

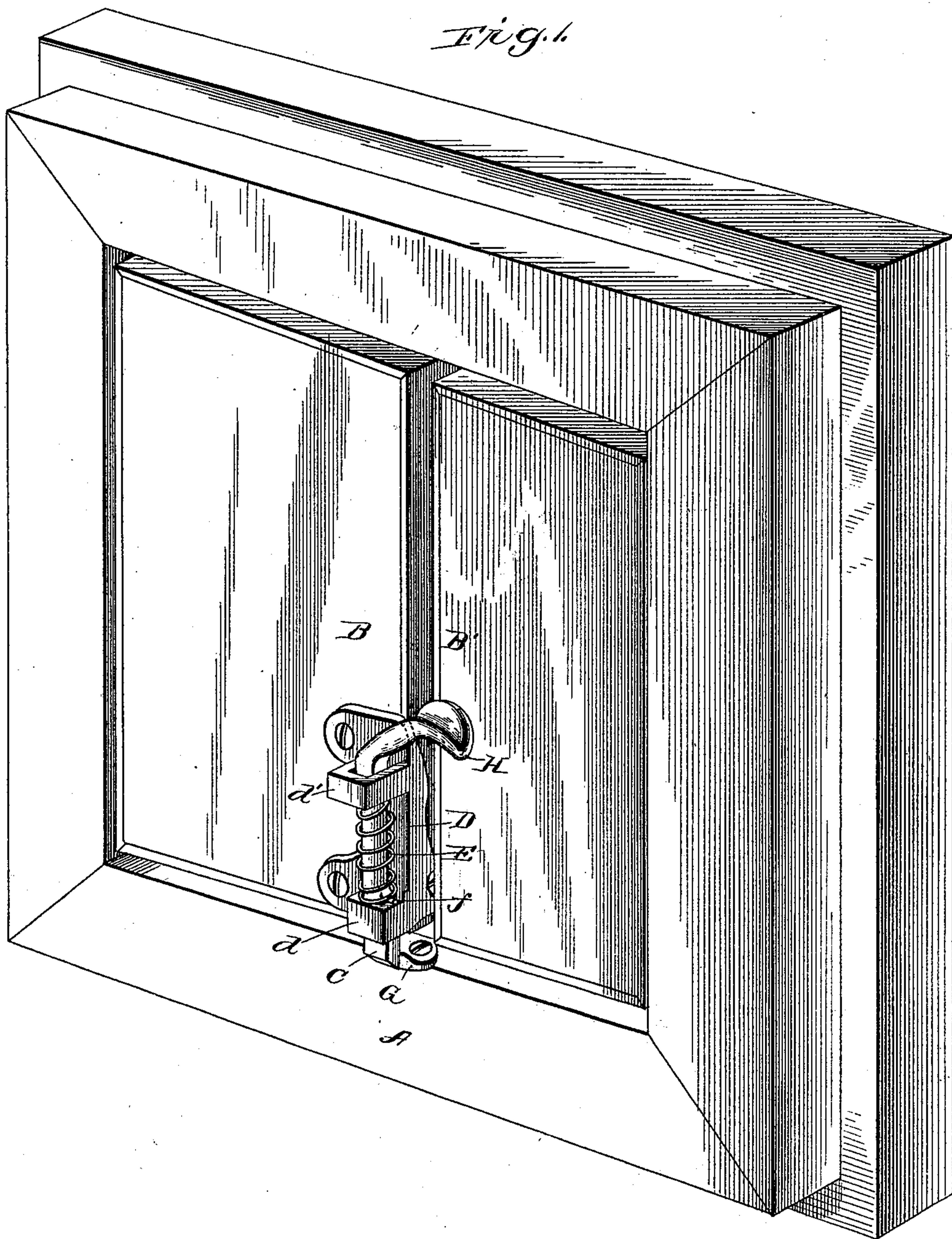
(No Model.)

2 Sheets—Sheet 1.

W. C. SHELDON.
LATCH.

No. 516,229.

Patented Mar. 13, 1894.



