United States Patent [19]

Wolny

[11] 3,757,388

[45] Sept. 11, 1973

[54] **GARMENT HANDLING**

[76] Inventor: **Andrew Blazej Marian Wolny**, 44 Berryhedge Ln., Winshill, Burton-on-Trent, England

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[21] Appl. No.: **244,733**

[52] **U.S. Cl.** ..... **24/113 MP**, 51/265, 68/235, 206/1.5

[51] **Int. Cl.** **A44b 1/16**

[58] **Field of Search** ..... 24/113 R, 113 MP, 24/90.5, 119, 201 A; 206/1.5, 5 A; 15/268, 257 R; 51/265, 171; 292/91; 68/235 R

[56] **References Cited**

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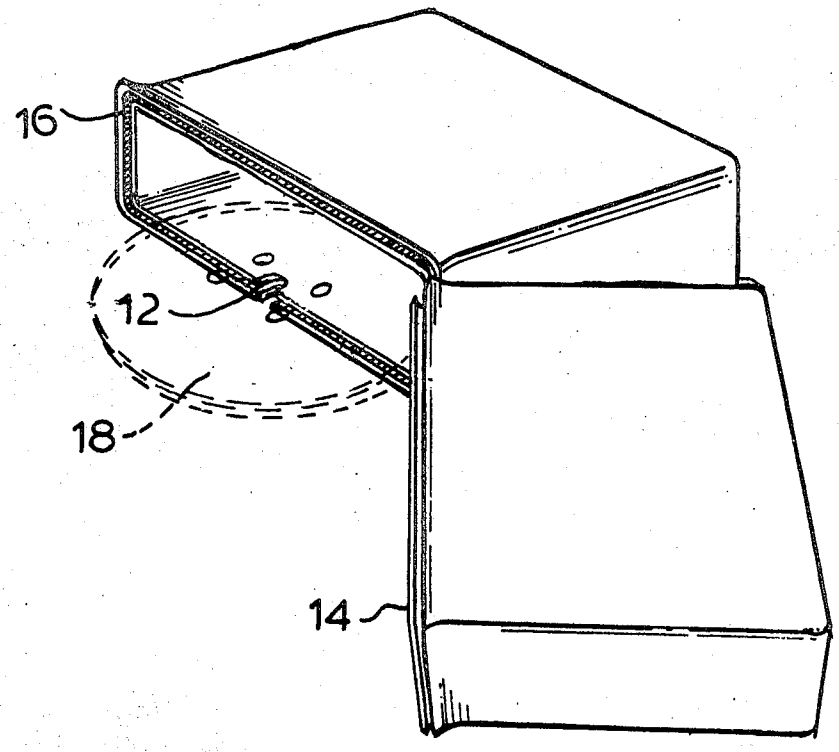
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Primary Examiner—Francis K. Zugel
Assistant Examiner—Kenneth J. Dorner
Attorney—Samuel Scrivener, Jr. et al.

[57] **ABSTRACT**

To prevent damage to buttons and like attachments on garments during operations such as dry-cleaning, there is disclosed a protective capsule having two hinged sections which may be fastened together to define a closed cavity around a button. There is also disclosed a releasable catch having a resilient snap action and being so configured as to reduce the possibility of accidental unfastening.

5 Claims, 12 Drawing Figures



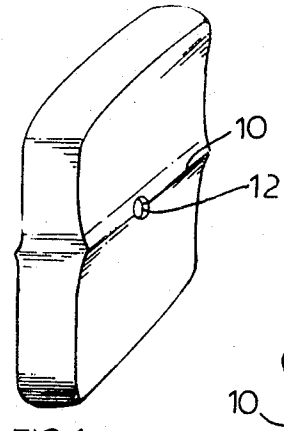


FIG. 1.

