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(54) **SLIDER FOR A RECLOSABLE POUCH**

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(57) **ABSTRACT**

A slider for opening and closing a mouth of a thermoplastic pouch includes first and second sidewalls. A third wall connects the first and second sidewalls and is transverse to the first and second sidewalls. A compressible gripping material is disposed on at least one of the first and second sidewalls.

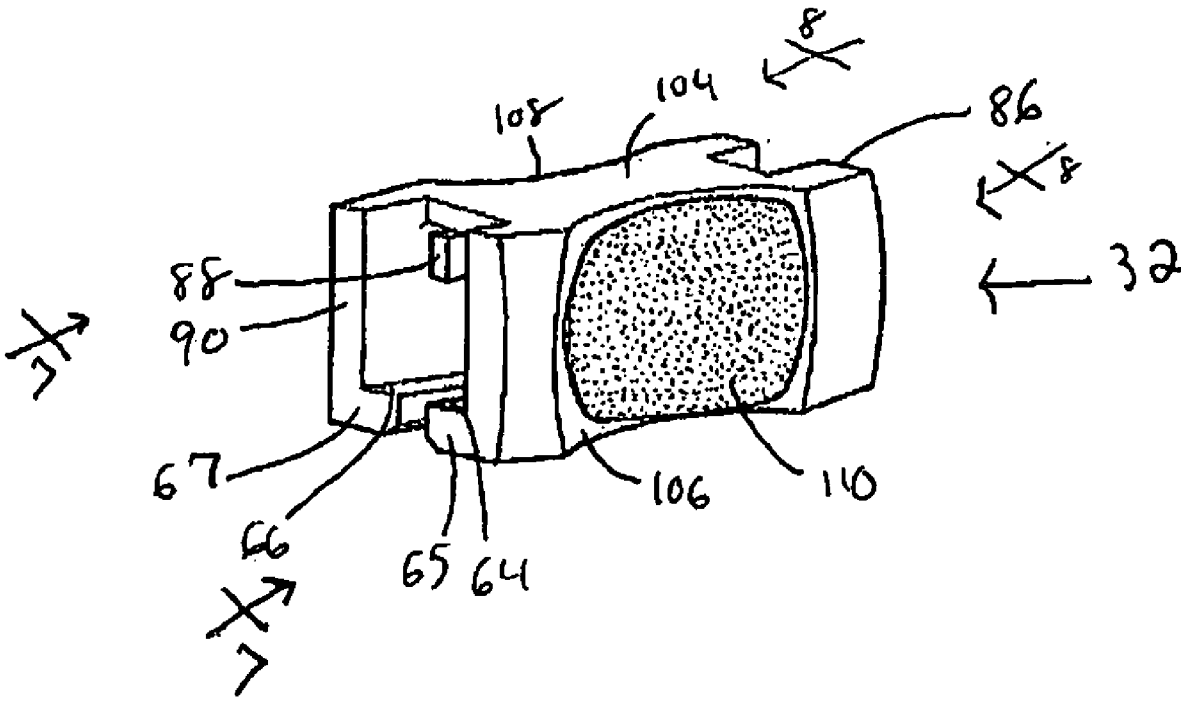
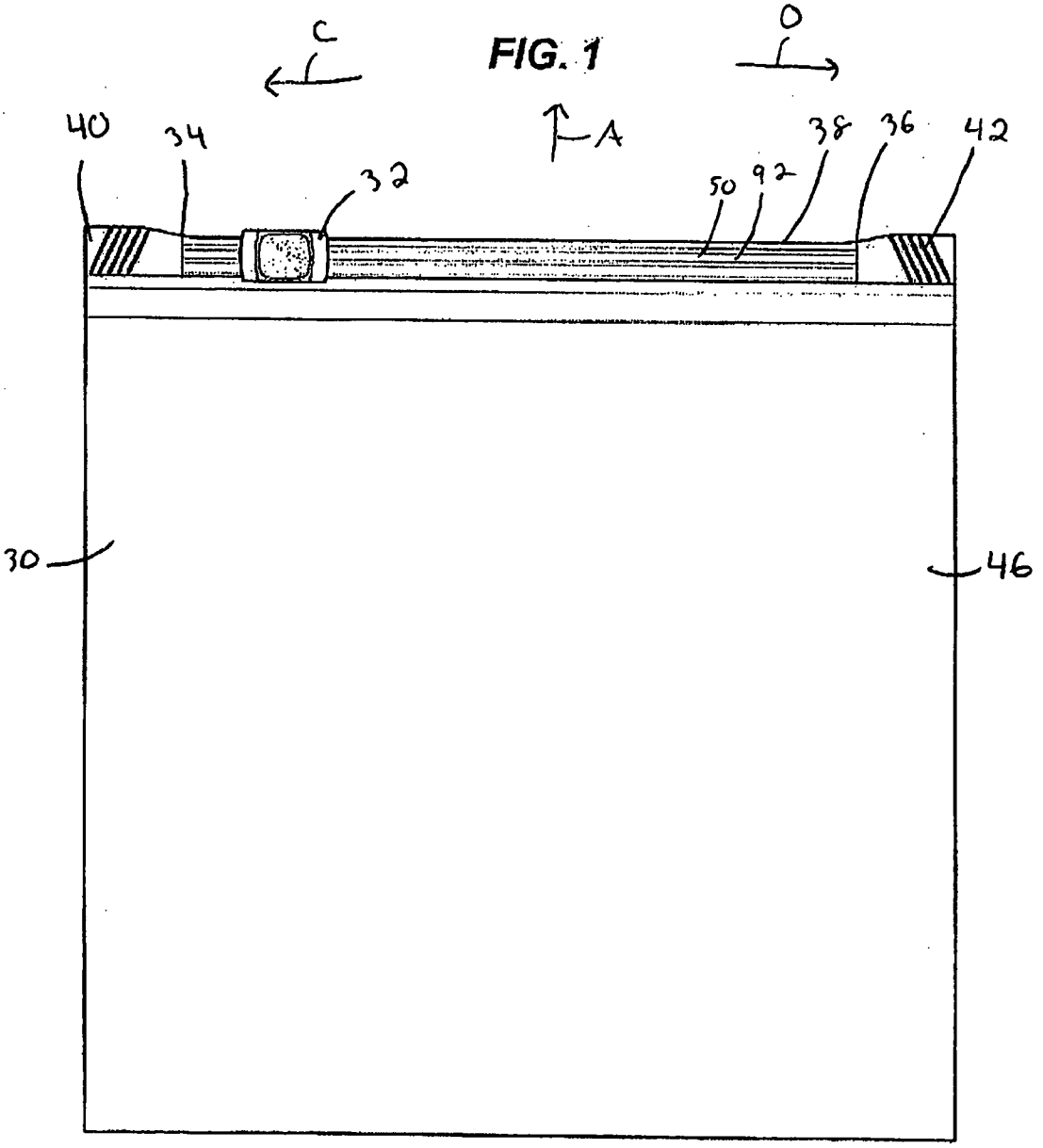


