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2,703,725

DOOR FASTENER

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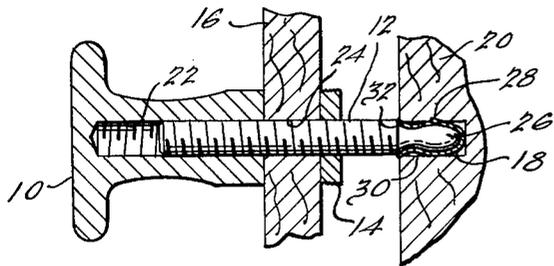


FIG. 1.

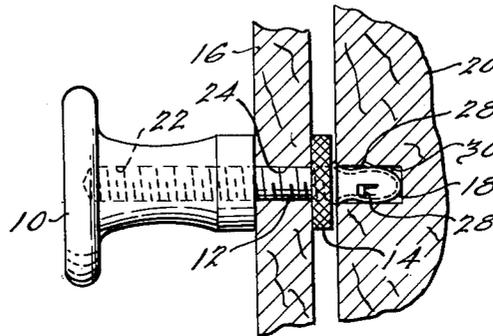


FIG. 2.

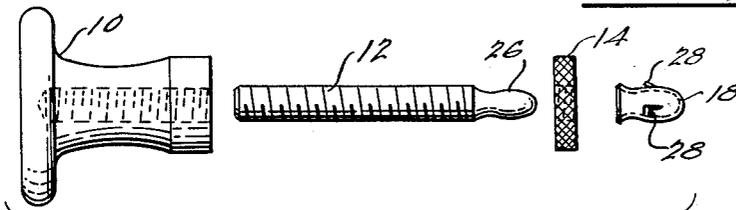


FIG. 3.

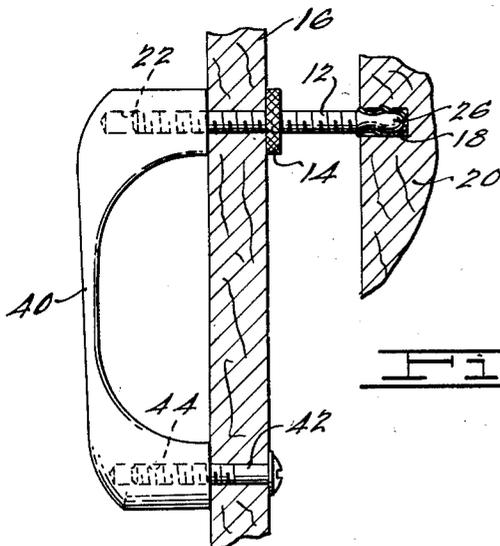


FIG. 4.

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1

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DOOR FASTENER

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1 Claim. (Cl. 292—70)

The present invention relates to an improved fastener for cabinet doors or the like.

It is an object of the present invention to provide an improved cabinet door fastener which is economical of manufacture and may be readily installed.

A further object of the invention is to provide an improved cabinet door fastener readily adjustable for securing the cabinet door with any desired spacing between the door and the portion of the cabinet to which it is secured.

A further object of the present invention is to provide such an improved fastener which may be readily adjusted to compensate for changes in the closed position of the door due to warping or the like.

Other and more detailed objects of the present invention will be apparent from a consideration of the following specification, the appended claim and the accompanying drawing, throughout the several views of which like reference characters designate like parts and wherein:

Figure 1 is a sectional view of an embodiment of the invention illustrating the parts thereof in a position of adjustment corresponding to one spacing between the cabinet door and the shelf or other cabinet portion to which the door is fastened;

Figure 2 is a view similar to Figure 1, showing the fastener parts in a position of adjustment corresponding to another space between the cabinet door and the cabinet shelf;

Figure 3 is an exploded view of the fastener illustrated in Figures 1 and 2; and,

Figure 4 is a sectional view illustrating the use of the present invention with another handle shape.

The fastener of the present invention generally comprises a handle 10, a shank 12, an element 14 for co-operation with the handle 10 and shank 12 for mounting the handle 10 and shank 12 on a door indicated at 16, and a retainer element 18 adapted to be mounted in a shelf or other portion of the cabinet indicated at 20, and engage the shank 12 to releasably hold the door 16 in a desired position relative to the cabinet portion 20.

