W. HAMMANN.

DOOR FASTENER.

APPLICATION FILED APR. 22, 1920.

1,438,233. Patented Dec. 12, 1922.

Fig. 1.

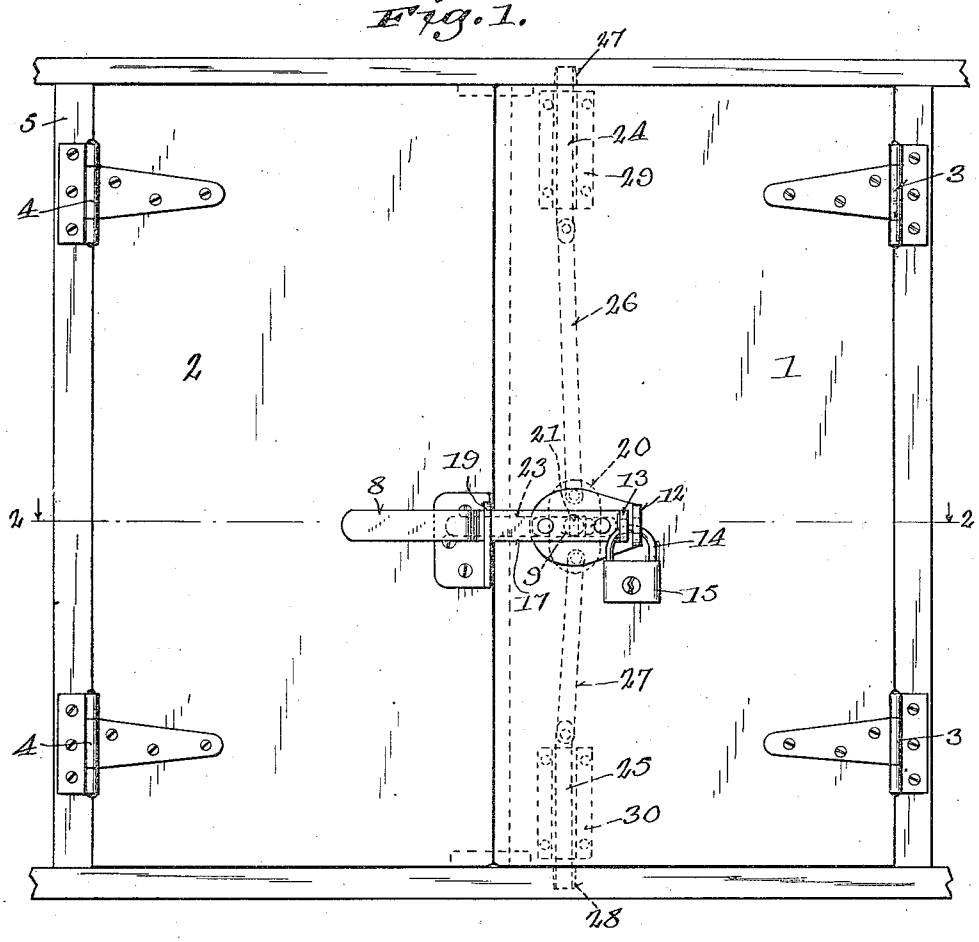


Fig. 2.

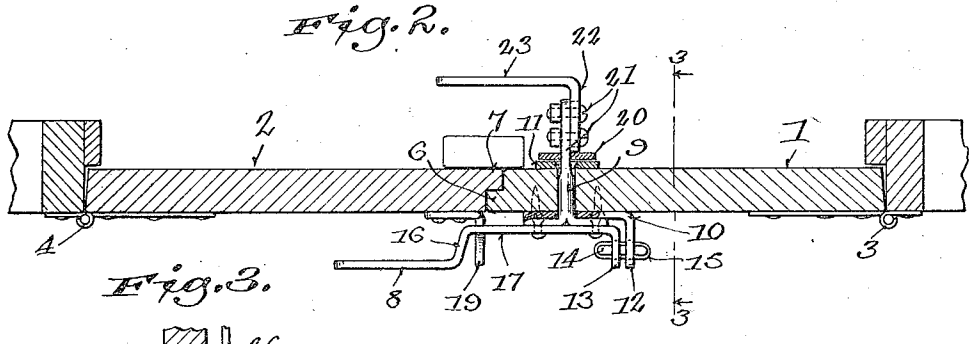
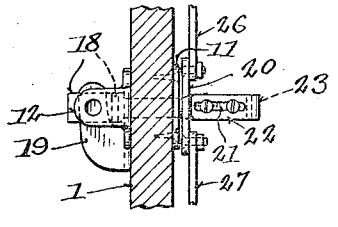


