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F. C. PETERSON
CABINET DOOR LATCH
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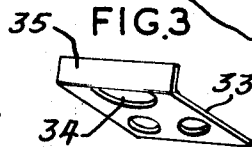
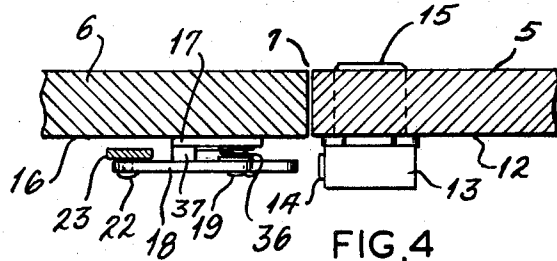
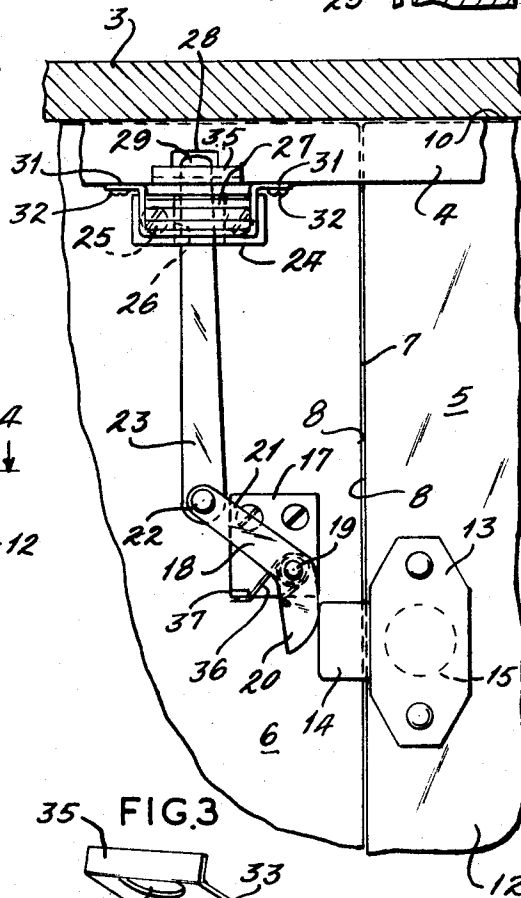
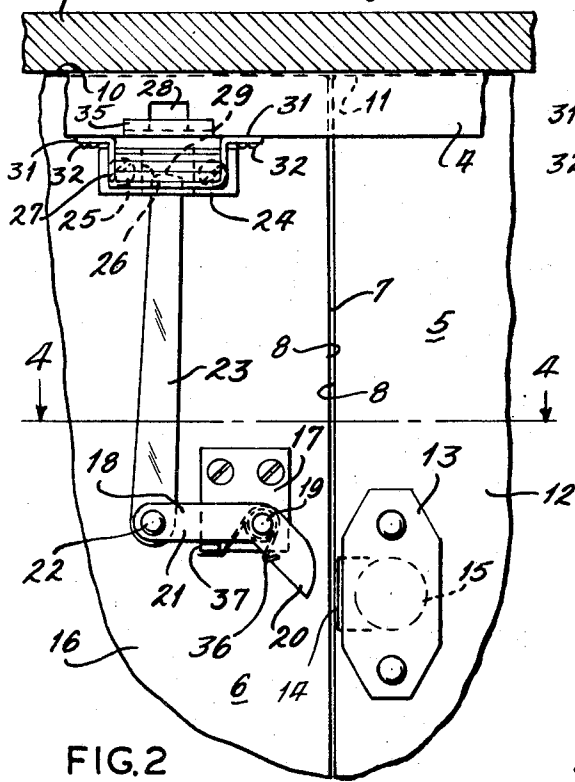
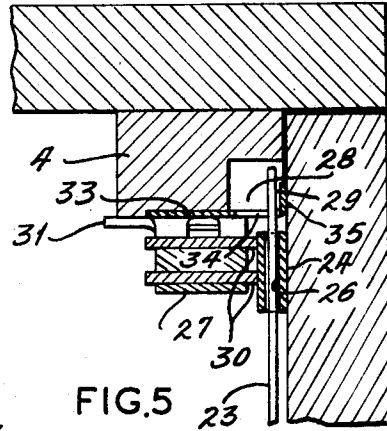
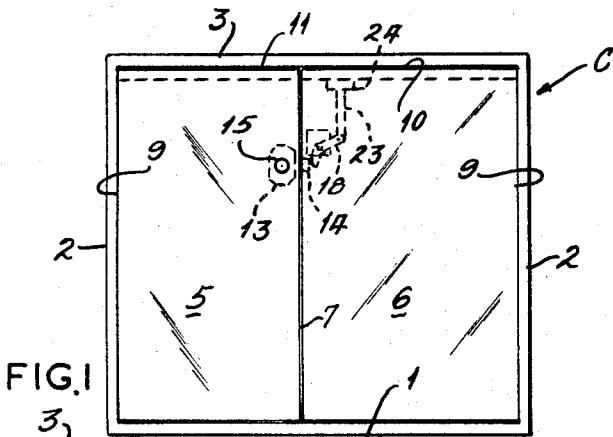


