No. 723,846. PATENTED MAR. 31, 1903.

M. W. DODGE.

LATCH.

APPLICATION FILED APR. 3, 1902.

NO MODEL.

Fig. 2.

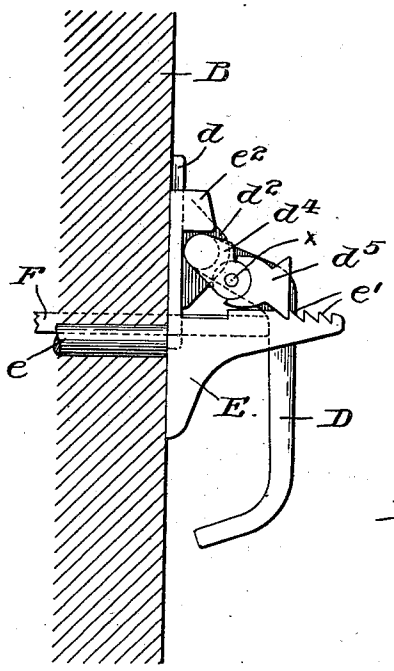


Fig. 1.

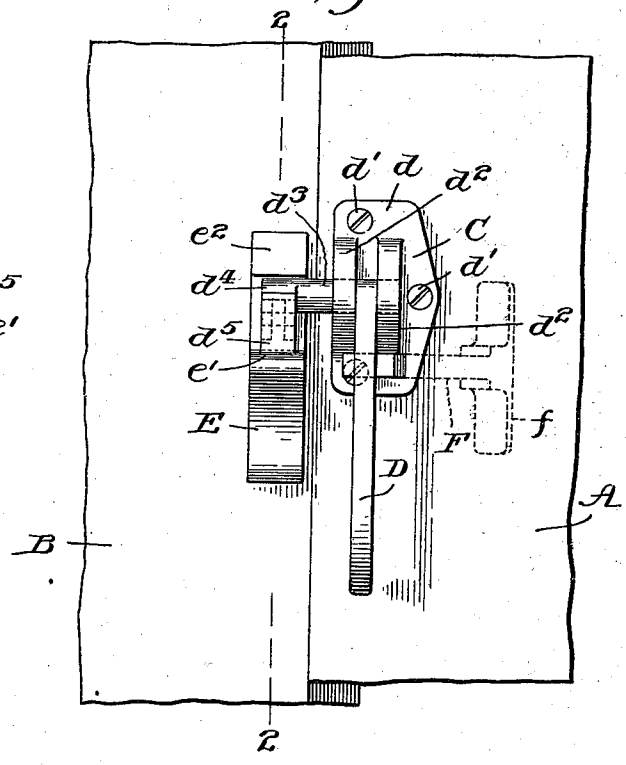
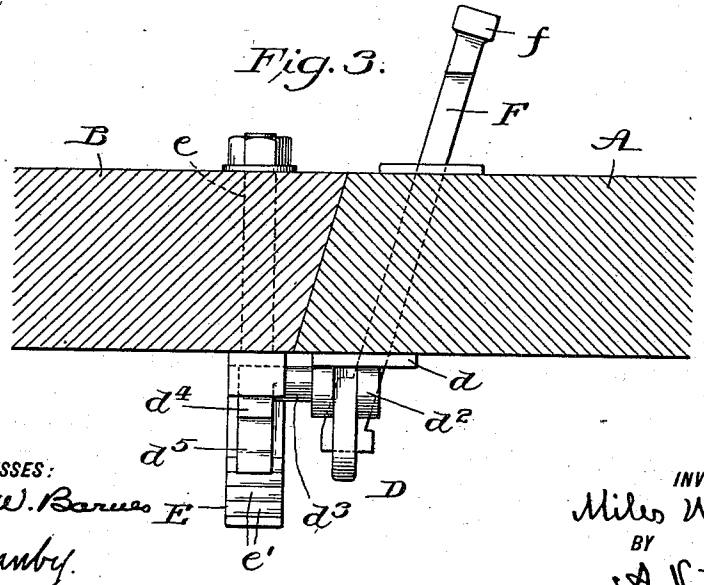


Fig. 3.



WITNESSES:

Amos W. Barnes

W. H. Leamby.

INVENTOR:

Miles W. Dodge

BY

A. V. Groupe

ATTORNEY.

UNITED STATES PATENT OFFICE.

