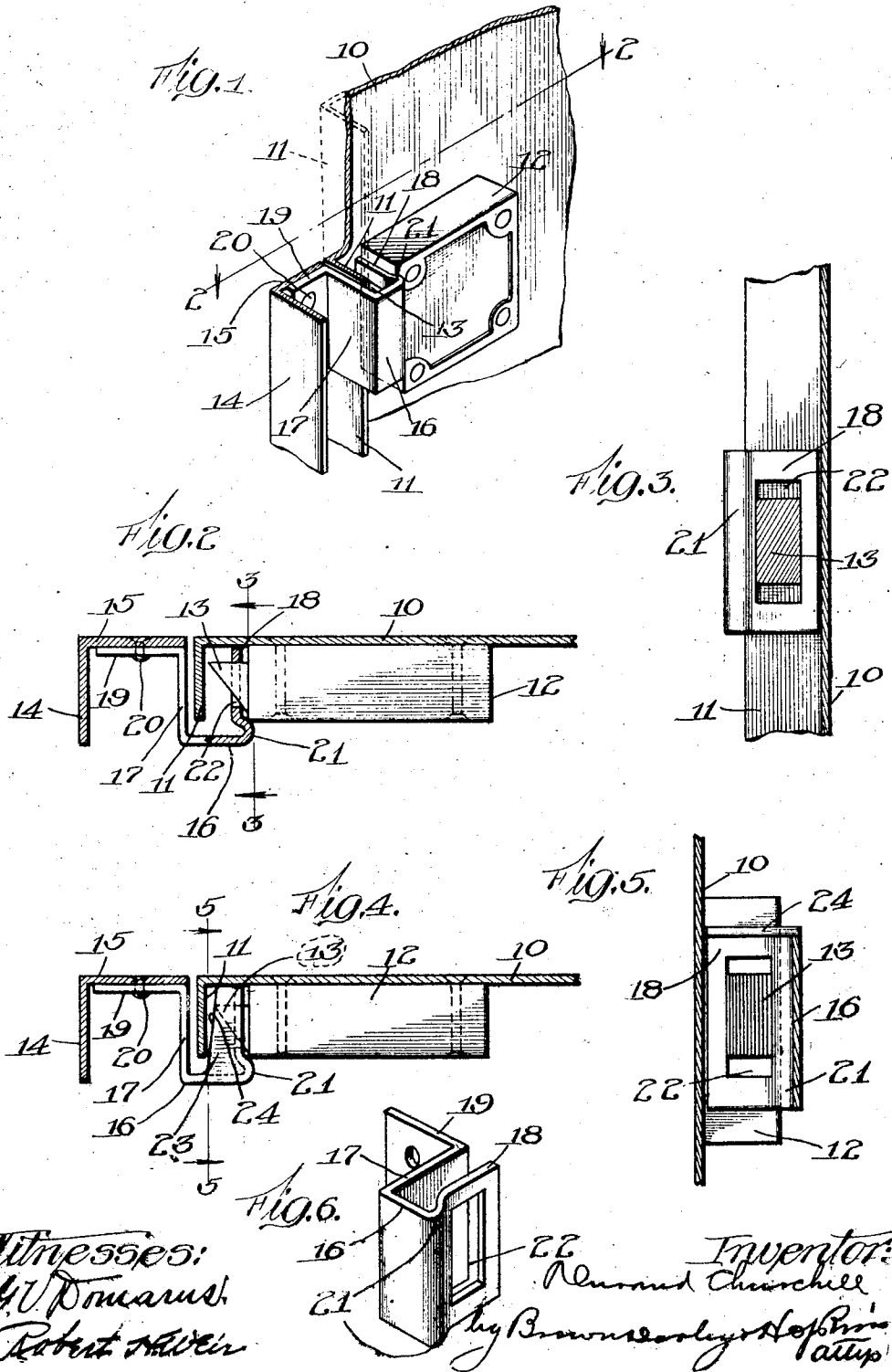


D. CHURCHILL.
 LOCK FOR LOCKER DOORS.
 APPLICATION FILED MAY 18, 1906.

973,001.

Patented Oct. 18, 1910.



UNITED STATES PATENT OFFICE.

DURAND CHURCHILL, OF CHICAGO, ILLINOIS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DURAND CHURCHILL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Locks for Locker-Doors, of which the following is a full, clear, and exact specification.

This invention relates to improvements in locks for locker doors and more particularly to the keeper for the lock, and the object of the same is to construct an improved keeper for locks, which may be applied to doors constructed of thin metal and more particularly though not necessarily doors made of thin material and which will serve as a stop to receive the impact of the door and at the same time prevent the lock from being pried open.

