(No Model.)

2 Sheets—Sheet 1.

D. W. TOWER.

LOCKING MECHANISM FOR DOORS.

No. 314,401. Patented Mar. 24, 1885.

Fig. 1.

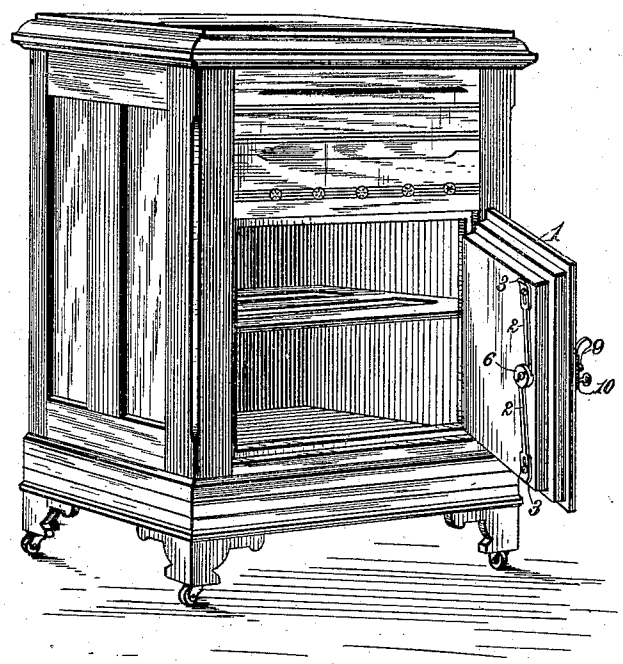
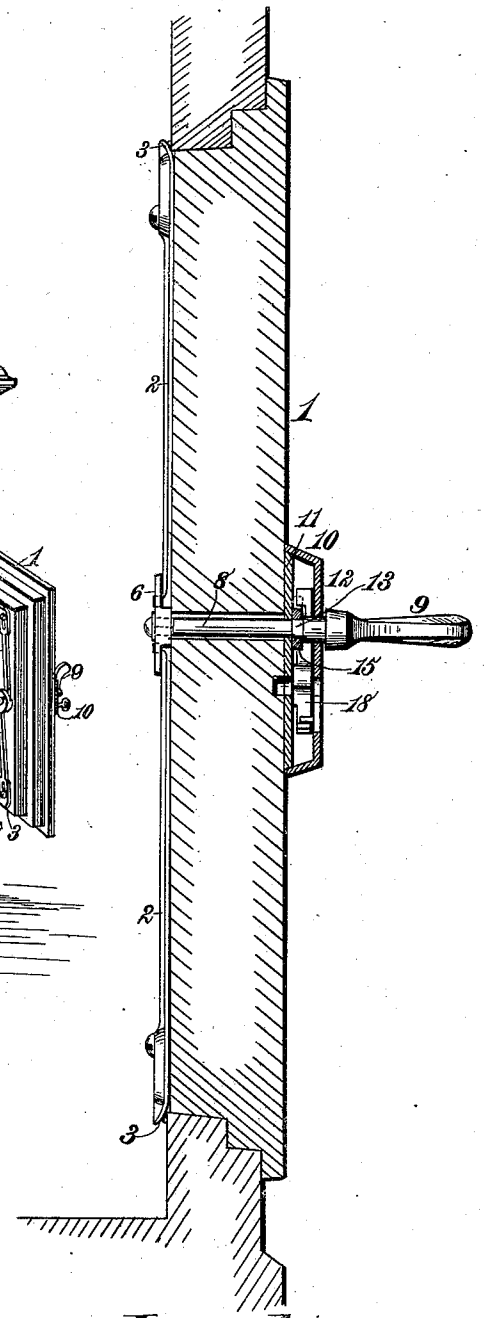


Fig. 2.



Witnesses.
Robert Everett,
A. H. Norris.