Fig. 3.



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Patented Dec. 12, 1922. 1,438,233

UNITED STATES PATENT OFFICE.

WILLIAM HAMMANN, OF MILWAUKEE, WISCONSIN.

DOOR FASTENER.

Application filed April 22, 1920. Serial No. 375,744.

To all whom it may concern:

Be it known that I, WILLIAM HAMMANN, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Door Fasteners, of which the following is a specification.

This invention relates to door fasteners.

Objects of this invention are to provide a door fastener which will securely hold either a single door, or a double door having overlapping and underlapping parts, against warping; which will lock the underlapping and overlapping door securely independently of variation in alignment due to shrinking, warping, and similar causes; which may be readily manipulated and locked from the outside and yet in which the major portion of the operating mechanism is upon the inside and away from exposure to the weather; and in which aligned ears are provided thru which the hasp of a padlock may be passed, such ears being so arranged that they always occupy in final position the same relative positions independently of shrinking or warping of the door.

In the drawings:

Figure 1 is an elevation from the outside of a double door, for example a garage door.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Doors 1 and 2 are hinged at 3 and 4 to the door jamb 5. The door 1 is hereafter referred to as the overlapping door and is provided with a projecting tongue 6 which overlaps an underlapping tongue provided upon the door 2.

The fastening mechanism is mounted upon the overlapping door 1 and comprises a handle 8 which is pivotally mounted upon the door 1 by being secured to a spindle 9 which passes thru such door 1. The spindle 9 is carried in a bearing plate 10 upon the outside of the door and a bearing plate 11 upon the inside of the door. The bearing plate 10 has a perforated ear 12 bent at right angles to the door and the pivoted lever 8 has a corresponding ear 13 which is also provided with an opening which registers with the opening in the ear 12. When these openings register with each other, the hasp 14 of a padlock 15 may be passed thru both ears and the lock snapped in place, thereby securely locking the mechanism. The handle 8 is bent inwardly at 16 and thereafter extends substantially parallel to the face of the door 1 as indicated at 17. This parallel portion or straight portion 17 engages in a slot 18 formed in a hook member 9 (see Fig. 3) and it will be noted that the outer side of this slot is tapered so that as the handle is forced downwardly, the doors 2 and 1 are drawn into close engagement with each other.

Upon the rear face of the door, a plate 20 is slotted to receive a rectangular portion 21 of the spindle 9. This plate 20 may be held in place by the end of a member 22 which is bolted to the member 21, or if desired, the member 22 may be adjustably mounted upon the member 21 and the plate 20 may be secured directly to the member 21. The member 22 has a portion bent at right angles forming a handle 23 upon the inside of the doors.

The plate 20 is joined to upper and lower bolts 24 and 25 by means of connecting links 26 and 27 which are pivotally joined at their respective ends to the member 20 and to the bolts. When the spindle 9 and plate 20 are rotated thru the manipulation of either handle 8 or handle 23, the bolts 24 and 25 are retracted and are withdrawn from the sockets 27 and 28 respectively, the bolts being guided by means of elongated sheaths 29 and 30.

It will thus be seen that when the lock 15 is removed, the handle 8 or the handle 23 may be moved upwardly, thereby rotating the plate 20 and withdrawing the bolts 24 and 25 and also withdrawing the portion 17 from engagement with the hooked portion 19. This releases the doors and they may be thereafter opened.