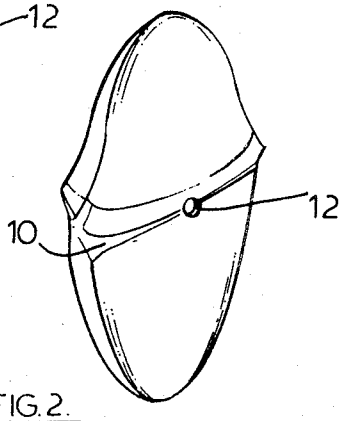


FIG. 2.

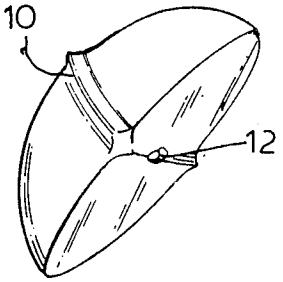


FIG. 3.

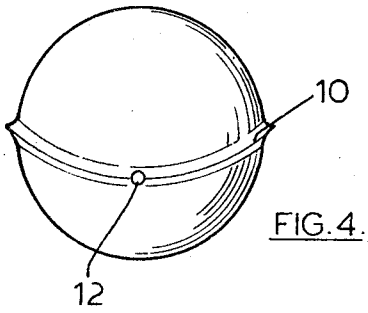


FIG. 4.

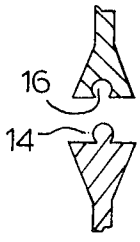


FIG. 5.

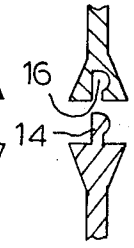


FIG. 6.

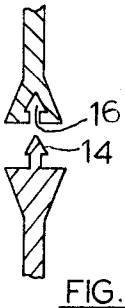


FIG. 7.

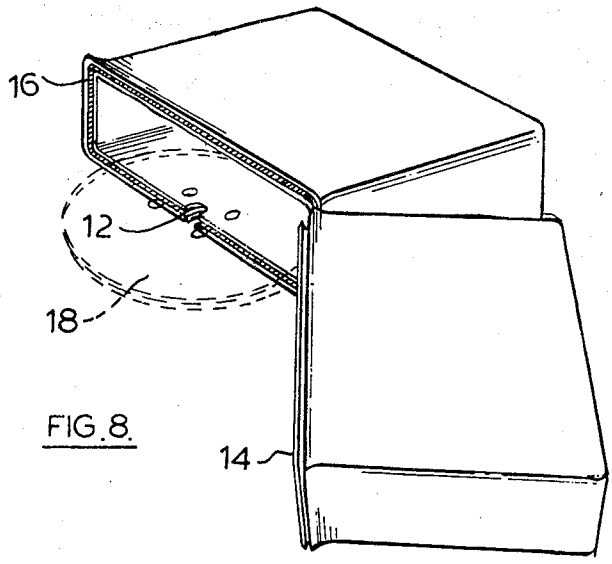


FIG. 8.

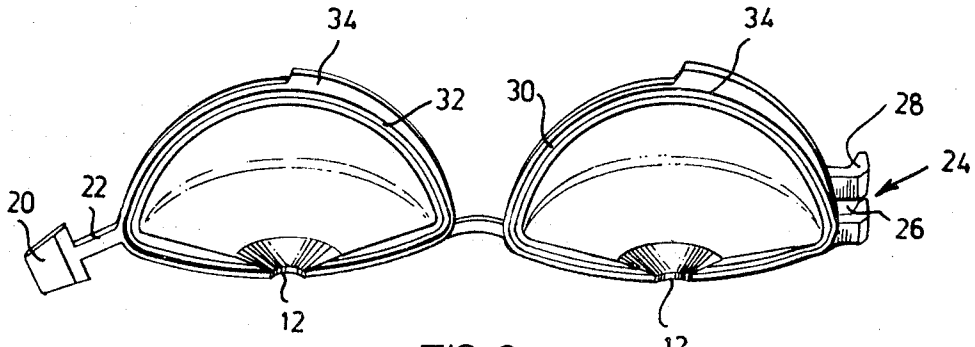


FIG. 9.