FIG. 6

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CABINET DOOR LATCH
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ABSTRACT OF THE DISCLOSURE

A latch for a cabinet having a plunger therein which moves across the opening between two doors, and a plate having a bell crank lever having one end positioned downwardly so as to pivot its opposite end upwardly upon actuation by said plunger, a latch bar pivotally attached to said opposite end and adapted to extend upwardly above the top edge of said other door, and means for maintaining said latch bar in an upright sliding position.

This invention relates to an improved cabinet door latch, and in particular, to a lock and latch which causes both doors of a cabinet to become unfastened and free to open when means in one door are moved. The arrangement can also be used on doors other than those on cabinets.

In the past, double doors on cabinets were individually locked. To open the cabinet, the door with a lock thereon was first opened, and then a separate inside latch would have to be unfastened in order to open the second door.

One of the principal objects of the present invention is to provide a cabinet lock which causes both doors to be free to open when the key or handle is rotated to unlock the one door with the lock therein. Another object is to provide a simple mechanical arrangement for unlatching both doors of a cabinet when a key or handle in one door is turned. Another object is to provide a simple lock or catch for double doors wherever they are installed.

These and other objects and advantages will become apparent hereinafter.

The invention is embodied in a latch for a cabinet with two doors, said latch comprising a lock in one door positioned so that a plunger therein moves across the opening between said doors, and a plate secured to the other door, said plate having a bell crank lever having one end positioned downwardly so as to pivot its opposite end upwardly upon actuation by said plunger, a latch bar pivotally attached to said opposite end and adapted to extend upwardly to a point near the top edge of said other door, and means for maintaining said latch bar in substantially upright sliding position.

The invention also consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed. In the accompanying drawings which form part of this specification and wherein like numerals and letters refer to like parts wherever they occur:

FIG. 1 is a front elevational view of a typical cabinet having two doors hinged at the opposite sides, with the general position of the latch embodying the present invention shown in dotted lines,

FIG. 2 is an enlarged view of the present invention mounted on the inside of said cabinet doors,

FIG. 3 is a view similar to FIG. 2 after the plunger has been extended to rotate the bell crank to lock the second door to the frame so that the plunger then locks the first door to the second door,

FIG. 4 is a vertical cross-sectional view taken along the line 4-4 of FIG. 2,

FIG. 5 is a fragmentary enlarged view of the latch bar in its upper door locking position, and

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FIG. 6 is a perspective view of the bar on the top of the catch.

Referring now to the drawings in detail, it will be seen that the invention is shown in a cabinet C having a bottom 1, upstanding side walls 2, and a top wall 3 with a stop 4 inwardly thereof. A first door 5 and a second door 6 are hinged to the side walls 2 and are free to pivot outwardly to open the cabinet C. The doors 5 and 6 have a vertical space 7 between them. Each door 5 and 6 has an inner edge 8 adjacent to each other with the vertical space 7 therebetween, an outer edge 9 which is hinged to the side walls 2, top edges 10, and horizontal spaces 11 thereabove to provide clearance below a headboard or the top wall 3. If desired, the cabinet C may be provided with drawers or other features of convenience above the double doors 5 and 6.

The inside of the first door 5 has an inner surface 12 provided with a lock 13 having a plunger 14 therein. The lock 13 may be designed so that the plunger 14 may be moved either by a key or a handle, positioned at 15, operated from the outside of said door 5. As used herein, the term lock may mean a locking mechanism which must be opened with a key or may mean a mechanism which merely contains the plunger and is adapted to be moved with a rotatable handle or knob.

