No. 611,743. Patented Oct. 4, 1898.

B. A. STEVENS.

REFRIGERATOR DOOR FASTENING.

(Application filed Feb. 23, 1897. Renewed June 27, 1898.)

(No Model.)

Fig. 1.

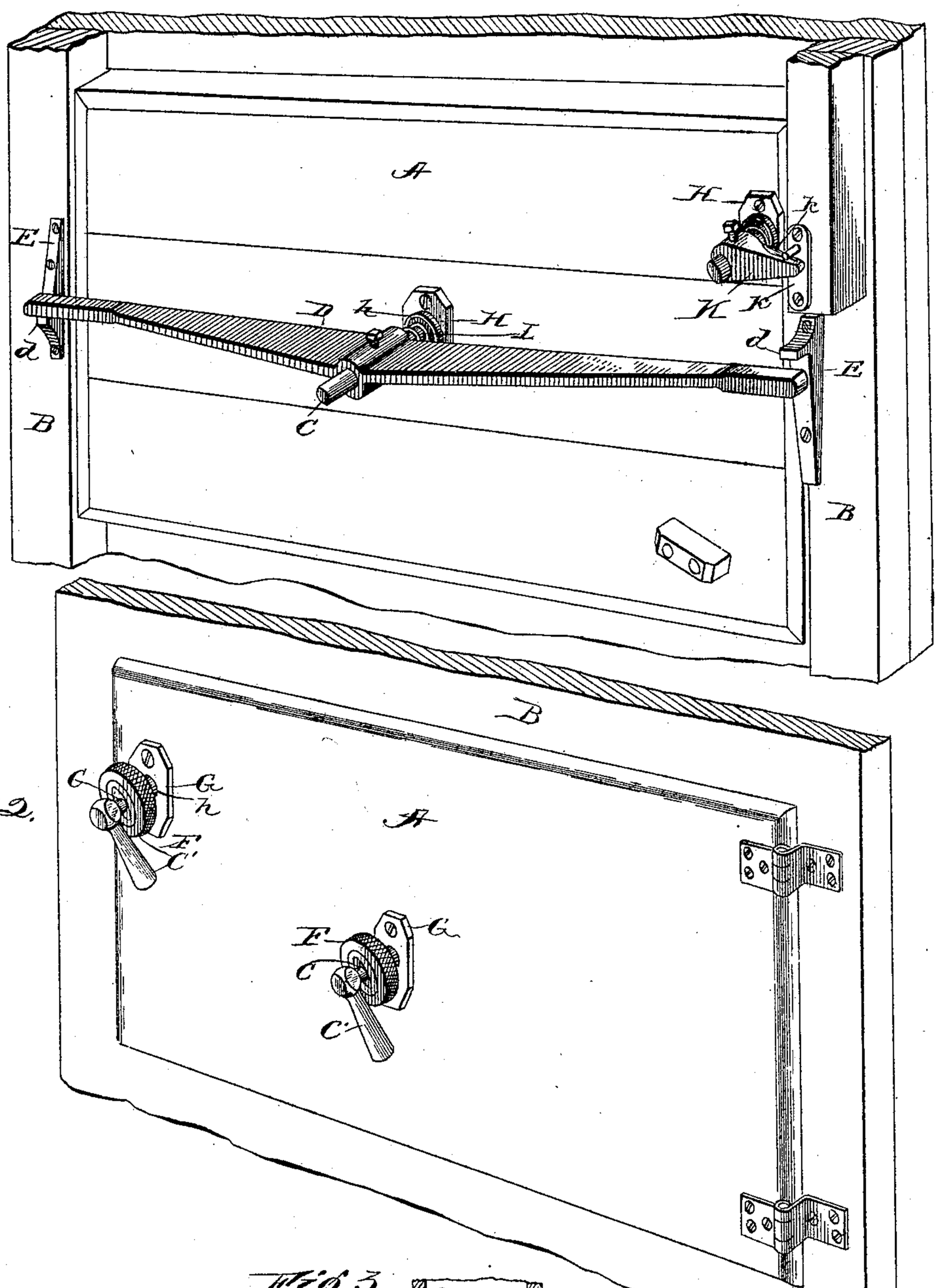
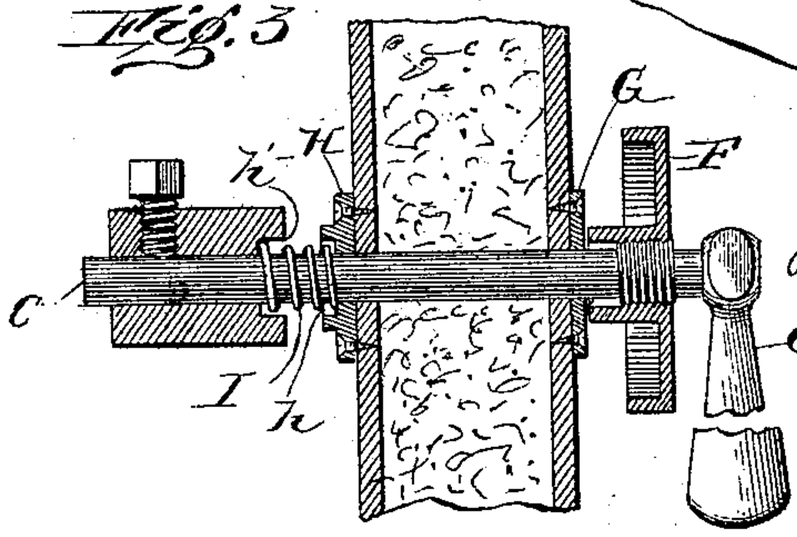


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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REFRIGERATOR-DOOR FASTENING.

SPECIFICATION forming part of Letters Patent No. 611,743, dated October 4, 1898.