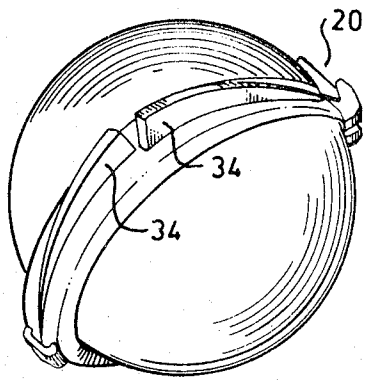


FIG. 10.

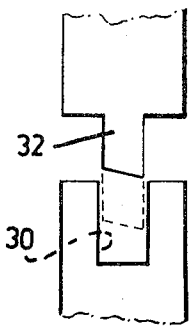


FIG. 11.

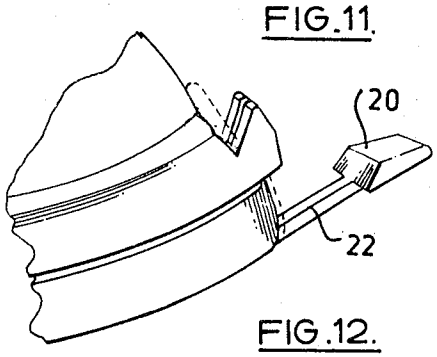


FIG. 12.

GARMENT HANDLING

The present invention relates to garment-handling.

In such garment-handling operations as dry-cleaning, domestic or industrial washing or the like, buttons or other relatively rigid attachments may be damaged. The present invention seeks to reduce the occurrence of such damage without requiring the removal and subsequent re-fitting of the attachments.

According to one aspect of the present invention, a protective capsule adapted to prevent damage to buttons or like attachment on garments during garment-handling operations has an interior chamber dimensioned to receive a button or like attachment, at least one aperture positioned to receive the means attaching the button or like attachment to the garment, and means to releasably close the capsule so as to encase the button or like attachment.

A protective capsule constructed in accordance with the invention may be of any convenient shape and is preferably formed of a non-rigid plastics material, particularly a thermoplastic material. The capsule may be formed in two separate sections or in two sections which are connected together by a hinge portion. Recesses are formed in the edges of the sections and constitute the aperture or apertures when the capsule is closed.

In one embodiment of the invention, mating edges of the two sections are able to be releasably secured together, conveniently by engagement of a bead formed along one edge within a complementary slot or channel formed in the opposite edge.

According to a second aspect of the present invention, a catch for releasably holding two members in engagement comprises a tab connected to the first of the members by an elastically deformable link and an abutment connected to the second member, the abutment having a recess for receiving at least part of the tab and having means projecting therefrom which, when said members are in engagement, necessitate elastic deformation of said link to engage the tab in the recess and hold the two members in engagement.

Preferably, the free end of the tab is in intimate contact with the surface of the second member when the tab is engaged in the recess.

The catch is particularly useful in conjunction with a protective capsule of the invention, the elastic linkage reducing the possibility of opening of the capsule during operations in which the capsule will be subject to agitation.

The invention is further described, by way of example, with reference to the accompanying drawings, iin which:

FIGS. 1 to 4 show four capsules constructed in accordance with the present invention,

FIGS. 5 to 7 are fragmentary sections through a capsule showing three forms of releasable closing means,

FIG. 8 is a perspective view of the capsule of FIG. 1 in an open position being fitted around a button which is shown in phantom,

FIG. 9 shows a modified capsule open,

FIG. 10 shows the capsule of FIG. 9 closed,

FIG. 11 is a section on an enlarged scale showing mating edges of the two capsule sections, and

FIG. 12 shows a catch in its open and closed positions.

The capsules shown in FIGS. 1 to 8 are conveniently formed of a non-rigid plastics material, typically a thermoplastic material, by, for example, injection moulding. Each capsule is divided along a medial line 10 to form two walled sections and an aperture 12 is formed on the medial line. Preferably the capsules are only partially divided so that a thin, flexible hinge portion remains.