Witnesses

J. M. Fowler Jr.
A. J. Stearns

Inventor
Willard C. Sheldon

BY *Clough & Shum*
Attorneys

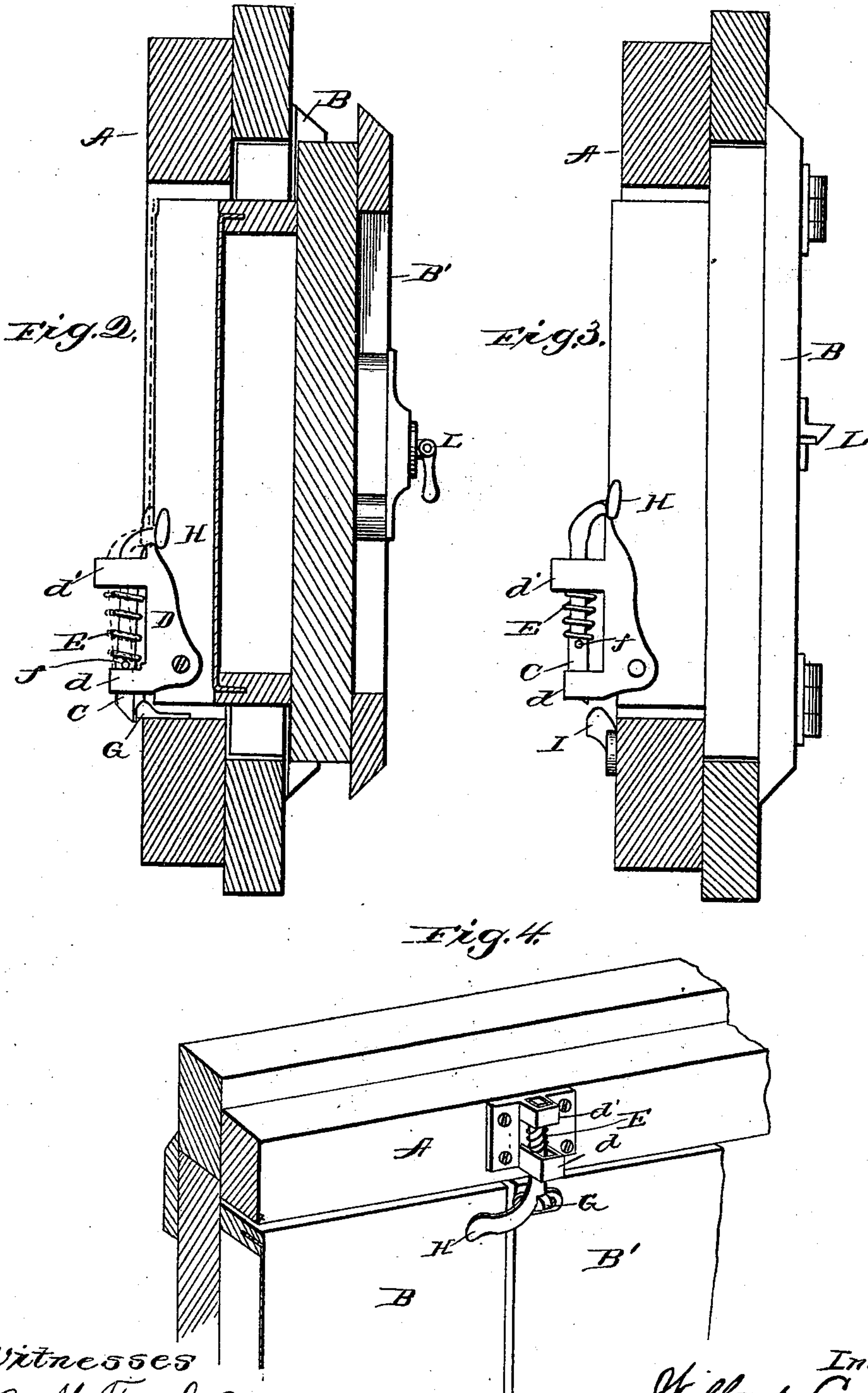
(No Model.)

W. C. SHELDON.
LATCH.

2 Sheets—Sheet 2.

No. 516,229.

Patented Mar. 13, 1894.



Witnesses

J. M. Fowler Jr.
R. Stewart

Inventor

Willard C. Sheldon

By

Chas. F. Church
Attorneys

UNITED STATES PATENT OFFICE.

WILLARD C. SHELDON, OF GRAND HAVEN, MICHIGAN.

LATCH.

SPECIFICATION forming part of Letters Patent No. 516,229, dated March 13, 1894.

Application filed August 21, 1893. Serial No. 483,703. (No model.)

To all whom it may concern:

Be it known that I, WILLARD C. SHELDON, of Grand Haven, in the county of Ottawa and State of Michigan, have invented certain new
5 and useful Improvements in Refrigerator-Doors; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this
10 specification, and to the letters of reference marked thereon.

This invention relates to improvements in devices for forcing double doors in to an air tight joint, the invention being essentially
15 though not exclusively applicable to refrigerators, where the doors must be made to close very tightly in order to prevent any circulation of air from the outside.

The invention consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described and pointed out particularly in the
20 appended claims.

Referring to the accompanying drawings:
25 Figure 1 is a perspective view looking at the inner side of a pair of refrigerator doors having my invention applied thereto. Fig. 2 is a section showing the pivoted or lever latch bolt and its action in drawing the door to an
30 air tight joint. Fig. 3 is a similar view with the bolt raised and showing a strike for a thick door. Fig. 4 shows the latch bolt mounted on the jamb instead of on the door.

Similar letters of reference in the several
35 figures indicate the same parts.

This invention is particularly designed for double doors of refrigerators, although applicable to other doors, and inasmuch as it relates to the means for bringing the doors to
40 a tight closure irrespective of the particular kind of snap catch or lock used on the outside or of the style of the door itself, I have deemed it unnecessary to illustrate or describe these features with particularity, especially
45 as any of the well known forms now on the market and in common use may be used.

