Dec. 8, 1953 R. H. WILMER 2,661,997

FRICTION DRAWER RETAINER

Filed March 6, 1950

Fig. 1.

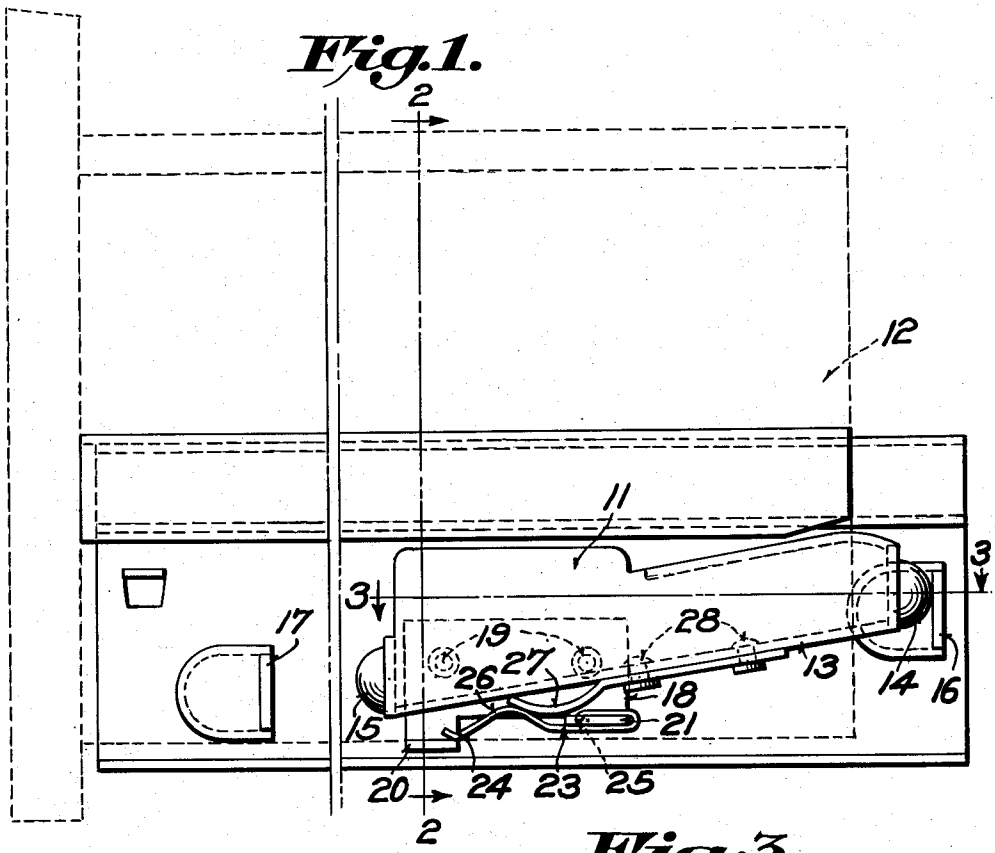


Fig. 2.

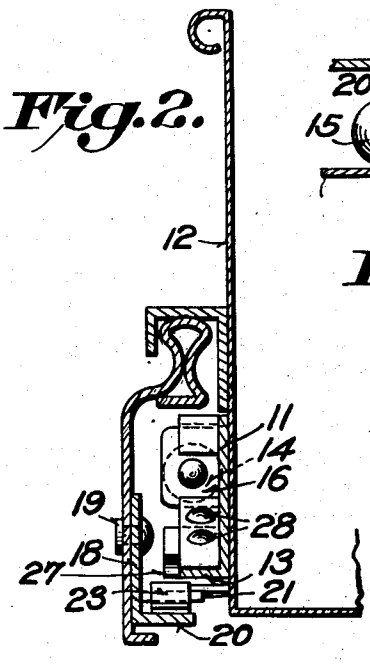


Fig. 3.

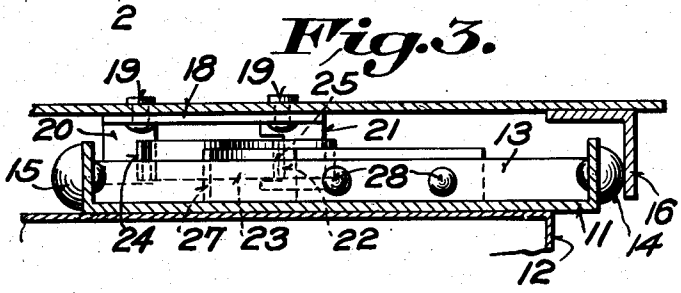
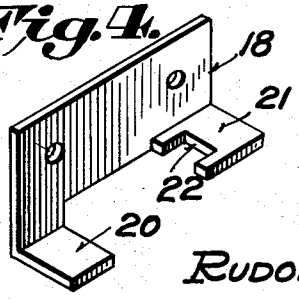


Fig. 4.