MILES W. DODGE, OF PHILADELPHIA, PENNSYLVANIA.

LATCH.

SPECIFICATION forming part of Letters Patent No. 723,846, dated March 31, 1903.

Application filed April 3, 1902. Serial No. 101,146. (No model.)

To all whom it may concern:

Be it known that I, MILES W. DODGE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Latches, of which the following is a specification.

The object of this invention is to provide a simple and efficient latch for doors, whereby said doors may be tightly closed, opened, and held in the closed position until the latch is operated.

The invention consists in the novel construction and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of a portion of a door, the jamb therefor, and my improved latch. Fig. 2 is a sectional elevation as on the line 2 2 of Fig. 1. Fig. 3 is a plan view of Fig. 1.

A designates a portion of a door, B the jamb therefor, and C my improved latch. The latch in its preferred form comprises a bracket d, secured to the door by means of screws d' and provided with projecting bearings d^2, to which is fitted the pivot-stud d^3 of a hand-lever D. One end of the pivot-stud d^3 projects outwardly beyond the door and is provided with a short arm d^4, which carries on its free end a pawl d^5.

E is a bracket secured to the jamb B, adjacent the bracket d on the door, by means of a bolt e. This bracket E projects outwardly in the path of the pawl d^5 and is provided with a series of teeth e', which are adapted to be engaged by said pawl.

From the foregoing description it will be seen that if the pawl d^5 be engaged with one of the teeth e' and the hand-lever D be lowered to the position shown in the drawings the door will be tightly closed, and the pivot x will pass the center line between the stud d^3 and the point of the pawl engaging the bracket E, thereby locking the door in the closed position until the lever D be again raised. The parts normally assume this locking position by the gravity of the hand-lever D when the door is closed without touching said lever.

This invention is especially adapted for use in connection with doors that are required to be tightly closed—such, for example, as refrigerator-doors. These doors do not always properly fit the jamb, owing to different conditions of the atmosphere and the wearing of the parts, and it is sometimes difficult to get a tight union between the door and the jamb.

By raising the hand-lever D and engaging the pawl d^5 with one of the outer teeth e' and then lowering said lever the arm d^4 and pawl d^5 act as a toggle, and the door is forced inward. The hand-lever may then be again raised and the pawl d^5 engaged with the next inward tooth e', whereupon said lever is again lowered, and so on step by step until the door is forced tightly against the jamb. The hand-lever being left in the down position locks the door closed, as above described, irrespective of the position of the pawl d^5 along the series of teeth e'.

In order that the latch may be operated from either side of the door, I arrange a bar F in the path of the hand-lever D. This bar projects through and is fitted to an opening in the door and is provided with a handle f, by means of which the hand-lever may be raised and the latch operated from the opposite side of the door.

The bracket E is provided with a projection e^2, which is arranged above the arm d^4, so that when the hand-lever D is raised the arm d^4 will take against the projection e^2 in a manner to disengage the door from the jamb.

I claim—

1. A door-latch comprising a lever adapted to be pivoted to the door, a toothed bracket adapted to be secured to the jamb, and a pawl pivoted to said lever and adapted to engage the bracket, the pivotal connection of the pawl being located between the fulcrum of the lever and the portion of the bracket engaged by the pawl whereby a toggle action is effected.

2. A door-latch comprising a toothed bracket adapted to be secured to the jamb, a pair of lever-arms, a stud connecting said arms and adapted to be pivoted to the door, and a pawl pivoted to one of said arms, the pivotal connection of the pawl being located between the stud and the portion of the bracket engaged by the pawl whereby a toggle action is effected.

3. A door-latch comprising a lever adapted to be pivoted to the door, a toothed bracket adapted to be secured to the jamb, a pawl pivoted to said lever and adapted to engage the bracket, and a bar projecting through said door and adapted to operate said lever, the pivotal connection of the pawl being located between the fulcrum of the lever and the portion of the bracket engaged by the pawl whereby a toggle action is effected.

4. A door-latch comprising a bracket adapted to be secured to the jamb and provided with a series of teeth, a projection on said bracket, a lever adapted to be pivoted to the door, means on said lever for engaging said bracket, and means on said lever for engaging said projection whereby the door may be disengaged from the jamb.

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

MILES W. DODGE.

Witnesses:

ANDREW V. GROUPE,

RALPH H. GAMBLE.