FIG. 1



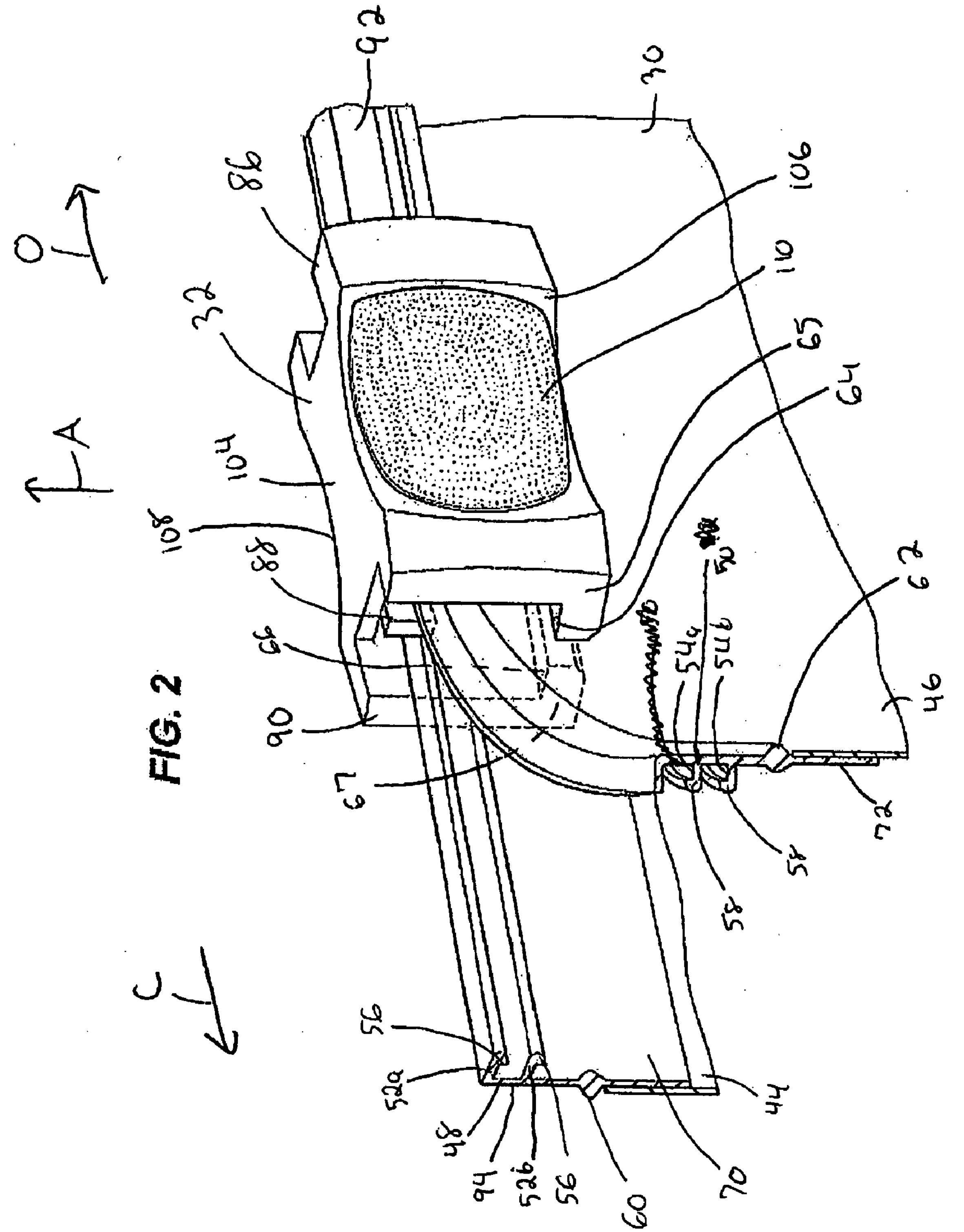

O
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FIG. 2

FIG. 3

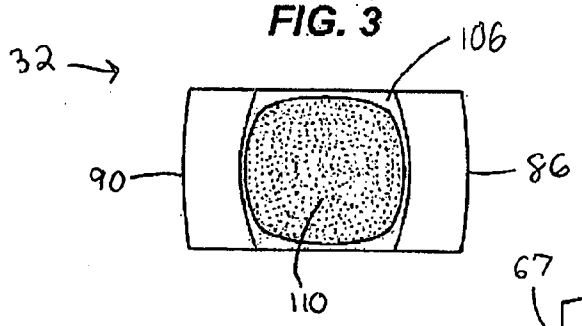


FIG. 4

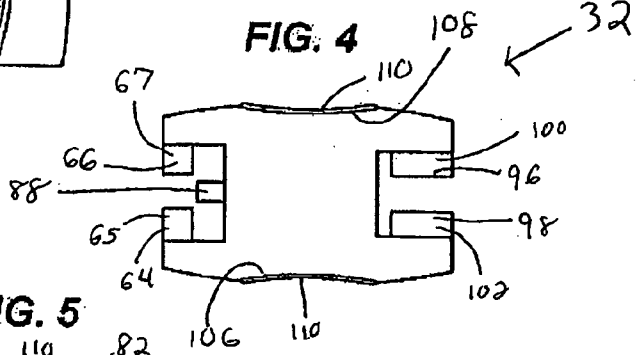


FIG. 5

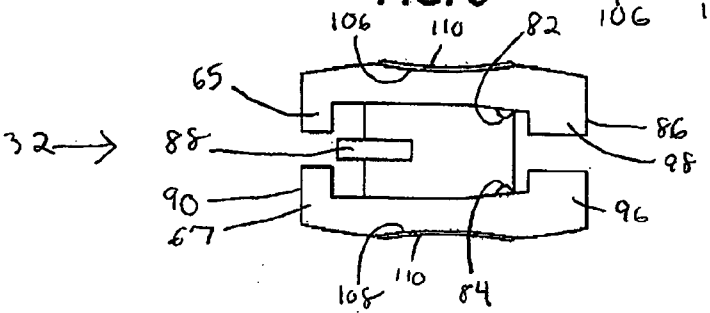


FIG. 7

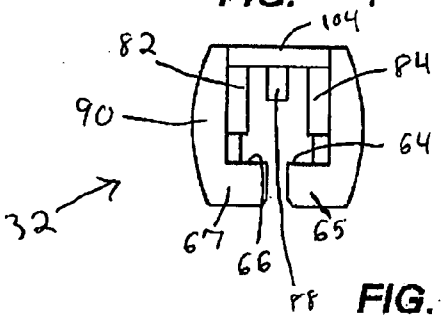


FIG. 8

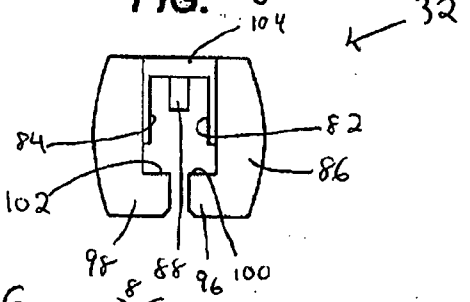
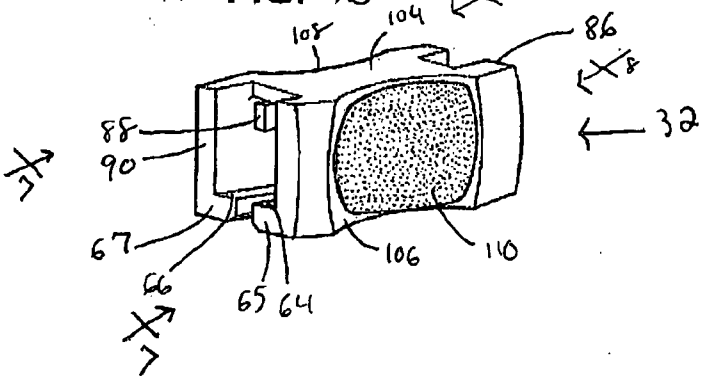


FIG. 6



SLIDER FOR A RECLOSABLE POUCH

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] Not applicable

REFERENCE REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable

SEQUENTIAL LISTING

[0003] Not applicable

BACKGROUND OF THE INVENTION

[0004] 1. Field of the Invention

[0005] The present invention relates to pouches, and more particularly, to reclosable pouches having sliders movable between ends of the pouch to open or close the pouch.

[0006] 2. Description of the Background of the Invention

[0007] Ishii et al. U.S. Pat. No. 4,928,358 discloses a zipper **23** and a pull-tab **21** connected to the zipper **23**. The pull-tab **21** includes grip mounds **27** constructed of an elastic and roughened material that provides a slip resistant and easy-to-grip property.

[0008] Ishii U.S. Pat. No. 4,976,015 discloses a pull-tab **18** for a zipper **10**. The surface of the pull-tab is formed of an elastic gripping material **23**.

[0009] Ausnit et al. U.S. 2004/0136618 discloses in **FIG. 2** thereof opposed zipper strips **17**, **19** having interlocking closure members **20**, **22**, respectively, and also having first and second sealing members **24**, **26**, respectively. **FIG. 10** shows alternative sealing members **38**, **38'** made of a compressible foam material.

SUMMARY OF THE INVENTION

[0010] According to one embodiment of the present invention, a slider for opening and closing a mouth of a thermoplastic pouch includes first and second sidewalls. A third wall connects the first and second sidewalls and is transverse to the first and second sidewalls. At least one compressible gripping material is disposed on at least one of the first and second sidewalls.