A further object is to provide an improved device of this character which may be applied to a thin metallic door and which will securely hold the door so as to prevent the same from being sprung or forced open.

A further object is to provide an improved device of this character which will be simple and strong in construction, cheap to manufacture, easily applied and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings illustrating an exemplification of the invention, and in which:—

Figure 1 is a perspective view of a portion of a door and casing partly in section with an improved lock applied thereto and constructed in accordance with the principles of this invention. Fig. 2 is a top plan view on line 2—2 of Fig. 1, partly in section. Fig. 3 is a sectional view on line 3—3 of Fig. 2. Fig. 4 is a top plan view partly in section of a modified form of this invention. Fig. 5 is a sectional view on line 5—5 of Fig. 4. Fig. 6 is a detail perspective view of the improved stop and keeper.

Referring more particularly to the drawing, in which the same reference numerals designate similar parts, the numeral 10, designates a portion of the front of the door proper, which is preferably formed of thin

sheet metal and provided with a flange 11 at its forward edge, formed by turning or bending the edge of the metal in any suitable manner. The door so formed may be mounted in any desired manner for swinging movement, as will be understood. Secured to the inner face of the door is a lock 12 having a spring bolt or latch 13 and is located adjacent the flanged or bent portion 11, so as to form a space between the flange 11 and the front end of the lock 12, and in such a position that when the latch or bolt 13 is in its operative position the end thereof will stand in close proximity to the flange 11. The edge of the casing constituting the door opening, may be constructed in any desirable manner and of any suitable material, such as metallic post 14 provided with a flanged portion 15 of suitable width. Secured to the flanged portion is a stop or keeper designated generally by the reference numeral 16 which is of any desired height, preferably of a height substantially equal to or a little higher than the width of the lock 12. This stop or keeper may be constructed in any desired manner but preferably of a piece of sheet metal bent or pressed into a substantially U shape with the arm 17 longer than the other arm 18. The portion 19 of the long arm beyond the extremity of the short arm 18 is bent or banded back and away from the short arm, at substantially right angles thereto to form a flange or projecting portion which is adapted to rest against the face of flanged portion 15 of the upright or the edge of the casing 14 and is secured thereto in any suitable manner, such as by bolts or rivets 20, so that the space formed by the walls 17—18 will be in a position with respect to the edge of the flange 15 as to receive the flange 11 of the door when the latter is closed. The space being of a suitable width as to house the flange 11.

The wall 18 of the keeper 16 is bent or offset as at 21, to form a projection or shoulder at the point of the junction of the arm and the base of the U shaped portion, and is so located with respect to the lock 12, that when the door is closed the said shoulder or projection 21 will form a covering for the space between the wall 18 of the keeper and the lock 12. When the lock has assumed this position the wall 18 will stand between the flange 11 of the door 10 and the front of the lock 12, and the bolt or latch 13 thereof will enter a slot or aperture 22 in the wall

18. This keeper or stop 16 is so constructed and arranged that when the door 10 is closed the arm or wall 17 thereof will stand in close proximity to the outer face of the flange 11 of the door, and the arm or wall 18, in close proximity to the front of the lock 12. The portion between the extremity of arm or wall 18 and the shoulder 21 thereon, being substantially equal to the width of the lock, whereby the parts may fit closely to prevent rattling or loose connections. With this arrangement it will be seen that the portion of the door adjacent the lock will be protected and firmly braced so as to resist all strain due to any prying action of a tool or instrument which may be inserted between the door and the casing adjacent the lock, and owing to the protecting shoulder 21 a wire or thin flexible instrument cannot be inserted between the keeper wall or arm 18 and the front of the lock 12 and into engagement with the bolt or latch 13, to press the same back to unlock the door. Furthermore, in case either the door or frame becomes warped (if of wooden construction) or bent, this stop and keeper will tend to draw the parts together and straighten the same.

In order to provide an additional means to prevent the insertion of a wire or flexible instrument between the flange 11 of the door 10 and the wall or arm 18 of the stop or keeper, a flange or wing 23 may be provided, and is so bent as to rest upon the top of the wall or arm 18 as shown in Fig. 4, and the front side or edge thereof may be beveled or inclined as at 24 to permit the flange 11 of the door to enter or be withdrawn from the keeper or stop when the door is closed or open, as will be understood. This flange or wing as will be seen, serves as a cap or cover for the space between the wall 18 of the keeper and the flange 11 of the door when the latter is closed.

