

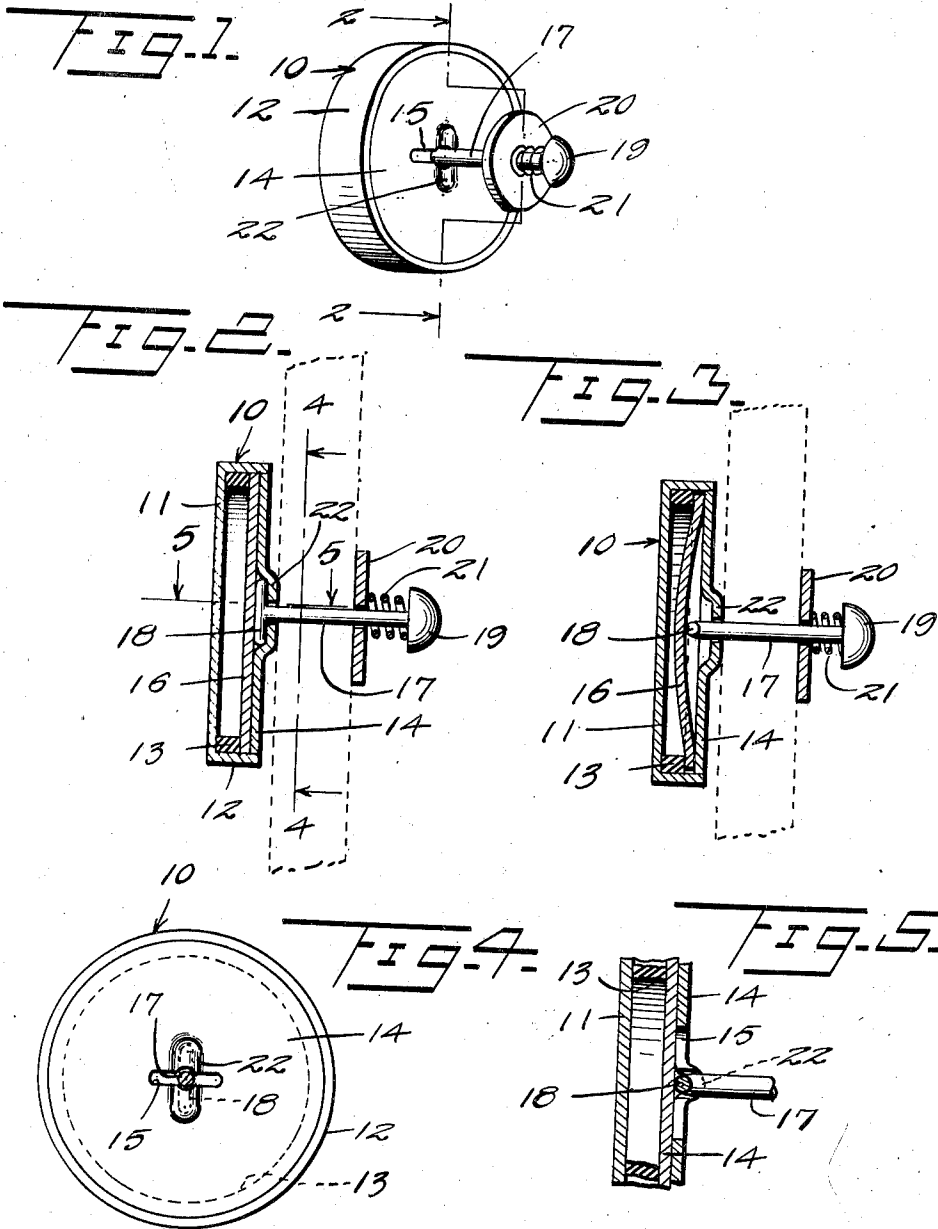
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FASTENING DEVICE

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FASTENING DEVICE

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3 Claims. (Cl. 24-104)

This invention relates to fastening devices, and more particularly, to a device for detachably fastening a button or the like onto an article of support. This invention is an improvement over the structure embodied in my co-pending application, Serial No. 136,107, filed April 10, 1937.

An object of this invention is to provide a device whereby a button or another suitable article may be quickly attached to a supporting device in such a manner that the article may be readily detached from the support when desired without injuring the article or the support.

Another object of this invention is to provide an improved means for detachably locking an article to a support so that the article may have movement relative to the support without affecting disengagement of the article from the support.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended thereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views:

Fig. 1 is a perspective view of a device constructed according to an embodiment of this invention.

Fig. 2 is a sectional view taken on the line 2-2 of Fig. 1.

Fig. 3 is a sectional view similar to Fig. 2 but showing the device during the initial assembly of the structure.

Fig. 4 is a sectional view partly in rear elevation taken on the line 4-4 of Fig. 2.

Fig. 5 is an enlarged sectional view taken on the line 5-5 of Fig. 2.