Mating edges of the two walled sections of the capsules are provided with releasable closing means which, as is shown in FIGS. 5 to 7, comprise a bead 14 engageable in a channel 16. The beads 14 and channels may extend around the entire extent of the mating edges as is shown in FIG. 8 or may be shorter. Similarly, the closing means may comprise one or more projections or pegs engageable in bores.

FIG. 8 shows the capsule of FIG. 1 being positioned around a button 18. The aperture 12 which allows the cotton (not shown) joining the button 12 to a garment (not shown) to pass through the capsule may be symmetrically disposed about the two mating edges as is shown in FIG. 1 or may be formed wholly within one part of the capsule.

The two parts of the capsule are snapped together to enclose the button 18 which is thereby protected from damage during a subsequent garment handling operation such as dry cleaning.

In the modification shown in FIGS. 9 to 12, a releasable catch is provided to hold the two parts of the capsule together. The catch comprises a tab 20 joined to one of the parts of the capsule by a link 22 which is elastically deformable, and an abutment 24 which has a central opening 26 to receive the link 22 and a generally V-shaped recess 28 to receive an edge of the tab 20. When the two wall sections of the capsule are brought together and the catch fastened, the tab 20 must be firmly pressed over projections between the recess 28 and the end of the abutment. The link 22 is thereby elastically extended and the tab 20 snaps into the recess.

As is clear from FIG. 12, the edge of the tab 20 which engages in the recess 28 is chamfered so that the said edge cooperates with the recess 28 to urge the tab 20 against the wall of the capsule. Thus the catch is unlikely to unfasten during an operation such as dry-cleaning. The catch may be unfastened manually by lifting the free end of the tab away from the adjacent wall of the capsule whereby the tab is rocked about the projections on the abutment 24 and the chamfered edge is lifted out of the recess 28.

FIG. 11 shows that the mating edges of the two parts of the capsule provide a seal against the ingress of, for example, cleaning fluids. One mating edge is formed with a channel 30 and the other mating edge is formed with a rib 32 having an inclined end wall.

Upstanding extensions 34 on the two walled sections of the capsule facilitate opening of the capsule when the catch is released.

In each of the embodiments illustrated, the entire capsule may be formed integrally from a plastics material such as polyethylene or polypropylene. Conveniently the capsules are injection-moulded.

I claim:

1. A protective capsule adapted to prevent damage to buttons or like attachments on garments during garment handling operations, comprising two co-operating wall sections having mating edges and defining between

them a chamber dimensioned and configured to receive a button, a hinged connection between said wall sections for hinging movement of said walled sections between an open position and a closed position in which said mating edges are in intimate contact with one another, sealing means spaced along said mating edges to provide a fluid seal when said wall sections are in closed position, a single opening in said capsule positioned and dimensioned to receive means attaching said button to said garment and defined by a recess formed in at least one of said mating edges, and a snap-closure for releasably retaining said wall sections in said closed position, whereby when said capsule is in said closed position over a button to be protected with said means attaching said button to said garment occupying said single opening, said capsule is substantially sealed against fluid leakage into said chamber

2. A capsule according to claim **1**, wherein said snap-closure is spaced along said mating edges.

3. A capsule according to claim **1** wherein said snap-closure is provided on said walled sections at regions thereon remote from said hinged connection.

4. A capsule according to claim **3**, wherein said snap-closure is a catch comprising a tab, an elastically deformable link between said tab and the first of said walled sections and an abutment connected to the second of said wall members, said abutment having a recess for receiving at least part of said tab and having means projecting therefrom which, when said capsule is closed, necessitate elastic deformation of said link to engage said tab in said recess and hold said wall sections in said closed position.

5. A capsule according to claim **4**, wherein, when said tab is engaged in said recess, an end portion of said tab remote from said link is urged into intimate contact with said second wall section whereby to prevent accidental unfastening of said catch.

* * * * *

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3757388 Dated September 11, 1973

Inventor(s) Andrew Blazej Marian Wolny

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

[30] Foreign Application Priority Data

April 21, 1971 Great Britain 10,383/71

Signed and sealed this 2nd day of July 1974.

(SEAL)
Attest:

EDWARD M. FLETHCER,JR
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

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