No. 718,101. PATENTED JAN. 13, 1903.

W. H. H. DECKER.

LATCH.

APPLICATION FILED AUG. 26, 1902.

NO MODEL.

Fig. 1.

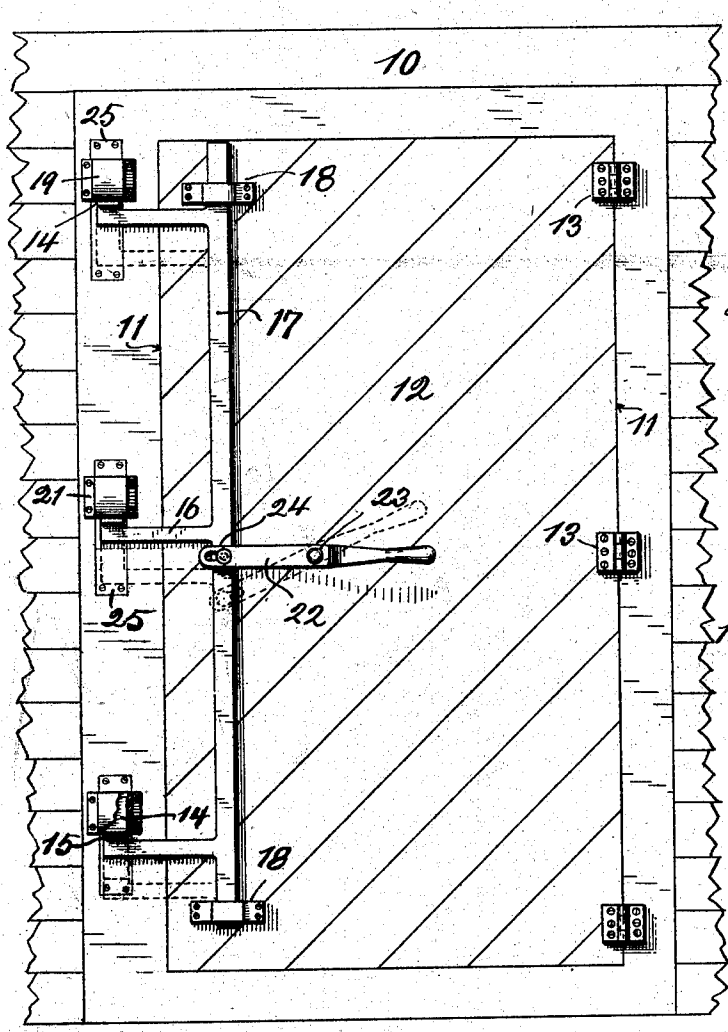


Fig. 3.

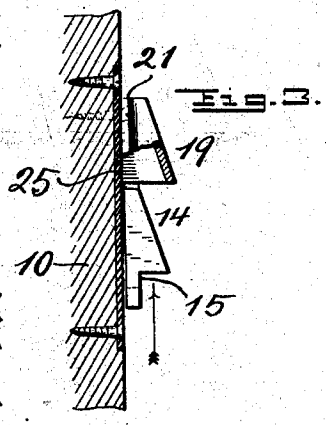


Fig. 4.

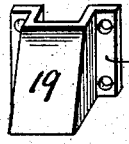


Fig. 5.

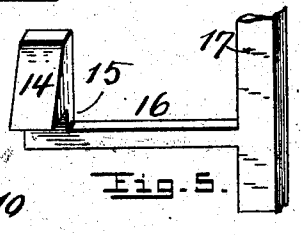
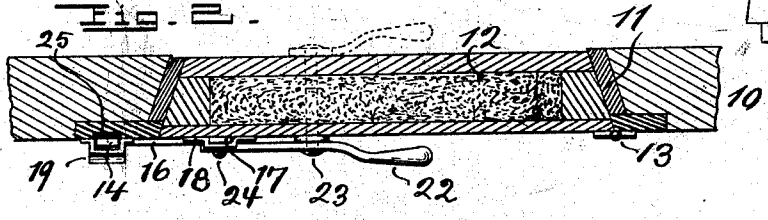


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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LATCH.

SPECIFICATION forming part of Letters Patent No. 718,101, dated January 13, 1903.

Application filed August 26, 1902. Serial No. 121,043. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. DECKER, a citizen of the United States, residing in the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Fastening Device; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form also a part of this specification.

This invention relates to means for holding doors, shutters, &c., in their closed position. The object as attained by the construction shown is to force and hold as tight as possible the door against its seat or jamb, so as to obviate any open spaces or crevices and obtain a tightly-closed joint. For these reasons the invention is particularly well adapted for use in connection with ice-boxes, refrigerators, and cooling-chambers, where a tight closure is particularly essential in order to maintain a certain temperature.