It is to be noted that the major portion of the operating mechanism is positioned upon the inside of the doors and is protected from the weather while the padlock is upon the outside, and one of the operating handles is mounted upon either side. This arrangement readily lends itself to use upon garage doors or other exposed doors where it is customary to lock the doors from the outside. By having the overlapping door provided with a locking mechanism, the underlapping door is securely held thruout its entire extent and cannot warp or bow outwardly. The upper and lower portion of the outside door is securely held against warping by means of the bolts and the upper and lower

corners of the inside door are also held against warping by being clamped between the overlapping tongues 6 of the outside door and the door sill. The central portions of the door are locked together by means of the lever 17 and hook shaped portion 19.

It will also be noted that shrinking of the doors or other changing conditions of a similar nature do not affect the operation of the fastening means. The ears 12 and 13 are always spaced the same distance apart when the door is in fastened condition for the reason that there is a metallic connection between the ear 12 and the spindle 9 thru the medium of the plate 10 and warping or shrinking does not alter the alignment of the openings in the ears 12 and 13. There is sufficient room allowed along the member 17 for engagement with the hook 19 to take care of any shrinking or changing that the doors might be subjected to.

I claim:

1. The combination of a door having an overlapping portion and an underlapping portion, of a fastener for securing said portions together and to a door sill, said fastener comprising an operating member upon the outside of said door, a spindle extending thru one of the portions of said door, upper and lower bolts positioned upon the inner side of said door, and operated from said spindle for locking said overlapping doors to the door sill, and an external member carried by said spindle for locking said overlapping and underlapping portions together at a point between their respective ends.

2. A fastener for a pair of doors, comprising a hook shaped member adapted to be secured to one of said doors, a plate adapted to be secured to the other of said doors, said plate having a perforated ear extending outwardly from a portion thereof, and a member pivotally mounted in said plate and adapted to engage said hook, said member being provided with an outwardly projecting ear, said last mentioned ear having a perforation adapted to align with the perforation in said first mentioned ear, whereby a locking means may be passed thru said perforations and lock said fastening means in closed position.

3. A fastener for a pair of doors comprising a hook shaped member adapted to be secured to one of said doors, a metallic plate adapted to be secured to the other of said doors, said plate having a perforated ear extending outwardly from a portion thereof, and a member pivotally mounted in said plate and adapted to engage said hook, said member being provided with an outwardly projecting ear, said last mentioned ear having a perforation adapted to align with the perforation in said first mentioned ear, whereby a locking means may be passed thru said perforations and lock said fastening means in closed position.

4. In combination with a double door having an overlapping and an underlapping door, a fastening means comprising a hook shaped member secured upon said underlapping door at a point intermediate its ends, a spindle passing through said overlapping door a lever attached to one end of said spindle and adapted to engage said hook shaped portion, a member attached to the other end of said spindle upon the other side of said door from that upon which said lever is positioned, said member being rigidly fastened to said spindle, and a pair of bolts carried upon the same side of the door as said member and operatively connected with said member, whereby when said lever is in engagement with said hook shaped portion, said bolts will engage sockets within a door sill and cap.

5. In combination with a double door having a hingedly mounted overlapping member and a hingedly mounted underlapping member, a fastening means comprising a spindle passing through said overlapping member, a handle carried by the outer end of said spindle and having a projecting portion provided with a perforated ear, a plate mounted upon said overlapping member and having an aperture through which said spindle passes, a perforated ear formed integrally with said plate and adapted to have its perforation alined with the perforation of the first mentioned ear when said fastening means is in locking position, a second plate positioned upon the inner side of said door and carried by said spindle, a pair of links pivoted to said last mentioned plate, bolts carried adjacent the upper and lower edges of said overlapping member and connected to said links, a plate having a hook shaped portion secured upon the outer side of said underlapping member and adapted to cooperate with the external handle to latch said doors together at a point intermediate their ends, and a lock having a portion adapted to be passed through the perforations in said ears when said perforations are in alinement to thereby lock said fastening means in its closed or locking position of adjustment.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM HAMMANN.

Witnesses:

A. R. WOOLFOLK, Jr.,

O. C. WEBER.