The second door 6 has an inner surface 16 provided with a flat plate 17 mounted slightly above the level of the plunger 14. The plate 17 has a bell crank 18 pivotally mounted thereon on the pin 19. The bell crank 18 has a near end 20 and a far end 21 with a pin 22 for pivotally receiving the lower end of an upwardly extending latch bar 23. The latch bar 23 is maintained in a substantial upright position by means of a bracket 24 attached to the inside surface 16 of the second door 6 by screws 25 or the like. The bracket 24 has an opening 26 therein for receiving said latch bar 23 in sliding relation. The top wall 3 above the pivoted second door 6 is provided with a stop 4 with a catch 27 mounted adjacent to a small recess 28 in the stop 4 for receiving the top portion 29 of the latch bar 23. The catch 27 preferably has magnetic means 30 therein for maintaining the bracket 24 in contacting relation therewith. The catch 27 has flanges 31 for receiving screws 32 or other fastening means which fasten the catch 27 to the stop 4. The catch 27 also has a bar 33 with an opening 34 therein, said bar 33 having an upturned forward end 35. The plate 17 has a leaf spring 36 mounted between the plate 17 and the bell crank 18 for normally biasing the adjacent or near end 20 downwardly against a stop 37 which is bent outwardly from the plane of the plate 17. The spring 36 contacts the lower portions of the stop 37 and the end 20 of the bell crank 18 and extends over the pin 19.

These parts are shown in their unlocked but "doors closed" position in FIG. 2, in which the latch 23 is in its lower position and no part of said latch 23 extends above the top edge 10 of the second door 6, and the plunger 14 is retracted into the lock 13 so that it does not extend across the vertical space 7 between the first and second doors 5 and 6. In this position, the bracket 24 is in contact with the magnet 30 in the catch 27. When the lock 13 is rotated by a handle or by a key inserted into a keyhole, at 15, in the lock 13, the plunger 14 moves across the space 7 between the doors to contact the lower end 20 of the bell crank 18 to pivot it downwardly against the action of the spring 36 thereby forcing the other end 21 of the bell crank 18 upwardly to move the latch 23 slidably upwardly through the opening 26 in the bracket 24 so that its top portion 29 moves above the lower surface of the stop 4 above the level of the bar 33 and into opening 34 in the bar 33. In this position, the first door 5 cannot be opened because the plunger 14 contacts the inside of the second

door 6, and the second door 6 cannot be opened because the latch 23 extends into the opening 34 in the bar 33. Thus, rotating the mechanism within the lock 13 locks both doors in closed position. Unlocking the mechanism within the lock 13 automatically unlocks both doors, since when the plunger 14 is retracted to the position shown in FIG. 3, the spring 36 pivots the bell crank 18 downwardly to its inoperative position against the stop 37, as shown in FIG. 2.

In practice, the lock 13 and plate 17 are mounted about six or eight inches beneath the top edge 10 of the doors, so that the latch bar 23 need not be too tall. However, this arrangement can be used on doors which are relatively tall if the latch bar 23 is lengthened. It will be noted that the weight of the latch 23 and the end portion 21 of the bell crank 18 to which the latch 23 is pivotally mounted, tend to rotate the bell crank 18 to the "doors unlocked" position, shown in FIG. 2, thereby aiding the spring 36. The plunger 14 has no difficulty in pivoting the bell crank 18 against the action of the spring 36, the weight of the latch 23, and the weight of the opposite arm 21 of the bell crank 18.

This invention is intended to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

What is claimed is:

1. A latch for double doors hinged at their opposite sides and having inner adjacent side edges with a vertical space therebetween, said double doors comprising a first door and a second door, said latch having a lock adapted to be secured to the inner surface of said first door adjacent to said vertical space, said lock having a plunger

therein adapted to extend across said vertical space between said doors when means within said lock are rotated, said latch having a plate adapted to be secured to the inner surface of said second door, said plate having a member pivotally mounted thereon, said member having a near end portion adapted to be contacted and moved by said plunger, said member having a far end portion with a latch bar connected thereto, said latch bar adapted to extend upwardly along the inner surface of said second door and adapted to be moved upwardly upon pivoting of said member, a bracket adapted to be secured to said second door for maintaining said latch bar in a substantially upright position, and a catch adapted to be connected to a frame member adjacent to the top portion of said second door, said catch having magnetic means therein adapted to receive said bracket in contacting relation, said latch bar in its raised position adapted to be held by said catch.

2. The latch set forth in claim 1 wherein said bracket is mounted on said second door adjacent to the top edge thereof so that when said second door is closed the bracket contacts said magnetic means in said catch to maintain said second door in a tightly closed position.

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