In the following specification, and particularly pointed out in the claims following, is found a full description of the invention, together with its mode of operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in front view a door which may be the door of a refrigerator and provided with the device provided by my invention and whereby it is held tightly in its closed position. Fig. 2 is a horizontal section of the preceding figure. Fig. 3 shows in a sectional side view and at enlarged scale the complementary parts of the locking device disengaged. Figs. 4 and 5 show the same parts in perspective view.

In the drawings, 10 indicates the wall, containing a door-opening provided with the tapering jambs 11, against and into which the door 12 is fitted. This wall and door may be parts of a refrigerator, or they may occur in any other connection. The door is supported on hinges 13. By reason of the tapering jambs, against which the tapering edges of the door abut, a tight closure may be obtained, provided the door is tightly forced into this opening and also tightly held therein. With ordinary means holding the door only at one point between its upper and lower ends such is not possible, especially if the parts do not fit closely or have more or less lost their shape, due to warping, shrinking, or swelling. For these reasons and to overcome these objections I provide fastening devices at more than one point, the number depending on the height and size of the door, and by preference there should be not less than two, one near each end of the door, unless this latter be very small, in which case one would be sufficient. Wedging action is employed, and this action is such as to direction as to force the tapering door tightly against its tapering abutments, and such action may be continued until the absolute engagement of the parts is complete, preventing further action and at which time the door is in closed condition and tightly held therein. To facilitate manipulation, all these wedges are so connected as to be capable of simultaneous operation. For such purpose there is a series of wedges 14, carried at the outer upwardly-turned end 15 of arms 16, projecting laterally from a bar 17, supported in guides 18 in a manner to be capable of moving in a direction parallel to the upright edges of the door, to which latter these guides are attached. Fitted and located so as to be capable of receiving these wedges there are a corresponding number of sockets 19, having flanges 21 whereby they are attached to the outside of wall 10 and close to the edge of the door. It will now be seen that by moving bar 17 in a manner to cause wedges 14 to enter these sockets 19 the door will be forced tightly into its opening and held there, the engagement between the two being effective to an equivalent degree upon the engagement of the door within its jambs. For so moving bar 17 any suitable device, like a lever-handle 22, may be used. It is pivoted at 23 and connected to bar 17 at 24.

When it is desirable to operate this device from either side of the door, the pivot which carries this lever-handle may pass through the door and a similar handle may be attached to the other end of this pivot, as shown in dotted lines in Fig. 2. The position of the parts may be reversed, so that the wedges enter their sockets from above—that is, by a downward movement instead of by one upwardly. Again, guides 18 for bar 17 and ap-

pended wedges might all be attached to wall 10 and the sockets might be carried by the door.

As will be seen from Fig. 4, sockets 19 are open on their rear side, which rests against the wall, the particular part of this latter constituting such rear side and closing the socket thereof. To obviate wear of the wood due to the movement of the wedges on the same, I provide plates 25 back of sockets 19, upon which they may move and against which they may rub. They also insure a smoother movement of the wedges and guide them readily into their sockets. These plates might, however, form also integral parts of sockets 19, in which case the rear sides of these latter would simply be closed instead of being open, as shown.

In the device illustrated the frictional engagement is considered sufficient to hold the parts engaged in their operative position—that is, the wedges within their sockets. If necessary, they may, however, be positively held so by any suitable means—as, for instance, by the use of a pin inserted so as to hold lever-handle 22 or arms 16.

Having described my invention, I claim as new—

1. In a fastening device of the kind described, the combination of a bar, guides whereby it is supported and held in a manner to be free for a reciprocatory rectilinear movement in a direction parallel to the outer or free edge of the door which the device is intended to hold closed, one or more arms projecting at right angles therefrom, a wedge carried at the outer end of each arm and projecting therefrom at right angles, a fixedly-attached socket for each wedge and means to move the bar longitudinally in either direction to cause the wedges to either leave or enter their sockets.

2. In a fastening device of the kind described, the combination of a bar, guides whereby it is supported and held in a manner to be free for a reciprocatory rectilinear movement in a direction parallel to the outer or free edge of the door which the device is intended to hold closed, a series of arms projecting therefrom at right angles and all in the same direction, wedges carried, one each at the outer ends of these arms from which arms they project at right angles, fixedly-attached sockets one for each wedge and fitted to receive the same and means to move the bar longitudinally in either direction to cause all the wedges to simultaneously either leave or enter their sockets.

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

WILLIAM H. H. DECKER.

Witnesses:

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ARTHUR KLINE.