INVENTOR

RUDOLPH H. WILMER,

BY

ATTORNEY

Patented Dec. 8, 1953 2,661,997

UNITED STATES PATENT OFFICE

2,661,997

FRICTION DRAWER RETAINER

Rudolph H. Wilmer, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio

Application March 6, 1950, Serial No. 147,901

8 Claims. (Cl. 312—333)

1

This invention relates to furniture drawers and is more particularly concerned with check devices for holding or retaining the drawers in a closed position when not in use.

A special application of the invention is in connection with furniture on seagoing vessels, aircraft and other vehicles wherein the movements of the vehicles cause the ordinary slidable drawers of furniture equipment to open, thereby endangering the furniture and objects and persons in the vicinity thereof.

Although various types of drawer retaining devices are available, many of them are generally inadequate for use on equipment carried by vehicles of the type mentioned from the standpoint of not being able to resist the forces involved. Others require the actuation of a thumb latch, levers or other means protruding from the front of the drawer which is not only unsightly and detracts from the appearance of the equipment but is also liable to be tripped accidentally and cause damage. Still other types are subject to getting out of order frequently, are expensive to manufacture and install and are not easily repaired.

Accordingly, it is an object of this invention to provide a drawer holding or retaining device which can be used on equipment in vehicles of the type mentioned as well as on stationary equipment.

Another object of the invention is the provision of such a device which does not require independent actuation by the user of any latches, levers or other means.

A further object is the provision of such a device which is wholly concealed within the equipment and which, therefore, does not detract from the appearance of the equipment.

Still further objects are the provision of such a device which cannot be tripped accidently, which is simple and inexpensive to manufacture and which is not likely to get out of order.

These and other objects and advantages of the invention will be apparent from the following description considered together with the accompanying drawing, in which:

Figure 1 is a side elevational view of an embodiment of the invention as it appears in position on a filing cabinet drawer, the drawer being closed;

Figure 2 is a section along the line 2—2 of Figure 1;

2

Figure 3 is a section along the line 3—3 of Figure 1; and

Figure 4 is an isometric view of the spring clip bracket.

Referring with more particularity to the drawing in which like numerals designate like parts, the embodiment illustrated comprises a stirrup 11 which is secured to the side of the drawer 12 at the rear thereof by any suitable means such as welding. The bottom 13 of the stirrup slopes upwardly toward the rear. It is provided at the back with a bumper 14 and at the front with another bumper 15, said bumpers being of any suitable resilient material, such as rubber. Abutments 16 and 17 at the rear and front, respectively, of the drawer guide are adapted to contact said bumpers when the drawer is opened and closed to minimize shock.

An angle bracket 18 is secured to the drawer guide by bolts or rivets 19 passing through its vertical side. The bracket 18 carries at the front a flange in the form of a horizontal bearing plate 20 and at its rear another flange in the form of a horizontal hook member 21 consisting of a plate having a square notch 22 cut out at the front thereof, substantially as shown. The rear hook member 21 is preferably at a higher elevation than the front plate 20.

A spring clip 23 is disposed across the hook 21 and bearing plate 20, the front end 24 thereof slidably resting on the plate. The rear end has a hairpin bend to straddle the hook 21 and a lip 25 for engaging the notch 22, substantially as shown in Figure 1. A portion 26 of the spring clip is bowed outwardly and projects toward the stirrup 11.

To the bottom 13 of the stirrup an outwardly convex member 27 is secured by means of rivets or bolts 28 or any other suitable means. In normal position, the member 27 projects below the top of the bowed portion of the spring clip. When the drawer is in closed position the member 27 bears against the back of the bowed portion 26 as shown in Figure 1.

When the drawer is pulled open, the spring clip 23 is compressed downwardly by the member 27. After it passes this point the drawer moves normally. When the drawer is closed again the member 27 in its backward travel again compresses the spring clip 23 when the drawer approaches its closed position and comes to rest

just behind the bowed portion 26 when the drawer is fully closed. In this position, the drawer is prevented from opening accidentally.

