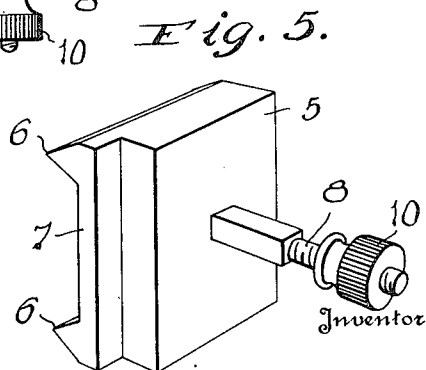
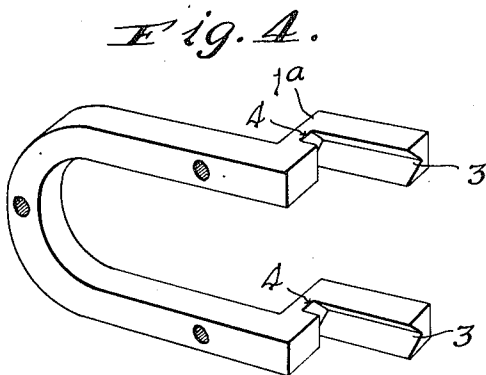
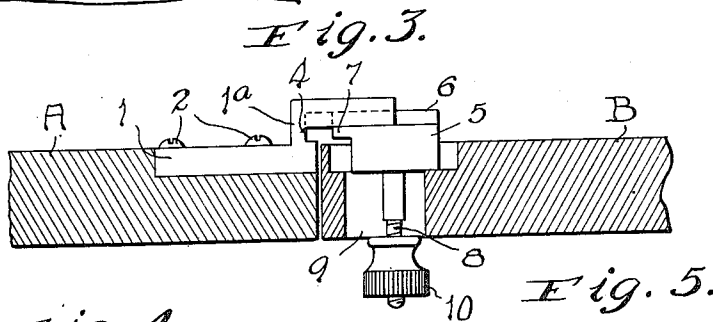
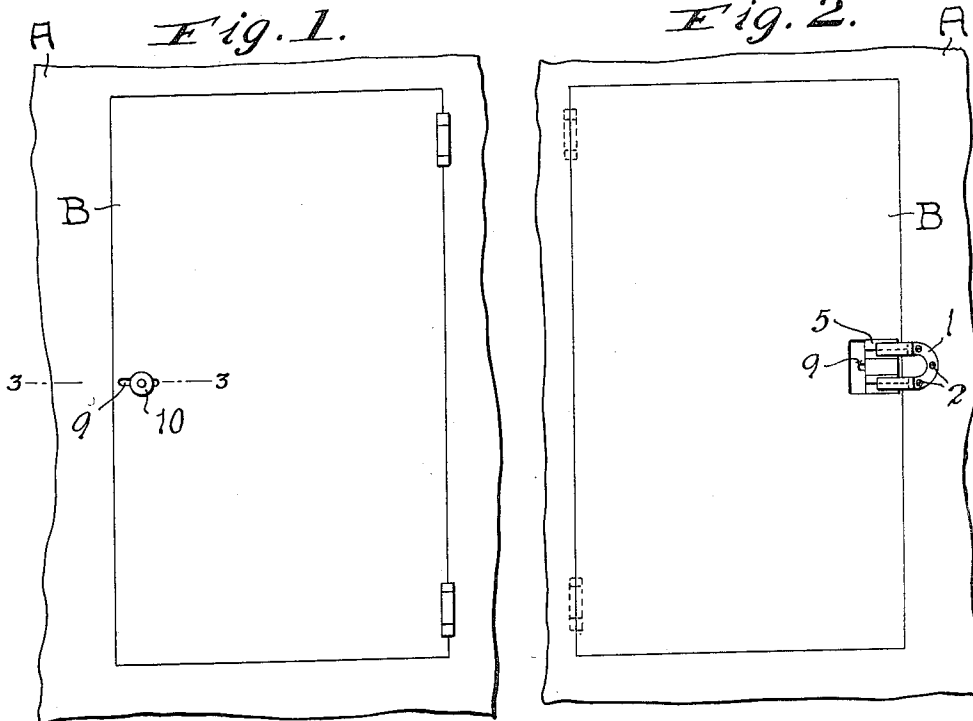


J. G. McCracken.
CUPBOARD LATCH.
APPLICATION FILED MAR. 7, 1917.

Patented June 19, 1917.

1,230,740.



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CUPBOARD-LATCH.

1,230,740.

Specification of Letters Patent. Patented June 19, 1917.

Application filed March 7, 1917. Serial No. 153,095.

To all whom it may concern:

Be it known that I, J. GLEN McCracken, a citizen of the United States, residing at La Crosse, in the county of Rush, State of Kansas, have invented a new and useful Cupboard-Latch; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it 5 appertains to make and use the same.

The present invention relates to a magnetic door latch, and has for its object to provide a device of this character which embodies novel features of construction 15 whereby the door will be held tightly closed after being shut, and will not remain slightly open.

Further objects of the invention are to provide a device of this character which is 20 comparatively simple and inexpensive in its construction, which can be readily applied to the door of a cupboard, bookcase, or like article of furniture, which enables the door to be forcibly opened at any time, but holds 25 it tightly shut after it has once been swung into a closed position, and which also provides for locking the door in a closed position.