[0011] According to another embodiment of the present invention, a pouch includes a first closure element carried by a first pouch wall. A second closure element is carried by a second pouch wall. The closure elements seal a mouth of the pouch closed when pressed together. A slider traverses across the mouth of the pouch from a first end of the mouth to a second end of the mouth. The slider includes a channel having opposed walls in contact with exterior surfaces of the pouch. The slider further includes a separator finger disposed between the closure elements. At least one of the first and second sidewalls of the slider includes a compressible gripping material thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] **FIG. 1** is an elevational view of a pouch having a slider thereon;

[0013] **FIG. 2** is an enlarged fragmentary isometric view of the pouch and slider of **FIG. 1**;

[0014] **FIG. 3** is a side elevational view of the slider of **FIG. 1**;

[0015] **FIG. 4** is a plan view of the slider of **FIG. 1**;

[0016] **FIG. 5** is a bottom elevational view of the slider of **FIG. 1**;

[0017] **FIG. 6** is an isometric view of the slider of **FIG. 1**;

[0018] **FIG. 7** is a front elevational view taken generally along the view lines **7-7** of **FIG. 6**; and

[0019] **FIG. 8** is a rear elevational view taken generally along the view lines **8-8** of **FIG. 8**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] Referring to **FIG. 1**, a pouch **30** includes a slider **32** that moves between first and second ends **34**, **36** of a mouth **38** of the pouch **30** for opening and closing the mouth **38**. The pouch may be made from any suitable thermoplastic film such as, for example, low density polyethylene, linear low density polyethylene, substantially linear copolymers of ethylene and a C3-C8 α-olefin, polypropylene, polyvinylidene chloride, mixtures of two or more of these polymers, or mixtures of one of these polymers with another thermoplastic polymer. The end **34** includes an end stop **40**, and the end **36** includes an end stop **42**. Each of the end stops **40**, **42** may be formed in any suitable manner such as by ultrasonically sealing opposed walls of the mouth **38** at the ends **34**, **36**. Referring to **FIG. 2**, the pouch **30** includes first and second pouch walls **44**, **46** carrying first and second closure elements **48**, **50**, respectively. The first closure element **48** includes one or more ribs **52**, such as first and second ribs **52***a*, **52***b*. Likewise, the second closure element **50** includes one or more ribs **54**, such as ribs **54***a*, **54***b*. The ribs **52***a*, **52***b* include downwardly extending hook members **56**, while the ribs **54***a*, **54***b* include upwardly extending hook members **58**. When the closure elements **48**, **50** are pressed together, the hook members **56**, **58** interlock to close and thereby seal the mouth **38** in a closed state. The first closure element **48** includes a projecting rail **60**, while the second closure element **50** includes a projecting rail **62**. A surface **64** of a first guide portion **65** of the slider **32** underlies the rail **62**, and a surface **66** of a second guide portion **67** of the slider **32** underlies the rail **60**. The interference relationship of the surfaces **64**, **66** with the rails **60**, **62** inhibits removal of the slider **32** in the direction of an arrow A, generally perpendicular to the mouth **38** of the pouch **30**. The first closure element **48** includes a flange portion **70** joined to the first pouch wall **44** in any suitable manner such as by a layer of thermoplastic. It should be noted that while the closure elements **48**, **50** and the pouch wall **44**, **46** are illustrated as separate structures, the closure elements **48**, **50** could be integral with the walls **44**, **46**, respectively. The closure element **50** includes a flange portion **72** joined to the second pouch wall **46**.

[0021] With reference to **FIGS. 1-8**, when the slider **32** is moved in the direction of an arrow C, a pair of closing bars **82**, **84** disposed at a pinching end **86** of the slider **32** presses the ribs **52**, **54** together to interlock same. When moved in the direction of an arrow O, a downwardly depending

separating finger **88** disposed at a separating end **90** of the slider **32** disengages the ribs **52** from the ribs **54** to open the mouth **38**.