Referring to the drawing, the numeral 10 designates, generally, a cup-shaped or flanged button or article which it is desired to detachably secure to a supporting means which includes a face plate 11 and a flange 12, preferably integral therewith. A resilient annular member 13 in the form of a rubber ring or the like is disposed within the flange 12 and abuts against the inner side of the face plate 11. An outer or rear plate 14 is secured within the flange 12 by any suitable means and is provided at its central point with a slot 15. A spring plate in the form of a disk member 16 is interposed between the rear plate 14 and the resilient annulus 13, and preferably is co-extensive with and normally in contact with the inner face of the rear plate 14.

A shaft or shank 17, having at one end laterally extending prongs 18, is adapted to engage

through the slot 15 and contact with the adjacent face of the spring locking plate 16. The shank or shaft 17, at its other or outer end, is provided with a head 19 and a plate 20, loosely disposed on the shaft or shank 17. An expansion spring 21 is mounted on the shaft or shank 17 between the head 19 and the plate 20, and is adapted to constantly urge the plate 20 toward the opposite or inner end of the shank 17.

The rear plate 14 is provided with an elongated detent, or recess 22, which extends at right angles to the slot 15 and constitutes a locking means in which the pin or laterally extending prongs 18 are adapted to engage when the device is detachably located on a support.

In the use of this device, the button member 10 is placed on one side of a support, such as 23, and the shaft or shank 17 is projected through this support 23, or an opening such as a button-hole or the like in this support 23, with the locking member 18 aligning with the slot 15. The plate 20 will initially contact with the face of the supporting member 23 opposite from the button 10, and in order to admit of the insertion of the inner end of the shank 17 into the slot 15, it is necessary to compress the spring 21 with the plate 20 contacting with a face or side of the support 23. When the locking member 18 is inserted in the slot 15, the lock plate 16 will bend inwardly of the flange 12, and at the same time, the cushion member 13 will be compressed. The shank 17 is then given a quarter turn so that the locking pin 18 will engage in the detent 22.

The tension of the lock plate 16 will firmly hold the locking member 18 within the detent 22, and at the same time, the spring 21 will firmly hold the plate 20 against one side of the support 23 and pull the rear plate 14 against the opposite side of the support 23 so that the button 10 will be firmly secured to the support 23. Release of the button 10 from the support 23 is effected by compression of the spring 21, and the turning of the shank 17 so that the locking member 18 will be in register with the slot 15.

It will be obvious from the foregoing that an exceedingly simple fastening device has been provided for buttons, medals, or other articles, which is so constructed that the button or other article will be firmly held on the supporting member, and while the button may have some rotary movement relative to the supporting member, such rotary movement will not be of a nature such that the button member 10 and the shank 17 will become separated. This is due to the yieldable holding plate 16 which yield-

ably holds the locking member 18 in the detent 22.

It is, of course, understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

10 I claim:

1. A fastening device of the character described, comprising a hollow body having a front wall, an integral flange encircling said front wall and a back wall in the form of a plate secured to said flange in spaced relation with the front wall, said plate having a slot formed therethrough in the central part thereof and being pressed outwardly to form an elongated detent extending across and perpendicularly to said slot, an imperforate resilient disk within the body disposed flat against the inner side of said plate, resilient means disposed against the inner side of said flange between said disk at the periphery thereof and said front wall, a shaft having a transverse bar at one end formed for insertion through said slot against said resilient disk and adapted to be turned by flexing said disk inwardly to dispose the bar across the slot in the detent, a head upon the other end of the shaft, a flat body having the shaft passing therethrough, and resilient means between the flat body and said head normally urging the two apart.

2. A fastening means, comprising a hollow cup-shaped member, a plate carried by and clos-

ing said member and having an elongated slot in substantially the center thereof, a shaft having a substantially T-shaped inner end and a headed opposite end, a detent formed in said first plate at right angles to said slot, and a resilient imperforate disk plate in said member engageable with the T-shaped inner end of said shaft and against the inner side of said first plate to resiliently hold said T-shaped inner end of the shaft in the detent and maintain said shaft in locked position, the shaft being adapted to be turned by flexing said disk inwardly.

3. A fastening means, comprising a cup-shaped member, a plate carried by and closing said member and having an elongated slot in substantially the center thereof, a shaft, a locking member carried by and extending transversely of one end of said shaft, a head on the other end of said shaft, a flat body on said shaft, resilient means between the flat body and said head normally forcing the body and head apart, a detent formed in said first plate across and at right angles to said slot, a resilient imperforate disk of a diameter to position snugly in said member and disposed against the inner side of said first plate over said detent to engage and resiliently maintain said locking member in the detent, and a resilient annulus between said imperforate plate and the first plate and normally tending to maintain said imperforate plate flat against the first-mentioned plate, said shaft being adapted to be turned by flexing said disk inwardly to move the head into or out of said detent.

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