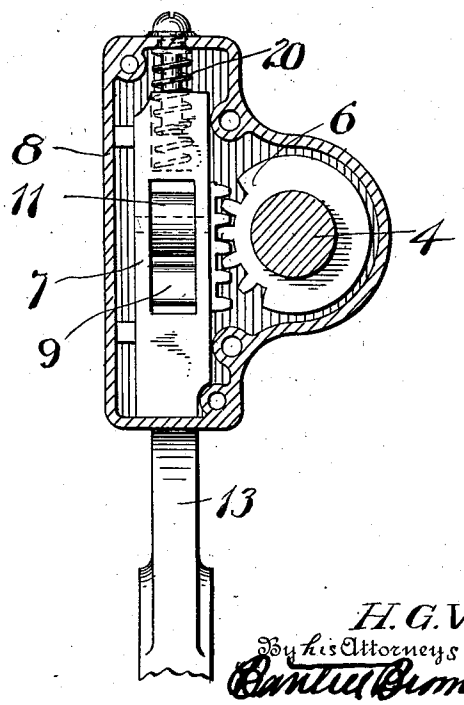


Fig. 3.



Witnesses:
Chas. A. Evans
Leo M. Hungiker.

Inventor
H. G. VOIGHT
By his Attorneys
Bartlett Brownell & Mitchell

H. G. VOIGHT.

PANIC LOCK.

APPLICATION FILED JUNE 1, 1911.

1,025,102. **Patented Apr. 30, 1912.**

3 SHEETS—SHEET 3.

Fig. 6.

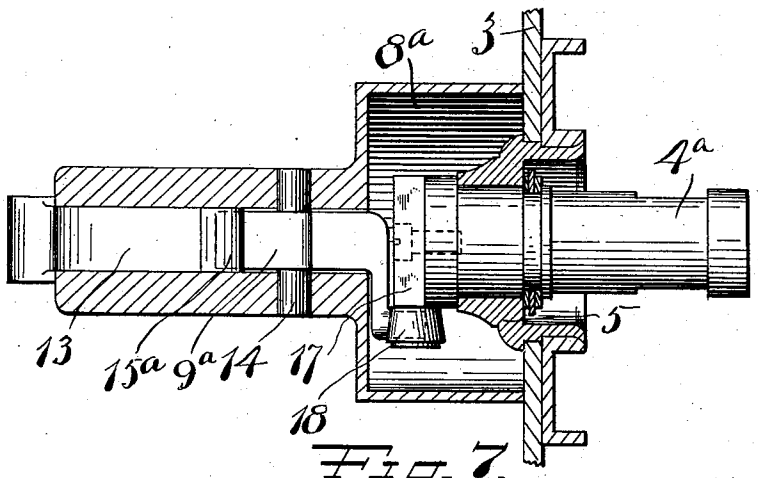


Fig. 7.