[0022] Referring to **FIGS. 5, 7**, and **8**, closing bars **82**, **84** are disposed at or near the pinching end **86**. The closing bars **82**, **84** are disposed in close contact with exterior surfaces **92**, **94** (**FIG. 2**) of the closure elements **48**, **50**. The closing bars **82**, **84** may have a generally round shape as shown in **FIG. 5** to inhibit tearing of the closure elements **48**, **50** as the slider **32** moves therealong. The pinching end **86** includes guide portions **96**, **98** having surfaces **100**, **102** that underlie the rails **60**, **62**, respectively, to retain the slider **32** on the pouch **30**. As shown in **FIG. 2**, the separator finger **88** need not extend down to the position of the lower ribs **52***b*, **54***b* and optionally might only extend from a top portion **104** of the slider **32** down to the position of the upper ribs **52***a*, **54***a* and such positioning may be sufficient to disengage both of the ribs **52***a*, **52***b* from the ribs **54***a*, **54***b* during movement of the slider **32** in the direction of the arrow O. The slider **32** includes curved gripping walls **106**, **108**, wherein the gripping walls **106**, **108** may be non-interrupted or the gripping walls **106**, **108** may include ridges or protrusions thereon. Each of the gripping walls **106**, **108** includes a compressible gripping material **110** that serves as a comfortable gripping surface to enhance user gripping comfort as the user moves the slider **32** along the mouth **38**. The compressible gripping material **110** may comprise for example, an open or closed cell foam, a thermoplastic elastomer, a compressible polymer, rubber, a textile, and/or any other material having cushioning, textured, or non-slip characteristics known to those skilled in the art. Further, the compressible gripping material **110** may be somewhat compressible under the application of finger pressure. In one embodiment, a two-shot injection molding process known to those skilled in the art may be used to construct the slider **32**. A first shot of a thermoplastic elastomer is injected into a mold to form a body of the slider **32**, wherein the body in part comprises the gripping walls **106**, **108**. Thereafter, the mold is adjusted to allow a second shot of thermoplastic elastomer into the mold to form the compressible gripping material **110** onto the gripping walls **106**, **108**. In a second embodiment, the compressible gripping material **110** is secured to the gripping walls **106**, **108** by a suitable adhesive. The gripping comfort afforded by the compressible gripping material **110** may be especially advantageous for users opening and closing pouches numerous times per day or for users with sensitive fingers or perhaps even an arthritic condition.

INDUSTRIAL APPLICABILITY

[0023] The slider for opening and closing a pouch described herein advantageously provides for a compressible gripping material to be disposed on a sidewall of the slider. The compressible gripping material advantageously provides for a comfortable gripping surface to assist a user in opening and closing the pouch.

[0024] Numerous modifications will be apparent to those skilled in the art in view of the foregoing description. Accordingly, this description is to be construed as illustrative only and is presented for the purpose of enabling those skilled in the art to make and use the invention and to teach the best mode of carrying out same. The exclusive rights to all modifications which come within the scope of the appended claims are reserved.

We claim:

1. A slider for opening and closing a mouth of a thermoplastic pouch, comprising:

first and second sidewalls;

a third wall connecting the first and second sidewalls and transverse to the first and second sidewalls; and

at least one compressible gripping material disposed on at least one of the first and second sidewalls.

2. The slider of claim 1, wherein the sidewalls define a channel therebetween and a separator finger projects into the channel.

3. The slider of claim 1, in combination with a pouch having closure elements.

4. The slider of claim 3, wherein the closure elements are disposed between the sidewalls of the slider.

5. The slider of claim 1, wherein at least one of the sidewalls are curved.

6. The slider of claim 1, wherein the compressible gripping material is disposed on both of the first and second sidewalls.

7. The slider of claim 1, wherein the compressible gripping material is disposed on at least one of the first and second sidewalls by molding the compressible gripping material thereon.

8. The slider of claim 1, wherein the compressible gripping material is disposed on at least one of the first and second sidewalls by an adhesive.

9. The slider of claim 1, wherein the compressible gripping material comprises a thermoplastic elastomer.

10. The slider of claim 1, wherein the compressible gripping material comprises a foam.

11. The slider of claim 1, wherein the compressible gripping material comprises a polymer.

12. The slider of claim 1, wherein the compressible gripping material comprises rubber.

13. The slider of claim 1, wherein the compressible gripping material comprises a textile.

14. The slider of claim 1, wherein the compressible gripping material is compressible under the application of finger pressure.

15. A pouch, comprising:

a first closure element carried by a first pouch wall and a second closure element carried by a second pouch wall wherein the closure elements seal a mouth of the pouch closed when pressed together;

a slider that traverses across the mouth of the pouch from a first end of the mouth to a second end of the mouth wherein the slider includes a channel having opposed walls in contact with exterior surfaces of the pouch and wherein the slider further includes a separator finger disposed between the closure elements; and

first and second sidewalls of the slider wherein at least one of the sidewalls includes a compressible gripping material thereon.

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