In broader aspects of the present invention it will be appreciated that any suitable means may be provided for connecting the shank element 12 to the handle 10 for adjustment relative thereto. In the preferred embodiment illustrated, the handle 10 is provided with a tapped bore 22 and the shank element 12 is externally threaded for threaded engagement with the handle 10, thereby permitting ready adjustment of the shank element 12 axially of the bore 22. Similarly, it will be appreciated that in the broader aspects of the present invention any suitable means may be employed for connecting the element 14 to the shank element 12 for adjustment axially thereof. In the preferred embodiment illustrated the element 14 is a disk having an internally threaded opening for threaded engagement with the shank 12. The peripheral surface of the disk 14 is serrated to facilitate gripping thereof during installation of the fastener.

The shank 12 is adapted to extend outwardly of the bore 22 through an aperture 24 in the door 16 and through the disk 14. The length of the shank element 12 and the depth of the bore 22 are such as to permit a substantial axial adjustment of the shank element 12 relative to the bore 22. The right-hand end of the shank 12, as viewed in the drawing, is shaped to define a bulbular portion 26 best illustrated in Figure 3. The retainer clip 18, in the preferred construction, is formed of a resilient material such as sheet metal and is adapted to receive and resiliently engage the bulbular portion 26 of the shank element 12 to releasably hold the shank element 12 against movement relative thereto. The retainer element 18 has outwardly struck fingers 28 which act as barbs effective upon the forcing of the retainer 18 into the recess 30 provided in the cabinet portion 20, to engage the walls of the recess 30 to prevent the retainer 18 from being withdrawn from the cabinet portion 20

2

upon withdrawal of the bulbular portion 26 of the shank element 12 from the retainer 18. The outer portion of the retainer 18 is outwardly flared as indicated at 32 to limit movement of the retainer 18 inwardly of the recess 30 and guide the bulbular portion 26 into the retainer 18.

It will be appreciated that the above described fastener may be very readily installed by forming the aperture 24 and the recess 30 by a single drilling operation when the door 16 is in its closed position, after which the shank element 12 may be received through the aperture 24 and the handle 10 and disk 14 threaded onto the opposite ends to secure it in the desired adjusted position. It only remains to position the retainer 18 into the recess 30 to complete the installation of the fastener. It will be appreciated that at any time, either upon installation or afterward, the shank element 12 may be readily adjusted relative to the door 16. Two such positions of relative adjustment are illustrated in Figures 1 and 2. It will also be appreciated that if a flush fit of the door 16 against the cabinet portion 20 is desired, either the door 16 or the cabinet portion 20 may be recessed to receive the disk 14.

Referring to Figure 4, the fastener there illustrated differs from the above described fastener only in that in place of the circular knob type handle 10, a handle 40 of generally C-shape is employed. The shank element 12 extends into the threaded bore 22 formed in one end of the handle 40 and the opposite end of the handle 40 is secured to the door 16 by a conventional screw 42 extending into an internally threaded bore 44 similar to the bore 22.

While only two embodiments of the invention have been illustrated and described in detail herein, it will be readily appreciated by those skilled in the art that numerous changes may be made without departing from the spirit of the present invention.

What is claimed is:

In a cabinet door fastener or the like for releasably securing a first member in a desired position relative to a second member, the combination of a handle element having an elongated recess therein, an elongated shank element having one end portion adapted to extend into said recess, co-operating threaded means on said elements for adjustably positioning said shank element axially of said recess to a desired position relative to said handle element, said co-operating means being operable to provide any desired increment of adjustment of said shank element axially of said recess, said shank element being adapted to extend outwardly of said handle element and through a closely fitting aperture in one of said members, a third element adapted to be mounted on the outwardly extending portion of said shank element, co-operating means on said shank element and said third element for adjustably positioning said third element relative to said shank element, said handle element and said third element being adapted to engage said one of said members at opposite ends of said aperture to mount said elements thereon, and a fourth element adapted to be mounted on the other of said members in alignment with said shank element when said members are in said desired position relative to each other, and co-operating means on said fourth element and said shank element operable when said members are in said desired position and independently of the relative rotative position of said fourth element and said shank element, to yieldably hold said members in said position, said fourth element being so proportioned relative to the diameter of said threaded shank that said fourth element may be mounted in an aperture in said other of said members of the same diameter as said aperture in said one of said members by forcing said fourth element into said aperture in said other of said members.

References Cited in the file of this patent

UNITED STATES PATENTS

444,338	Dodge	Jan. 6, 1891
665,901	Hampton	Jan. 15, 1901
1,224,382	Isakson	May 1, 1917
1,931,695	Hall	Oct. 24, 1933
2,322,769	Norberg	June 29, 1943
2,575,972	Nelson	Nov. 20, 1951