

April 16, 1940.

W. SCHEMERS

2,197,195

LATCH

Filed March 2, 1938

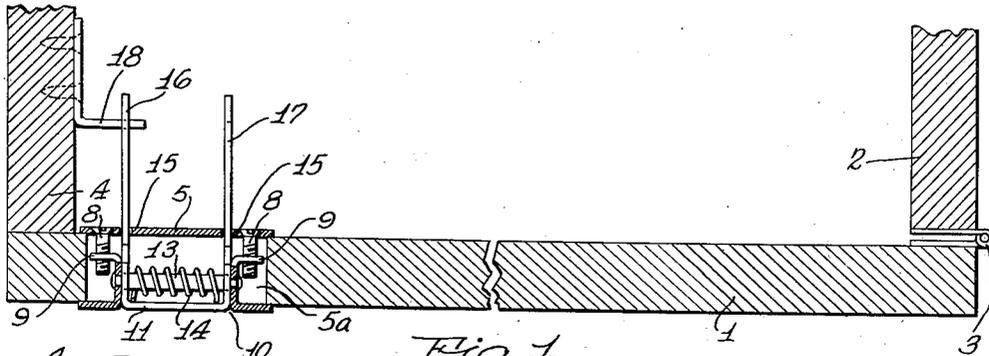


Fig. 1.

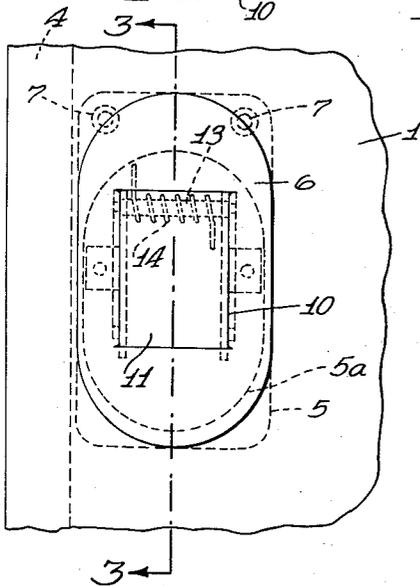


Fig. 2.

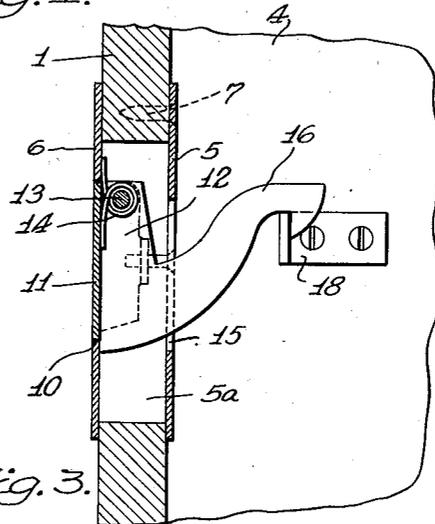


Fig. 3.

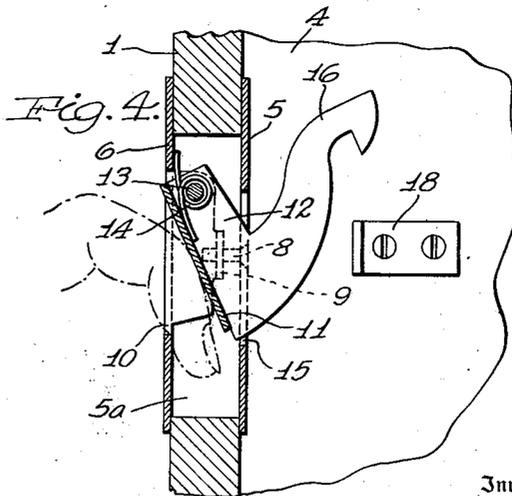


Fig. 4.

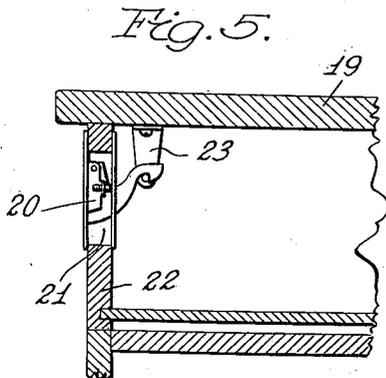


Fig. 5.

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2,197,195

LATCH

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Application March 2, 1938, Serial No. 193,553

7 Claims. (Cl. 292—128)

This invention relates to a latch mechanism designed for use in conjunction with various types of closures, such as, for example, the doors of cupboards, cabinets, compartments etc.

5 The primary object of the invention is to simplify the opening of doors, hinged covers etc. by the provision of a latch which is characterized by the simplicity with which it may be operated.

10 Another object of the invention is to provide a latch which is characterized by the absence of protruding parts that might catch upon and tear the clothing of persons passing the same, or cause injury to persons.

15 Another object of the invention is to provide a latch in which the actuator is in the form of a plate mounted flush with the door surface, and wherein the latch is released by the pushing-in action of the latch plate. Surrounding the in-

20 swinging latch release plate is a face plate of ornamental characteristics with a portion which resides in position for engagement by the finger of a person operating the latch plate, whereby it provides a convenient means for moving the un-

25 With the above and other ends in view, the invention is more fully disclosed with reference to the accompanying drawing, in which

Figure 1 is a horizontal section through a door equipped with the present latch;

30 Fig. 2 is a fragmental external elevation of the latch;

Fig. 3 is a section taken on the line 3—3 of Fig. 2;

35 Fig. 4 is a section similar to Fig. 3 illustrating the latch released, and

Fig. 5 is a section illustrating the latch applied to a drawer.