It is to be understood that it is not desired to be limited to the exact details of construction or the arrangement of the several parts as numerous changes may be made therein without departing from the spirit of the invention.

What is claimed as new is:—

1. In combination, a door frame, a door opening outwardly on said frame, a laterally projecting flange on the edge of the door extending lengthwise of the axis of the door, a stop on the frame extending across the edge of the door and adapted to receive the flange, and a lock on the door adapted to engage the stop.

2. In combination, a frame, a door, a flange on the door extending lengthwise of the axis on the door and projecting laterally beyond the face of the door, a stop on the frame projecting beyond the flange and across the edge of the door when the door is

closed, and interengaging means on the door and the stop for locking the door.

3. In combination, a frame, a door, a laterally projecting flange on the door extending beyond the face thereof, a stop on the frame adapted to project beyond the edge of the door and across the flange and disposed in close proximity to the door when the latter is closed, and means carried by the door and adapted to engage only the adjacent portion of the stop for locking the door.

4. In combination, a frame, a door, a laterally projecting flange on the door extending beyond the face thereof, a stop secured to the frame and projecting beyond the edge of the door and adapted to receive the flange and means on the door removably engaging the stop beyond the flange for locking the door.

5. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, and a substantially U shaped member on the frame arranged to receive the flange, one wall of the member being adapted to enter the space between the flange and the lock and be engaged by the latter when the door is closed.

6. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member secured to the frame, and arranged to receive the flange, one wall of the member being adapted to enter the space between the flange and the lock, said wall being provided with a slot adapted to receive the bolt of the lock when the door is closed for locking the same.

7. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, and a substantially U shaped member secured to the frame, and adapted to receive the flange, said flange standing in close proximity to one of the walls of the member, the other wall being adapted to stand between the flange and the lock, in close proximity to the latter and be engaged thereby when the door is closed.

8. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member secured to the frame, and adapted to receive the flange, said flange standing in close proximity to one of the walls of the member, the other wall being adapted to stand between the flange and the lock, in close proximity to the latter and be engaged thereby when the door is closed, and a shoulder on said member adjacent the lock for covering the space between said member and the lock.

9. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, and a substantially U

shaped member secured to the frame and adapted to receive the flange, said flange being adapted to stand in close proximity to one of the walls of the member, the other wall being adapted to stand between the flange and the lock, in close proximity to the latter and to be engaged thereby when the door is closed, the latter said wall being shaped adjacent the lock to cover the space between the lock and the adjacent wall of the member.

10. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member, secured to the frame, and adapted to receive the flange of the door, one wall of the member being disposed in close proximity to the flange of the door when the latter is closed, the other wall being adapted to enter the space between the flange and the lock and stand in close proximity to the latter, and having a slot adapted to receive the bolt of the lock, and a shoulder formed at the junction of the last said wall and the base of the member, and adapted to cover the space between the lock and the adjacent wall.

11. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member projecting from the inner face of the frame and adapted to receive the flange, one wall of the member being adapted to stand between the flange and the lock in close proximity to and engaged by the latter when the door is closed, and means for preventing the insertion of an instrument between the flange on the door and the last said wall.

12. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member secured to the inner face of the frame and adapted to receive the flange, one

wall of the member being adapted to stand between the flange and the lock in close proximity to and engaged by the latter when the door is closed, and a flange on the member, adapted to cover the space between the last said wall and the flange on the door to prevent the insertion of an instrument therebetween.

13. In combination, a frame, a door, a flange on the door, a lock on the door spaced from the flange, a substantially U shaped member secured to the frame and adapted to receive the flange, one wall of the member being adapted to stand between the flange and the lock in close proximity to and engaged by the latter when the door is closed, and a flange on the member, adapted to cover the space between the last said wall and the flange on the door to prevent the insertion of an instrument therebetween, one edge of said flange being beveled or inclined to permit the movement of the door.

14. In a locker, the combination with a sheet-metal frame, of a sheet-metal door having one edge bent at right angles to provide an inwardly projecting flange, a lock secured to the inner face of said door and having a latch bolt with its beveled face inwardly disposed, and a substantially U-shaped sheet-metal member provided with a flange projecting laterally from one leg of the U whereby said member is secured to the inner face of the locker with the flange on said door projecting between the legs of the U, the other leg of said U being provided with a slot for the reception of the latch bolt.

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

DURAND CHURCHILL.

Witnesses:

FRANK T. BROWN,
F. A. HOPKINS.