

June 3, 1952

D. G. MCAFEE  
CUPBOARD DOOR CLOSURE  
Filed July 11, 1949

2,598,814

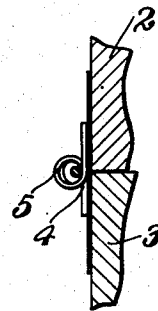
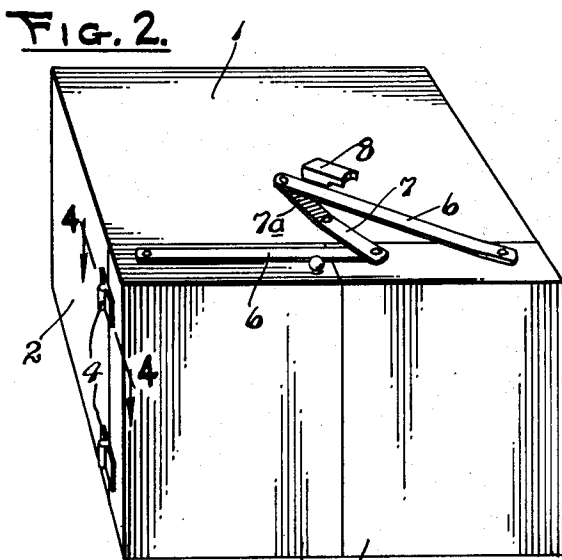
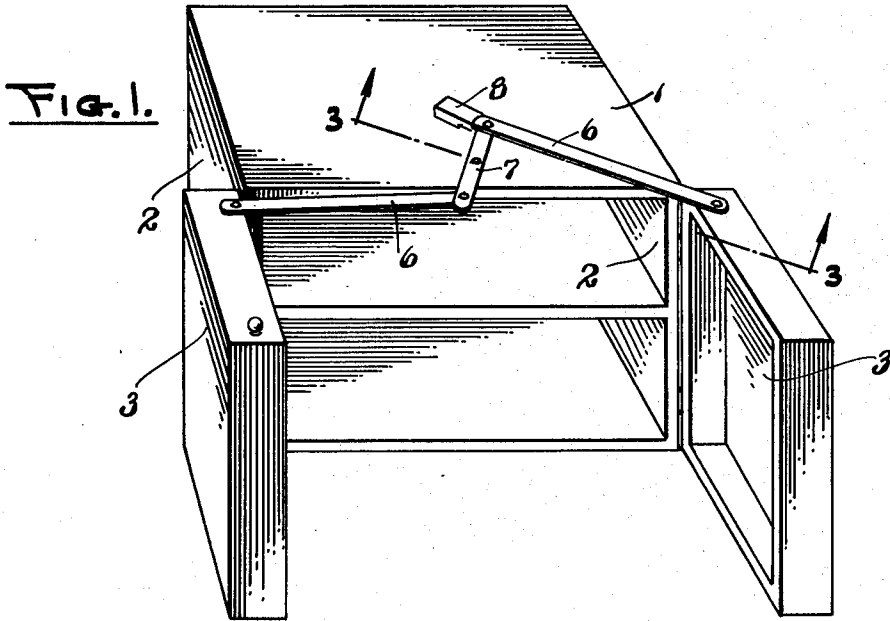


FIG. 4.

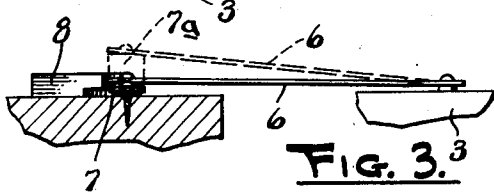


FIG. 3.

INVENTOR  
DON G. MCAFEE  
BY *Liverance and*  
*Van Antwerp*  
ATTORNEYS

# UNITED STATES PATENT OFFICE

2,598,814

## CUPBOARD DOOR CLOSURE

Don G. McAfee, Grand Rapids, Mich.

Application July 11, 1949, Serial No. 104,010

2 Claims. (Cl. 312-275)

1

This invention relates to a cupboard or other case or cabinet door closer and opener, being primarily concerned with the novel and very simple, practical and useful means for simultaneously opening a pair of swinging doors which close the front of a cupboard or other similar cabinet, the doors when released automatically closing by reason of spring actuated hinges for the doors, and both doors being simultaneously and equally opened on manually induced outward movement of one of them. In addition, a simple and useful means is provided for releasably holding the doors in open position, which holding means is automatically released upon moving one of the open doors slightly from its open position after which, by releasing such door, both are automatically closed by spring action.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a perspective view of a wall case, for example, having a pair of hinged doors at its front open side and with my invention applied thereto, the doors being shown held in open position.

Fig. 2 is a perspective view showing the doors closed.