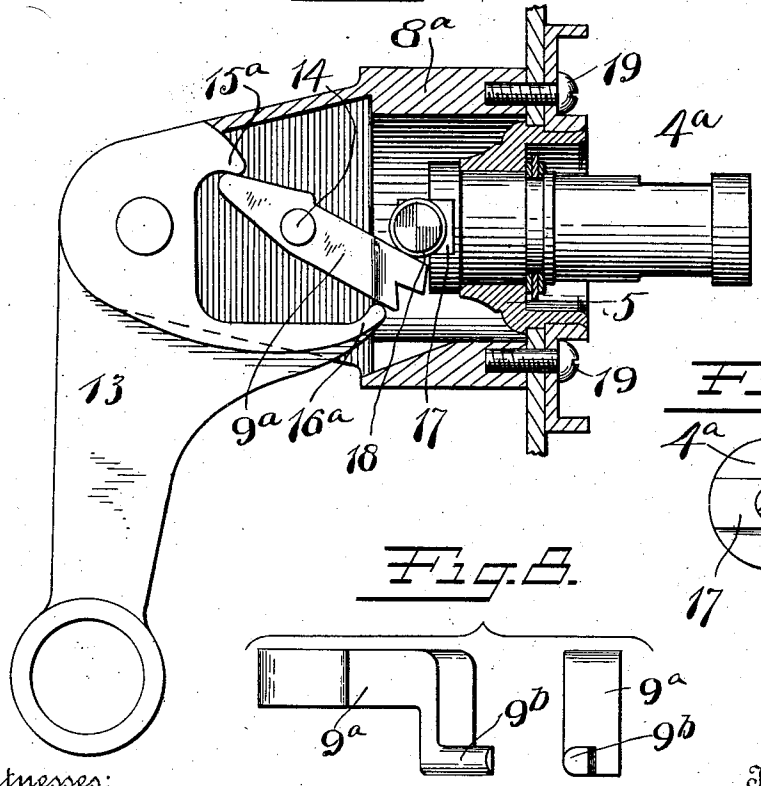


Fig. 9.

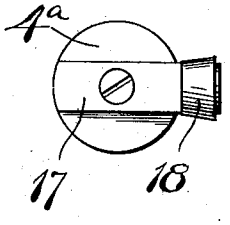


Fig. 8.

Witnesses:
Chas. A. Read
Lee M. Kunzelman

Inventor
H. G. VOIGHT,
By his Attorneys
Barnes Barnes & Thacher

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.

PANIC-LOCK.

1,025,102. Specification of Letters Patent. Patented Apr. 30, 1912.

Application filed June 1, 1911. Serial No. 630,585.

To all whom it may concern:

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

My invention relates to improvements in so-called panic door bolts, the object of the invention being to provide a simple apparatus for application to an ordinary lock or latch, whereby the same may be converted into a "safety" door lock so-called; that is, a door lock whereby, in the event of a panic, pressure toward the inside of the door will be applied to a bar located transversely of the door in such a manner that the latch will be withdrawn, whereby the door will be forced open by the same pressure.

In the accompanying drawings, Figure 1 is a front elevation of a part of a door showing my improvement applied thereto. Fig. 2 is a relatively enlarged vertical sectional view of certain of the parts shown in Fig. 1, (see line *x*—*x*, Fig. 1). Fig. 3 is a vertical section on the plane of the line *y*—*y*, Fig. 2. Fig. 4 illustrates a detached detail. Fig. 5 illustrates another detail. Fig. 6 is a horizontal sectional view illustrating a modification. Fig. 7 is a vertical sectional view illustrating the same modification. Fig. 8 is a detail view of one of the parts shown in Figs. 6 and 7. Fig. 9 is another detail view of one of said parts.

1 represents a part of an outwardly swinging door.

2 represents a latch bolt which, when the door is closed and said bolt is projected, holds said door against opening.

3 represents an escutcheon plate in one form of a well-known lock.

4 represents a spindle, which is suitably connected with the latch bolt 2 so that when said spindle is operated, said latch bolt will be retracted. The particular method of connecting the spindle 4 to the latch bolt 2 is not illustrated since it is not material to the invention and may be any means well understood. In this particular instance, it is sufficient to state that it is an oscillating movement of the spindle 4 which operates the bolt. The spindle 4 is suitably mounted in a bearing 5. Ordinarily this spindle may be operated by means of the ordinary knob (not shown), but it is the object of the present invention to provide a construction which may be readily applied to the ordinary lock to transform the same from the ordinary knob controlled door latch into what is termed a "safety" door latch. To that end, in the present instance, it requires simply the removal of certain parts and the substitution of the apparatus hereinafter described, leaving the lock otherwise in its original form. By this means it is possible to transform many locks now already in use from the ordinary knob controlled type, or non-safety form, into the form of a "safety" latch whereby mere pressure toward the door will serve always to operate the latch retracting mechanism in such a manner as to release the door and to permit it to swing open. With this in mind, attention is now directed to the following parts.