Inventor
Daniel W. Tower.
By James L. Norris.
Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

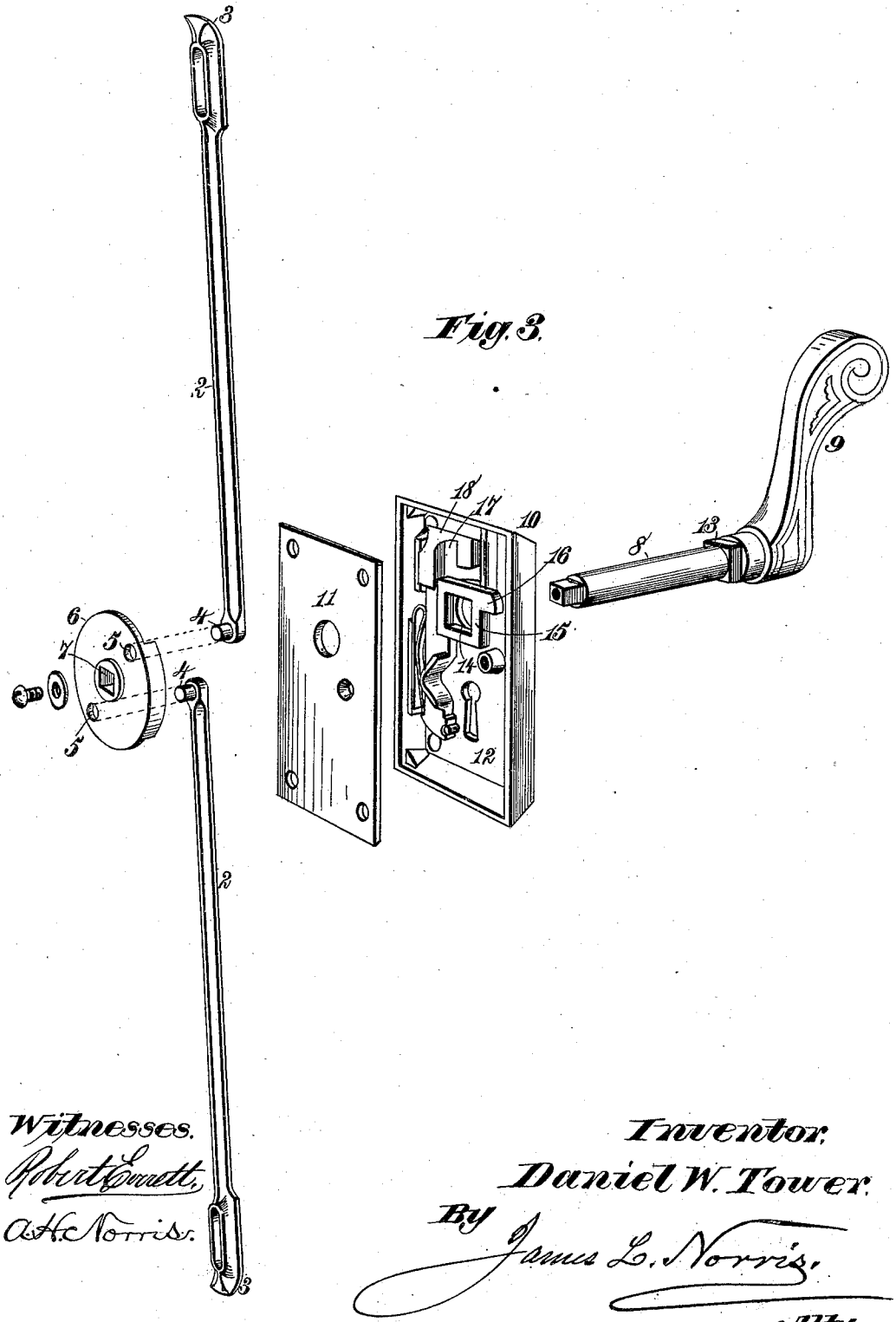
2 Sheets—Sheet 2.

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LOCKING MECHANISM FOR DOORS.

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Fig. 3.



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UNITED STATES PATENT OFFICE.

DANIEL W. TOWER, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO CHARLES H. LEONARD, OF SAME PLACE.

LOCKING MECHANISM FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 314,401, dated March 24, 1885.

Application filed November 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. TOWER, a citizen of the United States, residing at Grand Rapids, Michigan, have invented new and useful Improvements in Locking Mechanism for Doors, of which the following is a specification.