Like characters of reference are employed throughout to designate corresponding parts.

40 By way of example the drawing illustrates a door 1 mounted upon a side frame 2 by means of a hinge 3, whereby its swinging end contacts the side frame member 4. Adjacent the edge of the swinging end an opening 5a is provided for the

45 reception of the latch mechanism.

The latch mechanism comprises inner and outer face plates 5 and 6, the inner face plate being secured to the door by screws 7, and the outer plate being secured to the inner plate by screws 8 which engage brackets 9 thereon. The brackets 9 are formed as an integral part of the outer plate 6 by punching a centrally disposed portion therefrom. The opening 10, resulting from formation of the brackets 9, receives a plate 11 which

55 comprises the latch actuator.

The plate 11 is provided with two rearwardly extending flanges 12, which extend between the brackets 9, and which are fulcrumed upon a pin 13. A spring 14 is mounted upon the pin 13 and has its opposite ends engaging the face plate 6 and actuator plate 11 respectively, whereby it normally holds the actuator plate 11 in the opening 10, in a plane coincident with the outer face plate 6. Extending rearwardly from respective flanges 12, and through slots 15 in the inner face plate 5, are two hook arms 16 and 17. A bracket 18 is mounted upon the side frame member 4, and when the door is closed the hook arm 16 engages the bracket 18 to hold the door closed.

15 In order to release the latch and open the door, the operator inserts his finger through the opening 10, and thereby pivots the actuator plate 11 whereby the hook arm 16 is released from the bracket 18.

20 In the door illustrated, the latch mechanism is mounted at the left hand side thereof. In the case of a door hinged at its left hand side, the latch mechanism will be mounted at the right hand side of the door, in which case the hook arm 17 will cooperate with a bracket like that shown at 18. It becomes obvious, therefore, that with

25 the same latch unit may be used at either side of the door.

30 In Fig. 5, the latch is illustrated in conjunction with a drawer having a top cover 19. A latch mechanism, identical to that above described, and generally designated by the numeral 20, is mounted in an opening 21 in the front wall 22 of the drawer and co-operates with a bracket 23

35 mounted on the cover 19.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various changes may be made within the scope of the appended claims without

40 departing from the spirit of the invention, and such changes are contemplated.

What I claim is:

1. A latch mechanism adapted to be mounted

45 in an opening in a member, said latch mechanism comprising an outer face plate for concealing said opening, an inner plate secured to said member at the rear of said opening, said two plates having means connecting the same

50 whereby the inner plate supports the outer face plate, said outer face plate having an opening therein, a pivoted actuator plate normally disposed in the opening in said face plate, and a latch member carried by said actuator plate

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and cooperable with a catch member mounted rearwardly of said inner plate.

2. A latch mechanism for a container having an opening in a wall thereof closable by a movable closure member provided with an opening therethrough, a plate member carried by the movable closure member and overlying the opening therethrough, said plate member having an opening therethrough, a movable closure member arranged to position in and close the opening in said plate member, and a latch member carried by said second-named closure member and cooperable with a catch member mounted within the container, said latch member being operable by and on movement of said second-named closure member to disengage from the catch member.

3. In a cabinet having an opening in a wall thereof closable by a movable closure member having an opening therethrough, a latch mechanism for the closure member comprising, a plate overlying the opening in the closure member and having an opening therethrough, a movable closure member for the opening in said plate, a latch member carried by said second-named closure member and cooperable with a catch member within the cabinet, and means rearwardly of said plate and attaching said plate to the first-named closure member.

4. In a container having an opening in a wall thereof closable by a movable closure member provided with an opening therethrough, a movable closure member overlying said second-named opening and pivotally mounted on the first-named closure member, a latch member carried by said second-named closure member and cooperable with a catch member mounted within the container, guide means for said latch member, and means cooperable with said guide means to support said second-named closure member.

5. In a container having an opening in a wall thereof closable by a movable closure member provided with an opening therethrough, a movable closure member overlying said second-named opening and pivotally mounted on the first-named closure member, a latch member

carried by said second-named closure member and cooperable with a catch member mounted within the container, guide means for said latch member, means cooperable with said guide means to support said second-named closure member, and spring means operable to pivot said second-named closure member in one direction.

6. In a container having an opening in a wall thereof closable by a movable closure member provided with an opening therethrough, a plate member overlying the opening in the closure member externally of the container, a second plate member overlying the opening in the closure member internally of the container, means securing said plate members together and to the closure member, said first-named plate member having an opening therethrough overlying the opening in the closure member, a pivoted closure member for the opening in said first-named plate member, a latch member carried by said pivoted closure member and projecting into the container for cooperation with a catch member mounted therein, said second-named plate member having a slot to receive and guide said latch member, and spring means operable to move said second-named closure member and urge said latch member into latching relation with the catch member.

7. A latch mechanism for a closure member having an opening therethrough, comprising, an outer face plate concealing the opening, said plate having a pair of spaced brackets disposed within the opening, an inner plate mounted on said closure member, means carried by said inner plate and cooperable with said brackets to support said outer face plate, said outer face plate having an opening therethrough overlying the opening in the closure member, an actuator plate pivotally supported on said brackets and normally closing said opening in said outer face plate, and a latch member carried by said actuator plate and cooperable with a catch member rearwardly of said inner plate, said inner plate having a guide slot to receive said latch member.

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