Referring first to the construction shown in Figs. 1 to 5 inclusive, in which a preferred form of construction is illustrated, it will be observed that the outer end of the spindle 4 is provided with a gear 6. 7 is a toothed rack. 8 is a combined housing and mounting for the aforesaid parts. 9 is a lever pivoted at 10 in an outward extension from the frame or housing 8. The inner end of this lever engages the rack 7, for example, through the medium of an anti-friction roller 11. 12 is an operating bar. This bar extends longitudinally across the door and one end is carried by a lever 13 pivoted at 14 to said extension from the housing 8. The lever 13 is suitably connected with the lever 9 so that when the rod 12 is pushed toward the door, it will tilt the lever 9 to move the rack 7 and thereby rotate the gear 6, which in turn rotates the spindle 4 to retract the latch bolt 2. In the particular form shown in Figs. 1 to 5 inclusive, the lever 13 is provided with a short arm 15 bearing on the outer end of the lever 9, and a long arm 16 bearing under the inner end of said lever 9. By this construction it is obvious that a movement of the bar 12 either forward or backward from the position indicated in the drawings will result in the tilting of the lever 9 in a direction to reciprocate the rack 7 and turn the spindle 4 in a direction to withdraw the latch bolt 2. 20 is a spring preferably provided to move the rack in one direction.

In Figs. 6 to 9 inclusive, I have shown a

somewhat modified form in which 13 represents the operating lever as before. 15^a represents the short arm and 16^a represents the long arm thereof. 9^a represents the intermediate lever. The end of this lever 9^a is offset as at 9^b to engage under the end of the arm 17, the latter being fixed diametrically of the spindle 4^a, whereby, when the inner end of the lever 9 is tilted upwardly, it will rock the spindle 4^a and thereby retract the latch bolt 2. 18 is an anti-friction roller preferably carried by the end of the arm 17, said roller being engaged by the extension 9^b of the lever 9^a. In this case, as before, the housing 8^a serves to cover and protect the parts and furnish the proper finish. The housing 8^a is provided with suitable screw threaded passages to enable said housing to be effectively secured to the escutcheon plate 3 by means of screws 19 which may be inserted from the rear side of the escutcheon plate. By this construction a properly finished appearance is afforded to the inner escutcheon plate, and it will be found that in many instances a door lock or latch in which the latch bolt is retracted by a knob may be transformed into a "safety" lock or "panic" door-lock, so-called.

What I claim is:

1. In a door lock of the character described, a latch operating spindle, an escutcheon having a spindle bearing and constituting a mounting for said spindle, suitable operating mechanism and a separate combined support and housing therefor arranged to be detachably secured to said escutcheon to bring said operating mechanism in coöperative relation to said spindle, means for detachably securing said support and housing to said escutcheon, said spindle operating mechanism including a slide, a guide in said housing for said slide, an exposed operating member extending transversely of the door to operate said slide, and means of connection between said slide and exposed operating member.

2. In a door lock of the character described, a lock frame comprising a face plate and an escutcheon plate, a latch bolt projecting through said face plate, a latch operating spindle projecting through said escutcheon plate, a lever arranged to swing to and fro and adapted to operate said spindle when swung in either direction, means for operatively connecting said lever with said spindle, a mounting for said operating lever and said connecting means, and means for detachably securing said mounting to said escutcheon.

3. In a door lock of the character described, a latch, a latch operating spindle, an escutcheon, a housing detachably secured to the front of the escutcheon, a lever carried by said housing, and operative means of connection between the inner end of said lever and the adjacent end of the spindle whereby an oscillation of the lever will impart an oscillation to said spindle, said means including a connection between said lever and the end of said spindle, said connection being in the form of a rack and pinion.

HENRY G. VOIGHT.

Witnesses:
GWENDOLINE A. JACKSON,
M. S. WIARD.