Fig. 3 is a fragmentary section and side elevation, the plane of the section being that shown on the line 3-3 of Fig. 1, looking in the direction indicated, and

Fig. 4 is a fragmentary enlarged horizontal section substantially on the plane of line 4-4 of Fig. 2.

Like reference characters refer to like parts in the different figures of the drawing.

The wall case is shown as having a horizontal top 1, spaced vertical sides 2, a bottom and shelf paralleling the top and bottom between them, though it is to be understood that such case may take many forms and be of greater height as for example, in cupboards or other articles of furniture. Two doors 3 have a hinged connection, at 4, at their outer vertical edges and at the front edges of the sides 2. The hinges 4 are spring hinges, having associated with them springs 5 which when free to do so move the doors to the closed position shown in Fig. 2. On opening the doors the springs are strained and distorted with an acquirement of a greater force in the springs expended in closing the doors when they are free to move in closed position.

Two somewhat elongated link bars 6 are pivotally connected, each at its outer end one to each of the doors 3 a short distance inwardly from

2

the hinges as shown in Fig. 2. Said links diverge, and at their inner ends are pivotally connected to opposite ends of a lever 7 which in turn has a pivotal connection midway between its ends to the top 1 of the cabinet or case. By equipping one of the doors 3 with a knob or handle at any convenient place thereon for manual engagement moving such door outwardly toward open position simultaneously moves the other door toward open position in equal amount.

At the upper side of the top 1 a stop 8 is permanently secured. The lever is bent or cambered upwardly from adjacent its pivot to the rear, as at 7a, so that normally its rear end and the corresponding end of the link bar 6 connected therewith pass by the stop. But by a pressure downward against such connected end of the hinge bars 6 the lever 7 may be bent downwardly, and the rounded ends of both the lever and the bar 6 received in a concave recess in the stop 8, and will remain therein under the pressure of the springs 5, the doors being held in open position against closing.

In the use of the invention, the doors will be opened either to put things in the case or cabinet or to take them out. If things are to be put in the cabinet they may be carried in one hand and the other hand used to open the doors by opening one of them and the doors may be held open by the hand so used until the things which are to be placed therein have been put in with the other hand which carries them. On going to the cabinet to take things out the doors may be opened by use of one hand and the lock to hold the doors open operated by the other after which the articles or things within the cabinet may be removed, rearranged or anything else done with them which is wanted. Then by pulling the manually engageable door 3 outwardly slightly farther, a release from the locking block 8 takes place, the rear inclined end of the lever 7 springs back to its upper position and the doors will close upon release of the one which had been manually moved.

It is of course to be understood that the invention shown applied at the upper side of the case or cabinet, and to the upper ends of the doors may be used at the lower sides thereof without changing the invention. The invention also is applicable to cases or cabinets or containers not vertically positioned. The back of the case or cabinet, shown in Fig. 1, may serve as the bottom of a container and the two doors 3 as the top thereof and the doors opened and closed in the same manner. The invention is of a simple eco-

3

nomical character and is very useful for the purposes for which it has been produced.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a structure of the class described, a case, cabinet or the like having spaced sides and ends, said cabinet being open at one side, spring actuated doors hingedly connected one to each of the opposite sides of the case or cabinet and normally moved by spring actuation to close said open side, a lever pivotally connected between its ends to one end of said case or cabinet, link bars pivotally connected each at one end to the opposite ends of the lever, said link bars at opposite ends being pivotally connected one to each of the doors, a holding stop means mounted on the end of the cabinet on which said lever is mounted, one end of said lever and the adjacent end of the link bar connected therewith being adapted to come to said holding stop when the doors are opened for engagement with said stop means to retain and hold the doors in open position, said lever having a part thereof, between its pivot and said stop means inclined outwardly so as to normally, upon coming to said stop means, be out of engagement therewith, but being adapted to be pressed into a position to engage said stop block when the doors are opened.

2. In a structure of the class described, a case cabinet or the like having spaced sides and ends, said cabinet being open at one side, spring

4

actuated doors hingedly connected one to each of opposite sides of the case or cabinet and normally moved by spring actuation to close said open side, a lever pivotally connected between its ends to one end of said case or cabinet, link bars pivotally connected each at one end to opposite ends of the lever, said link bars at opposite ends being pivotally connected one to each of the doors, a block having a concave recess in one end mounted on the end of the cabinet on which said lever is mounted, located in a position that when the doors are opened, the pivotally connected ends of one of said link bars and said lever come to said block out of engagement therewith, said pivotally connected ends of the link bar and lever having rounded ends manually movable into engagement with said recess in the block and pressed thereinto against the block by the spring force actuating the doors to normally close them, said engagement holding the doors open until release of the said lever and link bar from said block.

DON G. McAFEE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
657,347	Homan	Sept. 4, 1900
1,479,399	Olson	Jan. 1, 1924
1,824,968	Smith	Sept. 29, 1931
2,465,555	Smith	Mar. 29, 1949