Referring now to the drawings, A indicates the frame of the chest, refrigerator or other compartment, having the door opening therein, B B' the doors hinged to the frame and adapted to fit into the opening, the usual step

flanges being provided around the doors and opening to insure tight joints, and on the adjacent edges of the doors to insure a tight joint between them. One of the doors closes
55 with its flanges over the flanges of the other door, necessitating the closing of the doors successively, and on the inner side of the door which closes first, I locate what might be termed a lever latch, which is adapted
60 to engage the frame to hold the door closed, and is provided with a projecting end adapted to be struck or moved by the closing of the second door and thereby force the first door to a tight joint. The outside latch of
65 ordinary construction uniting the two doors, bringing the second door to an air tight closure. C indicates the said lever catch which in the form shown consists of a sliding and pivoted bolt, working in a housing D secured
70 to the inner side of the first door to close. To form the pivotal connection, the bearing d at the bottom is made only slightly larger than the squared end of the bolt so as to permit of a limited swinging movement of
75 the catch bolt toward and from the door, while the top bearing d' is made quite large so as to permit the upper end of the bolt to have a wide range of movement. A coil spring E is mounted on the bolt between the
80 bearings, and at the bottom, rests on a cross pin f for holding the bolt down.

The lower end of the bolt preferably projects below the level of the inner flange of the door so as to engage a strike G secured
85 on the door frame, and at the top, the bolt is provided with a laterally projecting arm H lying in the path of and adapted to be struck by the other door, or a part moved thereby. As shown, the two doors are substantially flat
90 on the inner side, and hence the arm H projects around slightly forward of the rear edge of the door on which it is mounted, in position for the rear side of the other door to strike it, and force the upper end inward.
95

The arm H, in addition to forming the projection adapted to be struck by the second or last door to close, forms the finger or thumb piece for raising the bolt and releasing the door in opening the refrigerator.
100

Should the door be thicker than the frame, a thicker strike, such as I in Fig. 3, may be

employed, thus the same form of latch may be employed for all doors.

In operation, it will be observed, the door carrying the pivoted latch is first closed and the latch rides up and drops in back of the strike holding the door closed with reasonable tightness, then the second or outer door is closed, and in closing, it strikes the upper end of the pivoted latch forcing it back, and acting as a lever of the second order with its fulcrum on the strike, forces the doors in with great power. The catch L of ordinary construction locks the second door to the first and thus both doors are brought in tightly against the frame or jamb.

Obviously, the form of the lever latch may be varied to suit the fancy of the manufacturer or exigencies of the case, it only being essential that the lever latch shall be struck by the last door to close and be operated thereby to draw the other door in to a tight fit. For instance the arrangement may be reversed and the bolt mounted on the jamb or frame instead of on the door as shown in Fig. 4 and two of the lever latches may be employed if desired, one at the top and the other at the bottom to overcome any effect of warping.

Having thus described my invention, what I claim as new is—

1. The combination with the double doors, and the catch or lock as described, of the pivoted lever latch cooperating with the jamb and one of the doors to lock the same without the cooperation of the other door and having a projecting portion lying in the path of the other door, adapted to be moved thereby and to draw the first mentioned door to an air tight joint; substantially as described.

2. The combination with the double doors, of the lever latch mounted on one of the doors and engaging the door jamb to lock the same without the cooperation of the other door, said latch having the projecting portion lying in the path of and adapted to be moved by the

other door, for drawing the first mentioned door in to an air tight joint; substantially as described.

3. The combination with the double doors of the latch movable into and out of engagement with its strike to hold one of the doors closed, said latch being pivoted to swing in a plane substantially at right angles to the plane of the doors, and having a projection extending into the path of the other door, whereby as the latter is closed the latch is moved and the first door brought to an air tight joint; substantially as described.

4. The combination with the double doors, of the spring pressed longitudinally movable latch bolt pivoted to swing in a plane at right angles to its longitudinal axis, said latch bolt cooperating with one door and the jamb, to fasten the door, and a projection lying in the path of the other door, for moving the latch bolt on its pivotal center to draw the door to an air tight joint; substantially as described.

5. The combination with the double doors, of the spring pressed longitudinally movable lever latch bolt pivotally connected to the inner side of one door, and having the extended end projecting into the opening for the other door, and the strike secured on the door jamb; substantially as described.

6. The combination with the double doors, of the housing secured to the inner side of one door and having the small lower bearing and wide upper bearing, the bolt mounted in said bearings to move longitudinally and to pivot in the lower bearing, the extended end on said bolt projecting into the opening for the other door, the spring for holding the bolt down and the strike on the door jamb with which the bolt cooperates; substantially as described.

WILLARD C. SHELDON.

Witnesses:

W. F. HARBECK,

W. C. SHELDON, Jr.