June 12, 1956 K. B. PLISZCZAK ET AL 2,749,588

LOCK MOUNTING FOR ARTICLES WITH PINS

Filed March 16, 1953

FIG. 1

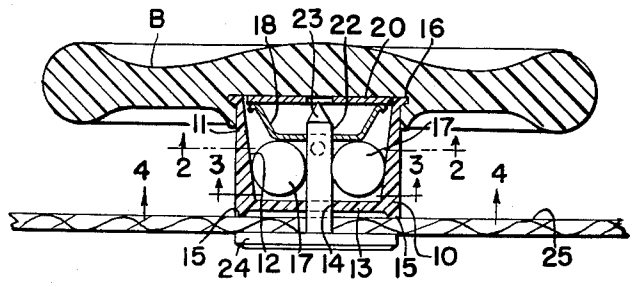


FIG. 2

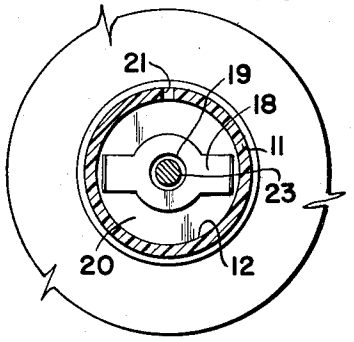


FIG. 3

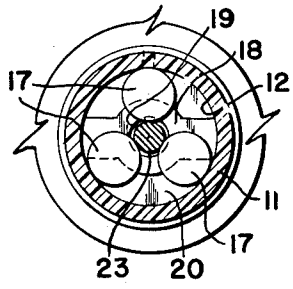
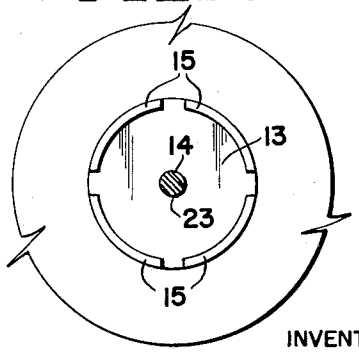


FIG. 4



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LOCK MOUNTING FOR ARTICLES WITH PINS

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2 Claims. (Cl. 24—104)

This invention relates to mountings for articles with pins, and more particularly to an improved lock suitable for holding a button or the like on a garment.

It is the principal object of the present invention to provide an improved locking mechanism for pins and the like which is simple in construction, but sturdy and reliable in operation.

It is a further object of the present invention to provide a simple form of button mounting which may be quickly and easily applied to a garment, which will remain in firm engagement after mounting, and which can be readily removed if desired.

It is a further object of the present invention to provide an improved mounting for buttons for garments and the like in which the mounting and locking structure may be easily applied to buttons of synthetic plastic material and the like.

It is a further object of the present invention to provide an improved locking mechanism for pins, the constituent parts of which are of simple construction so that the same may be inexpensively fabricated and assembled.

Other objects and advantageous features of the invention will be apparent from the specification and claims.

The nature and characteristic features of the invention will be more readily understood from the following description, taken in connection with the accompanying drawings forming part thereof, in which:

Figure 1 is an enlarged vertical central sectional view through a preferred embodiment of the invention;

Fig. 2 is a transverse sectional view taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1; and

Fig. 4 is a transverse sectional view taken approximately on the line 4—4 of Fig. 1.

It should, of course, be understood that the description and drawings herein are illustrative merely, and that various modifications and changes may be made in the structure disclosed without departing from the spirit of the invention.

Like numerals refer to like parts throughout the several views.

Referring now more particularly to the drawings, in which a preferred embodiment of the invention is illustrated, a casing **10** is provided having a side wall **11** with an interior frusto conical face **12** converging towards an end wall **13**. The end wall **13** has a central opening **14** therethrough and on the exterior thereof may be provided with gripping ridges or flanges **15**. At the open end of the casing **10**, opposite the end wall **13**, a flaring rim **16** may be provided for securing engagement in an article, such as a button B, on which the casing **10** is mounted. The button B may be made of any desired material, such as synthetic plastic, of the desired color and shape.

Within the interior of the casing **10**, a plurality of spherical metallic balls **17**, preferably three in number are provided, these being adapted to be engaged by a leaf spring

18 of bowed or curved shape. The spring **18** has a central opening **19** and at its ends is adapted to engage with a disc **20** which closes the open end of the casing **10**. The casing **10** is provided in the side wall **11** thereof, with an opening **21** for purposes to be explained.

A pin **22** is provided having a pointed cylindrical shank **23** and an enlarged and preferably disc like head **24**. The pin **22** is adapted to be forced through textile fabric **25** or like material of a garment or other object with the head **24** in engagement with one side face of the fabric **25**.

The shank **23** of the pin **22** is then inserted through the opening **14** in the end wall **13**, in separating relation to the balls **17**, and through the central opening **19** in the spring **18**.

The spring **18** tends to urge the balls **17** towards the end wall **13** and in gripping engagement with the shank **23** and the interior frusto conical face **12**. Any retracting force applied on the pin **22** will merely serve to tighten the gripping engagement by which the pin **22** is held. The gripping ridges or flanges **15** serve to prevent undesired turning of the button B with respect to the fabric **25**.

If it is desired to remove the button B from the fabric **25**, a stiff wire, such as needle (not shown), may be inserted through the side wall opening **21** to engage the spring **18** on the portion thereof facing the balls **17** and move it slightly towards the disc **20**. The removal of the spring force on the balls **17** releases the grip thereof on the shank **23** so that the pin **22** may be withdrawn.

The lock thus provided has been found to be positive yet readily releasable when desired and the ease of application results in a great saving of time in applying buttons to garments.

We claim:

1. Mounting mechanism for an article comprising a casing having a side wall exteriorly disposed with respect to said article and having an end portion mounted in fixed relation in said article, said casing having a fixed outer end closure wall oppositely disposed with respect to said end portion and providing therewith an interior chamber, said end closure wall having a central opening, the interior of said side wall being of frusto-conical shape converging toward said end wall, a plurality of spherical balls in said chamber, a closure member at the end portion of said casing, said casing at its inner end being rigidly closed by said closure member and the article, a resilient member interposed between said closure member and said balls and engaging said closure member and said balls, said resilient member having a central opening aligned with said other central opening, and a pin having an enlarged head movable into clamping position with respect to the outer face of said end closure wall, said pin having a cylindrical shank extending through said central openings and between said balls and held by the engagement of said balls with said frusto-conical side wall and therewith against retraction, the side wall of said casing having an opening therethrough aligned with the place of engagement of said resilient member and said balls for releasing access to said resilient member.

2. A lock mounting for an article comprising a pin having an enlarged head and a cylindrical shank, a casing extending from the article having a side wall exteriorly disposed with respect to the article, said casing having an integral exterior end closure wall with outwardly extending gripping projections towards which said head is advanced for clamping, said end wall having a central opening therethrough for the reception of the pin shank, the interior of said side wall being frusto-conical and converging towards said end wall, a plurality of spherical balls inwardly of said end wall for the reception of the shank therebetween, a spring in direct engagement with said balls and having a central opening for the passage of the

shank, said side wall having an opening therethrough aligned with the place of engagement of said spring and said balls for releasing access to said spring, and a closure member at the end of said casing opposite said end wall with which said spring engages, said casing at its inner end being rigidly closed by said closure member and said article.

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