This invention has for its object to provide novel means for clamping or holding the door of a compartment closely to its seat in the door-frame, for preserving an air-tight joint, and to provide for clamping and locking the door, whereby the latter is held closely to its seat to preserve an air-tight joint, while access cannot be had to the compartment when locked except by a person possessing the lock-key.

The invention consists in the combination of two sliding bars, a disk to which they are connected at their inner ends, a spindle secured to the disk and having an angular hub at its outer end portion, a tumbler arranged on the angular hub and having a lug or tooth, and a sliding bolt having a socket to engage and disengage the lug or tooth on the tumbler.

The invention is illustrated in the accompanying drawings, in which Figure 1 is a perspective view of a refrigerator provided with my invention; Fig. 2, a vertical sectional view taken through the door and centrally through the locking devices, and Fig. 3 a perspective view of the locking devices detached.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, reference being made to the drawings, where the number 1 indicates the door for closing the opening through which access is had to the preserving-chamber of a refrigerator, on the inside of which door are arranged two vertical slide-bars, 2, each having its outer end provided with a beveled nose, 3, the beveled side being on the side of the bar which is adjacent or next to the inside of the door. The inner ends of the slide-bars are each provided with a lateral cylindrical stud, 4, loosely engaging an orifice, 5, in a disk, 6, the orifices being opposite sides of the center of the disk, so that the bars are eccentrically connected therewith. The disk is furnished with an angular central opening, 7, fitting over the squared or angular inner end of a cylindrical spindle, 8, which extends transversely through the door, and is provided at its outer end with a suitable handle, 9—such as a crank-handle—by which the spindle can be rotated on its axis for the purpose of turning the disk to operate the slide-bars.

When the door is closed and the handle moved to turn the disk in the proper direction, the slide-bars will be projected and their beveled noses caused to engage behind the inner edge of the door-frame, so that by the action of such beveled noses on the frame the door is drawn inward and firmly clamped to its seat on the door-jamb, thereby securing an air-tight joint to effectually prevent the escape of cold from or the entrance of heat to the preserving-chamber of the refrigerator. This provides for effectively closing the door of the preserving-chamber to obtain a tight joint, which is so important in refrigerators.

Now, in order to lock the slide-bars in position to preserve the tight joint and also prevent access to the preserving-chamber by a person other than the one possessing the proper key, I provide the following mechanism: To the outside of the door is attached a lock-case, 10, through which the spindle 8 extends, the spindle having that portion of its length located between the inner and outer walls, 11 and 12, of the lock-case constructed with an angular or square hub, 13, which passes through a correspondingly-shaped orifice, 14, in a plate, 15, which, for convenience, I will term a "tumbler." This tumbler is provided at one corner edge with a lug or tooth, 16, to engage and disengage a similarly-shaped socket, 17, in one end portion of a sliding locking-bolt, 18, adapted to be operated by a key inserted through a key-hole in the lock-case. The bolt 18 can be moved in the direction of its length by the key, and when moved so that the socket 17 engages the lug or tooth 16 on the tumbler, the latter is held stationary, and through its angular connection with the spindle the latter is locked against rotation, while if the bolt be moved to disengage its socket from the tumbler the spindle can be rotated to operate the slide-bars. By these means, when the door is drawn and clamped to its seat by the beveled noses of the slide-bars acting like wedges on the door-frame to provide an air-tight joint, the parts can be

locked to preserve the tight joint, and also prevent any person gaining access to the preserving-chamber of the refrigerator unless in possession of the proper key.

Having thus described my invention, what I claim is—

1. The combination of the two sliding bars, the disk to which they are connected at their inner ends, the lock-case, the cylindrical spindle passing through the lock-case and having an angular hub portion located within the lock-case, the tumbler arranged on the angular hub portion to turn therewith and provided with a tooth, and a longitudinally-sliding bolt in the lock-case having a socket to receive and engage the tooth of the tumbler on the spindle and prevent the latter from turning, substantially as described.

2. The combination of the two sliding bars, the disk, the lock-case, the spindle passing through the lock-case and secured to the disk, a tumbler arranged on the spindle within the lock-case and turning with the spindle, and a longitudinally-sliding bolt within the lock-case actuated by a key for moving the lock into engagement with the tumbler on the spindle to lock the latter against rotation, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

DANL. W. TOWER.

Witnesses:
HENRY J. CARR,
FRED H. LEONARD.