With these and other objects in view, the 30 invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a front elevation of a door 40 having a latch constructed in accordance with the invention applied thereto.

Fig. 2 is a rear elevation of the same.

Fig. 3 is an enlarged horizontal sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a detail perspective view of the magnet.

Fig. 5 is a detail perspective view of the armature.

Corresponding and like parts are referred 50 to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, which illustrate one embodiment of the invention, the 55 reference character A designates a door frame, and B a swinging door which is

hinged to one side of the door frame and arranged to swing outwardly in the conventional manner. A U-shaped iron bar 1 which has been permanently magnetized is 80 secured to the inner face of the door frame A and arranged with the free ends thereof projecting into the door opening. This magnet 1 is invisible from the outside of the door, and may be secured in position in any 65 suitable manner, as by means of the screws 2 which pass through openings therein. The ends of the magnet 1 are preferably offset inwardly, as indicated at 1^a, being provided in their outer faces with horizontally extending V-shaped grooves or depressions 3. 70 It will also be observed that notches 4 are formed in the rearwardly extending portions of the iron bar at the inner ends of the offset ends 1^a thereof. 75

An armature plate 5 is carried by the swinging edge of the door B and arranged to contact with the ends 1^a of the magnet 1 when the door is closed. This armature plate 5 will then be attracted by the ends of 80 the magnet 1 and caused to cling tightly thereto, thereby holding the door B firmly in a closed position. There will thus be no danger of the door remaining in a slightly open position after being once closed, although it can be forcibly opened at any 85 time. The inner face of the armature plate 5 is preferably formed at the top and bottom thereof with horizontally extending V-shaped noses 6 which will seat in the before 90 mentioned grooves 3 of the magnet and tend to prevent sagging of the door.

Under normal conditions the armature plate 5 is held in such a position as to clear 95 the rearwardly extending portions 4 of the ends of the magnet 1, although when it is desired to lock the door in a closed position the armature plate 5 would be moved outwardly to bring a vertical rib 7 at the edge thereof into engagement with the before 100 mentioned notches 4. When thus locked there will be no danger of the door being accidentally jarred into an open position.

The armature plate 5 may be mounted in any suitable manner, and in the present instance it is shown as provided with a threaded stem 8 which passes through a slot 9 in the door and has a finger piece 10 applied to the outer end thereof. When this finger 105 piece is loosened the armature plate can be moved toward or away from the swinging edge of the door, although by tightening the 110

finger piece the armature plate can be clamped rigidly in an adjacent position. The finger piece also provides a convenient knob for use in opening and closing the door.

- 5 The inwardly offset ends 1^a of the magnet form stops to limit the inward swinging movement of the door, and also magnetically attract the armature 5 so as to hold the door in a tightly closed position and prevent the
10 door from remaining in a slightly open position.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

- 15 1. A door latch including a magnet permanently applied to the door frame, an armature plate adjustably mounted upon the door so as to be movable toward and away from the swinging edge thereof, the magnet
20 and armature plate being constructed with interlocking portions adapted to be brought into and out of engagement with each other by shifting the position of the armature plate on the door, and means for locking the
25 armature plate in an adjusted position on the door with the interlocking portions of the magnet and armature plate either in or out of engagement with each other.

- 30 2. A door latch including a magnet permanently applied to the door frame and formed with a notched portion, an armature plate adjustably mounted upon the swinging edge of the door in position to be attracted by the magnet when the door is closed, said
35 armature plate being formed with a projection adapted to engage the notched recess of the magnet to lock the door in a closed position when the armature plate is moved upon the door, and means for holding the arma-
40 ture plate in an adjusted position.

- 45 3. A door latch including a magnet permanently applied to the door frame and formed with an inwardly offset end which projects into the door opening, a notch being provided at the inner end of the offset end of the magnet, and an armature plate adjust-
ably mounted upon the swinging edge of the door in position to contact with the offset

end of the magnet and adhere thereto when the door is closed, said armature plate being
50 formed with a rib which is movable into and out of engagement with the notch of the magnet.

4. A door latch including a U-shaped magnetized bar permanently applied to the door
55 frame and arranged with the free ends thereof projecting laterally into the door opening, said free ends being formed with horizontally disposed V-shaped grooves, and an armature plate applied to the swinging
60 edge of the door in position to contact with the ends of the magnet and adhere thereto when the door is closed, said armature plate being formed with horizontally disposed V-shaped noses corresponding to the V-shaped
65 grooves in the ends of the magnet and co-operating therewith to properly position the armature plate upon the ends of the magnet.

5. A door latch including a permanently magnetized U-shaped bar applied to the door
70 frame and arranged with the ends thereof projecting into the door opening, said ends being offset rearwardly and having depressions in the outer faces thereof, while
75 notches are formed in the rearwardly extending portions of the bar at the inner ends of the offset ends thereof, and an armature plate adjustably mounted upon the swinging edge of the door in position to contact with the ends of the magnetized bar and
80 adhere thereto when the door is closed, said armature plate being formed with noses adapted to engage the depressions in the ends of the magnetized bar, and being also
85 formed with a rib adapted to be moved into engagement with the before mentioned notches to lock the door positively in a closed position.

In testimony whereof I have signed my name to this specification in the presence of 90 two subscribing witnesses.

J. GLEN McCracken.

Witnesses:

H. W. GRASS, Jr.,
H. W. GRASS.