Feb. 2, 1960 K. B. PLISZCZAK ET AL 2,923,042

LOCK MOUNTING FOR ARTICLES WITH PINS

Filed April 1, 1957

Fig. 1.

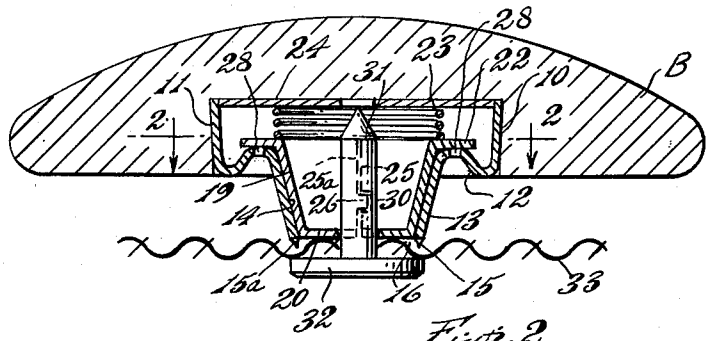


Fig. 2.

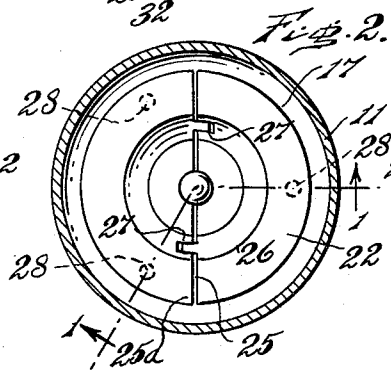


Fig. 4.

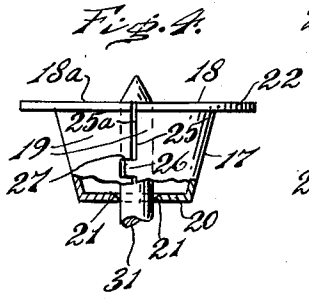


Fig. 5.

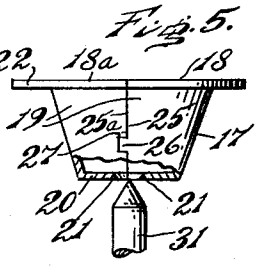
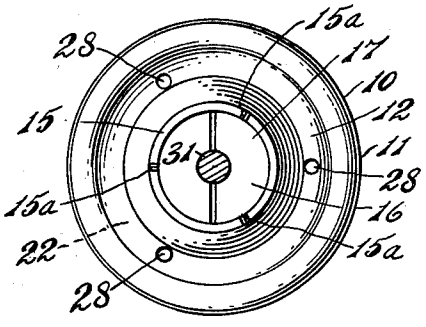


Fig. 3.



INVENTOR
Karl B. Pliszczak
Bruno T. Plizak
BY
B. T. Wolcenmitt
ATTORNEY

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LOCK MOUNTING FOR ARTICLES WITH PINS

Karl B. Pliszczak and Bruno T. Plizak, Philadelphia, Pa.

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3 Claims. (Cl. 24—104)

This invention relates to pin lock mountings and more particularly to an improved pin lock mounting suitable for, but not limited to, holding buttons or the like on garments.

It is the principal object of the present invention to provide a pin lock mounting of simplified construction and in which important components can be made as stampings.

It is a further object of the invention to provide a pin lock mounting which is particularly suited for attaching buttons to garments and with improved provisions for releasing the lock, as required, for removal of the buttons for cleaning of the garments.

It is a further object of the invention to provide a pin lock mounting which is reliable in its action, firm in its gripping, but which can be easily applied or removed as desired.

It is a further object of the present invention to provide a pin lock mounting which is very compact so that it occupies a relatively small space between the article, such as a button, to be mounted, and the material, such as the fabric of a garment, on which the article is mounted.

Other objects and advantageous features of the invention will be apparent from the description 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 a transverse central sectional view, greatly enlarged, of a pin lock mounting in accordance with the invention, and taken approximately on the line 1—1 of Fig. 2;

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

Fig. 3 is an end elevational view of the pin lock mounting before mounting and with the head of the pin removed;

Fig. 4 is a fragmentary view partly in elevation and partly in section showing the relation of the locking member to the pin; and

Fig. 5 is a fragmentary view similar to Fig. 4 prior to the insertion of the pin.

It should, of course, be understood that the description and drawings herein are illustrative merely, and that various modifications and changes can 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, an article B, such as a button, is shown with which the pin lock mounting is adapted for use. Secured to the article B, in any desired manner, a casing 10 is provided having a frusto-conical or flared side wall portion 11 from which an inwardly extending and depressed connecting portion 12 extends. Axially aligned with the wall portion 11 and extending from the connecting portion 12 a wall portion 13 is provided having an interior

frusto-conical surface 14. The wall portion 13 has a face or rim 15 with a plurality of projections 15a extending therefrom for gripping engagement with the fabric or the like to prevent rotation of the casing 10, and surrounds a central pin receiving opening 16. The casing 10 is particularly adapted to be made as a metal stamping.

Within the interior of the casing 10 a pin locking member 17 is provided, preferably also formed of a pair of like metal stampings.