To balance forces acting on the drawer, it is preferred to have two of the devices described above attached to the drawer, one on either side thereof, although, it is within the spirit of this invention to provide only one of the devices on only one side of the drawer.

It is to be understood that, although the invention has been described with the spring clip 23 beneath the stirrup 11, it is within the scope of the invention to position the spring clip above or on the side of the stirrup, the corresponding parts thereof being rearranged accordingly.

I claim:

1. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, a spring clip on the guide and adjacent said stirrup in the closed position of the drawer, said clip being secured in fixed position relative to the drawer guide and having a normally unstressed compressible bowed portion between its ends projecting toward the stirrup, a bracket on the guide for supporting the ends of said clip, one of said ends being secured to and the other end being slidably engaged with the bracket, and means carried by the stirrup for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in its fully closed position.

2. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, a spring clip on the guide and adjacent said stirrup in the closed position of the drawer, said clip being secured in fixed position relative to the drawer guide and having a normally unstressed compressible bowed portion between its end projecting toward the stirrup, a bracket on the guide for supporting the ends of said clip, one of said ends being secured to and the other end being slidably engaged with the bracket, said stirrup having a convex member for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in its fully closed position.

3. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, resilient means carried by said stirrup at the front and rear thereof and fixed abutments adapted to contact said means when the drawer is in its open and closed positions, respectively, a spring clip on the guide adjacent said stirrup in the closed position of the drawer, said clip being secured in a fixed position relative to the drawer guide and having a compressible bowed portion between its ends projecting toward the stirrup, a bracket on the guide for supporting the ends of said clip, one of said ends being secured to and the other end being slidably engaged with the bracket, and means carried by the stirrup for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in its fully closed position.

4. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, a bracket on the guide secured in fixed position relative to the drawer guide and adjacent said stirrup, a spring clip carried by said bracket and having a normally unstressed compressible bowed portion between its ends projecting toward the stirrup, one end of the clip being secured to and the other end being slidably engaged with the bracket, and means carried by the stirrup for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in closed position.

5. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, a bracket secured in fixed position relative to the drawer guide, said bracket having flanges extending outwardly therefrom, a spring clip on the bracket and having one end secured to one of said flanges and the other end bearing against and slidably engaging the other flange, said clip having also a compressible bowed portion between its ends projecting toward the stirrup and means carried by the stirrup for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in closed position.

6. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, a bracket secured in fixed position relative to the drawer guide, said bracket having flanges extending outwardly therefrom, a spring clip on the bracket and having one end secured to one of said flanges and the other end bearing against and slidably engaging the other flange, said clip having also a compressible bowed portion between its ends projecting toward the stirrup, said stirrup having a convex member for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion between its ends when the drawer is in closed position.

7. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, resilient means carried by said stirrup at the front and rear thereof and fixed abutments adapted to contact said means when the drawer is in its opened and closed position, respectively, a bracket secured in fixed position relative to the drawer guide, said bracket having flanges extending outwardly therefrom, a spring clip on the bracket and having one end secured to one of said flanges and the other end bearing against and slidably engaging the other flange, said clip having also a compressible bowed portion between its ends projecting toward the stirrup and means carried by the stirrup for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in closed position.

8. In combination, a drawer guide, a drawer slidably disposed on said guide and movable thereon between open and closed positions, a stirrup secured to the side of the drawer, said stirrup having resilient means at the front and rear thereof and fixed abutments adapted to contact said means when the drawer is in its opened and closed position, respectively, a bracket secured in fixed position relative to the drawer guide, said

bracket having flanges extending outwardly therefrom, a spring clip on the bracket and having one end secured to one of said flanges and the other end bearing against and slidably engaging the other flange, said clip having also a compressible bowed portion between its ends projecting toward the stirrup, said stirrup having a convex member for compressing said bowed portion when the drawer approaches its closed position and for engaging the rear side of said bowed portion when the drawer is in closed position.

RUDOLPH H. WILMER.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
538,305	Wait	Apr. 30, 1895
628,322	Hoffmire	July 4, 1899
1,103,598	Martin	July 14, 1914
1,145,925	Saul	July 13, 1915
1,846,512	Dike	Feb. 23, 1932
1,940,047	Cutler	Dec. 19, 1933
2,430,141	Reeves	Nov. 4, 1947