Application filed February 23, 1897. Renewed June 27, 1898. Serial No. 684,629. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. STEVENS, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Refrigerator-Door Fastenings; 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 specification, and to the letters of reference marked thereon.

This invention relates to improvements in fastenings for refrigerator-doors or closures for structures of any character in which it is desired to draw the door or closure in tightly against the jamb to prevent leakage around the door; and the object of the invention is to provide a simple device which may be operated after the manner of an ordinary latch by means of a handle and which will also embody the capability of clamping the door and drawing the same in with a powerful pressure.

The invention consists, broadly, in a pivoted retaining member operating on the inner side of the structure and having an operating-handle extending through to the outside of the structure in position to be grasped, said parts being movable transversely of the structure, with means for moving the same transversely to draw the closure inward to the desired extent.

The invention further 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 appended claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of the inner side of a refrigerator-door and door-jambs, showing the application of my fastening thereto. Fig. 2 is a similar view looking at the outside of the door. Fig. 3 is a vertical section of the fastening with the spindle and spring in elevation.

The letter A indicates the door, and B the door frame or jambs, which parts, it will be understood, are shown conventionally, inasmuch as the fastening device is intended for application to any structure wherein it is desired to draw the door in or to adjust the fastening device in such manner that it will close the door tightly against the frame or jambs.

In its simplest embodiments the fastening device consists of a spindle C, journaled in the door so as to be capable of rotating therein and also so as to be capable of moving to a limited extent in a longitudinal direction or transversely of the door. On its outer end the spindle carries an operating-handle C′, of any preferred style, usually, however, in the form of a lever or right-angle handle in order to give a somewhat greater power in turning the fastening device. On the inner end of the spindle I mount a cross-piece or latch proper, which may engage on one or both sides of the door, preferably the latter, and in the drawings I have shown a door having both styles of fastening device thereon, that passing through the center of the door having a cross-piece D, adapted, when turned to a right-angle position, to bridge the door-opening and coöperate at the ends with inclined faced strikes E, secured on the door-jamb, and having limiting-shoulders *d* for arresting the movement of the cross-piece when turned to a right-angle position.

For the purpose of drawing the spindle out or moving the same longitudinally I preferably screw-thread it on the outside of the door and at a point within the operating-handle, and upon this screw-threaded portion I mount a hand-wheel or second handle F, adapted when rotated to draw the spindle outwardly by reason of the coöperation of the cams or inclines formed by the screw-threads. Obviously now when the door is closed and the handle grasped and the cross-piece turned to right-angular position it is a simple matter to draw the door in as tightly as desired by a simple rotation of the second handle or hand-wheel.

In the preferred construction of apparatus the spindle is journaled in face-plates G and H, mounted on the outer and inner faces of the door, and the inner face-plate is also preferably provided with a recess *h*, corresponding to a recess *h′* in the cross-piece for the accommodation of a spiral spring I, surrounding the spindle, the tension of the spring being in a direction to draw the spindle inwardly and being at all times sufficient to create friction enough to hold the fastening in its adjusted position—to wit, either opened or closed.

The cross-piece on the structure shown may be employed when the door is to be left closed for any great length of time, and for ordinary purposes the single arm-fastening K may be employed. It is located at the outer edge of the door and is preferably cam-faced at *k* in its inner side and adapted to coöperate with a strike-plate *k'* on the door-jamb; but it is obvious that either form of cross-piece may be employed without the other, and the two are shown simply to illustrate the application of the invention, although by the employment of both the advantages just mentioned are secured.

Obviously the details of construction of the fastening device may be varied almost indefinitely to suit the particular style of construction to which it is applied, and hence I do not wish to be limited to such details of construction.

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

1. In a fastening for refrigerator-doors and the like, the combination with a rotary and longitudinally-movable spindle having an operating-handle on its outer end and a latch on its inner end adapted to be turned by the handle, of means for moving the spindle longitudinally; substantially as described.

2. In a fastening for refrigerator-doors and the like, the combination with the rotary and longitudinally-movable spindle of the latch on the inner end of the spindle, the handle connected with the outer end of said spindle for rotating the same, a second independently-movable handle and coöperating inclines on the said second handle, a spindle for moving the spindle longitudinally; substantially as described.

3. In a fastening for refrigerator-doors and the like, the combination with the rotary and longitudinally-movable spindle, the latch on the inner end of the spindle, the handle on the outer end of the spindle for rotating the same and a second handle screw-threaded on the outer end of the spindle for moving the same longitudinally and drawing the door to its seat; substantially as described.

4. In a fastening for refrigerator-doors and the like, the combination with the rotary and longitudinally-movable spindle, the latch on the inner end of the spindle, the handle on the outer end of the spindle for rotating the same and the second handle with coöperating inclines between said second handle and spindle for moving the spindle outwardly of a spring for drawing the spindle inwardly against the action of said second handle; substantially as described.

5. In a fastening for refrigerator-doors and the like, the combination with the rotary and longitudinally-movable spindle, the latch on the inner end of the spindle, the handle on the outer end of the spindle for rotating the same and the second handle screw-threaded on the outer end of the spindle inside of the first-mentioned handle and a spiral spring surrounding the spindle for drawing the spindle inwardly against the action of the second handle; substantially as described.

6. In a fastening for refrigerator-doors and the like, the combination with the rotary and longitudinally-movable spindle the face-plates in which said spindle is journaled the latch or cross-piece on the inner end of the spindle, the inner face-plate and cross-piece having annular recesses and a spring surrounding the spindle and lying in said recesses, of a handle on the outer end of the spindle for rotating the same and a second handle screw-threaded on the outer end of the spindle for drawing the same outwardly against the tension of the spring; substantially as described.

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