The locking member 17 is preferably made in two sections 18 and 18a, each of the same shape, and has a frusto-conical wall portion 19 with its outer face for engagement with the surface 14. At the smaller extremity of the wall portion 19 in wardly extending rim 20 is provided with an inner terminus 21 of V shape in vertical cross section surrounding a gripping opening for locking engagement, as hereinafter pointed out. At the larger extremity of the wall portion 19 an outwardly flaring rim 22 is provided, which, in one position of the locking member 17, can engage with the interior of the connecting portion 12 and also serves as an abutment for one end of a coil spring 23. The other end of the coil spring 23 can be engaged with any desired abutment 24, such as a plate or the interior of the article B.

Each of the sections 18 and 18a has edge margins 25 and 25a, one of which has a tongue 26 and the other a complemental notch 27 for positioning the sections 18 and 18a relative to each other and holding them for longitudinal movement together but permitting limited movement inwardly and separation outwardly.

The connecting portion 12 has a plurality of openings 28 therethrough, three preferably being provided at equally spaced locations so that a pin or needle (not shown) can be inserted into engagement with the rim 22 to move the locking member 17 downwardly for release.

A pin 30 is provided having a pointed shank 31 and an enlarged and preferably disc like head 32. The pin 30 is adapted to be forced through textile fabric 33 or like material of a garment or other object with the head 32 in engagement with one side face of the fabric 33.

The shank 31 of the pin 30 is then inserted through the opening 16 and through the gripping opening 21.

The spring 23 urges the locking member 17 so that its outer face 19 engages the surface 14 and the separate sections are forced inwardly with the gripping edges of the rim 20 in locking engagement with the shank 31 of the pin 30. Any retracting force applied on the pin 30 merely serves to tighten the gripping engagement by which the pin 30 is held.

If it is desired to release the locking of the pin 30 this can be readily effected by inserting a pin or needle (not shown) into one of the openings 28 and against the rim 22 to force the locking member 17 against the force of the spring 23 and permit separation from gripping engagement of the edges of the rim 20. With the locking member 17 held out of gripping action, the pin 30 can be readily withdrawn.

We claim:

1. Mounting mechanism for an article comprising a casing having a side wall portion for mounting the casing with respect to said article and extending longitudinally, a connecting portion extending laterally inwardly from said side wall portion and an outer longitudinally extending side wall portion with an interior surface converging towards its outer end, said outer side wall portion having a central opening at its outer end, a locking member interiorly disposed in said casing, said locking member having a plurality of laterally separable sections, said locking member having an outer surface portion converging towards its outer end for engagement

with said first mentioned interior surface, said locking member at its outer end having a transverse wall provided with a central opening with laterally extending pin gripping portions therearound, said locking member having a rim extending laterally from its inner end and movable towards said connecting portion, a resilient member in engagement with said rim for urging said rim towards said connecting portion, and a pin having an enlarged head and a cylindrical shank extending through said central openings for gripping engagement by said gripping portions, said connecting portion having an opening therethrough for access to said rim for releasing said locking member.

2. Mounting mechanism for an article comprising a casing having a side wall portion for mounting the casing with respect to said article and extending longitudinally axially, a connecting portion extending laterally inwardly from said side wall portion and an outer longitudinally extending side wall portion with an interior surface converging towards its outer end, said outer side wall portion having a central opening at its outer end, a locking member interiorly disposed in said casing, said locking member having a plurality of laterally separable sections, said locking member having side walls with an outer surface portion converging towards its outer end for engagement with said first mentioned interior surface, said locking member at its outer end having a transverse wall provided with a central opening with laterally extending pin gripping edges therearound, said locking member having a rim extending laterally from its inner end and movable towards said connecting portion, said locking member side walls intermediate said rim and said transverse wall having interengaging portions for holding said separable sections for movement together longitudinally axially but permitting lateral separation of said sections, a resilient member in engagement with said rim opposite said connecting portion for urging said rim towards said connecting portion, and a pin having an enlarged head and a cylindrical shank extending through said central openings for gripping engagement by said gripping edges.

3. Mounting mechanism for an article comprising a casing having a side wall portion for mounting the casing with respect to said article and extending longitudinally axially, a connecting portion extending laterally inwardly from said side wall portion and an outer longitudinally extending side wall portion with an interior surface converging towards its outer end, said outer side wall portion having a central opening at its outer end, a locking member interiorly disposed in said casing, said locking member having a plurality of laterally separable sections, interengaging portions on said sections for holding said sections for movement together longitudinally axially but permitting lateral separation of said sections, said locking member having an outer surface portion converging towards its outer end for engagement with said first mentioned interior surface, said locking member at its outer end having a transverse wall provided with a central opening with laterally extending pin gripping edges therearound, said locking member having a rim extending laterally from its inner end and movable towards said connecting portion, a resilient member in engagement with said rim opposite said connecting portion for urging said rim towards said connecting portion, and a pin having an enlarged head and a cylindrical shank extending through said central openings for gripping engagement by said gripping edges, said connecting portion having an opening therethrough for access to said rim for releasing said locking member.

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