Closure Device for a Reclosable Pouch

Inventor: James C. Pawloski, Bay City, MI (US)

Correspondence Address:
Kristin L. Chapman, Esq.
S.C. Johnson & Son, Inc.
1525 Howe Street
Racine, WI 53403 (US)

Publication Classification

- Int. Cl. 7: 65D 33/16
- U.S. Cl. 383/63

Abstract

A reclosable pouch includes a body portion having first and second opposing bag walls, wherein each bag wall has an internal side and first and second closure elements disposed on the internal sides of the first and second bag walls, respectively. A rib is disposed on the internal side of the first wall, wherein the rib is parallel to and spaced apart a sufficient distance from the first closure element to guide a user’s fingers when sealing the closure elements.
CLOSURE DEVICE FOR A RECLOSABLE POUCH

TECHNICAL FIELD

[0001] The present invention relates to closures for reclosable pouches, and more particularly, to such closures wherein at least one rib is disposed on a surface of the bag to guide a user’s finger when sealing closure elements.

BACKGROUND ART

[0002] A thermoplastic bag for the storage of items typically includes a closure mechanism comprising male and female closure elements or profiles attached to an inner surface of a bag wall. In addition, thermoplastic bags are known having one or more pairs of ribs on outer surface(s) of the bag wall straddling at least one of the closure elements to guide a user’s fingers when sealing the closure elements. Ribs have also been used on an internal surface of the thermoplastic bag closely spaced and adjacent the closure elements to assist in aligning the male and female closure elements when sealing the bag.

[0003] Hugues et al., U.S. Pat. No. 4,672,723 discloses a stabilized reclosable extruded plastic fastener. The fastener comprises a female profile on one wall of an extruded film material and a male profile on an opposite wall of the film material. Alignment ribs are spaced alongside and integral with a base area of the male profile to facilitate alignment of the male profile with the female profile during closing of the fastener.

[0004] Fisher U.S. Pat. No. 4,736,496, owned by the assignee of the present application, discloses a wide-track integral thermoplastic closure for a reclosable thermoplastic container. The closure includes ribs on either side of an element of the closure to assist in guiding a user’s fingers during closing of the thermoplastic container.

[0005] Tilman et al., U.S. Pat. No. 4,929,487 discloses a thermoplastic bag having male and female fastener profiles and at least one alignment rib integral with the film and disposed on an outer surface of a bag wall opposite and aligned with the male profile. The rib functions to stiffen the area of film occupied by the male profile and facilitate the alignment of the male and female fastener profiles.

[0006] Porchia et al., U.S. Pat. No. 5,012,561, also owned by the assignee of the present application discloses a closure for reclosable thermoplastic containers. The closure comprises male and female closure elements, wherein the male closure element includes a male profile member and ribs disposed on either side of the male profile member and attached thereto by a base. The ribs are of a sufficient size and proximity to the male profile member so as to move together as a unit with the male profile member when the male and female closure elements are engaged or disengaged.

[0007] Dais et al., U.S. Pat. No. 5,140,727, owned by the assignee of the present application, discloses a zipper for reclosable thermoplastic bags and a process and apparatus for making the same. The zipper comprises opposing longitudinally extending interlockable rib and groove profiles. The rib profile defines a bulbous head that is generally triangularly shaped in cross-section, a stem, and optionally, one or more ribs adjacent the stem.

[0008] Tilman, U.S. Pat. No. 5,209,574 discloses a reclosable plastic bag having a sliderless zipper. The bag includes front and rear walls sealed along three edges to form a mouth or opening. Male and female profiles are attached to internal surfaces of the front and rear walls, respectively, wherein the male and female profiles are engageable to close the opening. Two ribs are provided on an outside surface of the front wall, one on each side of the male profile, to define a valley therebetween. Similarly, two additional ribs are formed on the outside surface of the rear wall, one on each side of female profile, to define a valley therebetween. The valleys act as finger guides for the user of the bag.

[0009] Scott et al., U.S. Pat. No. 5,368,394 discloses a reclosable bag having a stabilizer wedge zipper. The reclosable bag comprises front and rear walls sealed along three edges to form an opening. Male and female profiles are attached to internal faces of the walls. Each of the male and female profiles includes two stabilizer wedges that assist in transmitting forces to male and female profiles during opening of the bag.

SUMMARY OF THE INVENTION

[0010] According to one aspect of the present invention, a reclosable pouch comprises a body portion having first and second opposing bag walls, wherein each bag wall has an internal side. First and second closure elements are disposed on the internal sides of the first and second bag walls, respectively, and a rib is disposed on the internal side of the first wall. The rib is parallel to and spaced apart a sufficient distance from the first closure element to guide a user’s finger when sealing the closure elements.

[0011] According to another aspect of the present invention, a zipper tape comprises first and second closure elements disposed on first and second surfaces, respectively, and a guide rib disposed on the first surface, wherein the guide rib is parallel to and spaced apart a sufficient distance from the first closure element to guide a user’s finger when sealing the closure elements.

[0012] According to yet another aspect of the present invention, a thermoplastic bag includes first and second body portions joined to one another to form bag walls, a first closure element disposed on an inside surface of the first body portion, and a second closure element disposed on an inside surface of the second body portion opposite the first closure element. A pair of guide ribs is disposed on the inside surface of the first body portion adjacent the first closure element and spaced from the first closure element by a distance sufficient to guide a user’s fingers during closure of the bag.

[0013] Other aspects and advantages of the present invention will become apparent upon consideration of the following detailed description and the attached drawings, in which like elements are assigned like reference numerals.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is an elevational view of a reclosable thermoplastic storage bag according to the present invention;

[0015] FIG. 2 is an enlarged, fragmentary, sectional view taken generally along the lines 2-2 of FIG. 1;
FIGS. 3-8 are sectional views similar to FIG. 2 illustrating alternative bags produced in accordance with the present invention;

FIG. 9 is an isometric view of a bag according to the present invention having intermittent ribs;

FIG. 10 is a fragmentary and enlarged elevational view of a portion of zipper tape according to the present invention;

FIG. 11 is an isometric view of an apparatus for producing bags according to the present invention;

FIG. 12 is a bottom elevational view of an extrusion die profile plate used in the apparatus of FIG. 11;

FIG. 13 is a cross-sectional view taken generally along the lines 13-13 of FIG. 11;

FIGS. 14-16 are isometric views similar to FIG. 11 of an alternate apparatus for producing bags according to the present invention;

FIG. 17 is a cross sectional view taken generally along the lines 17-17 of FIG. 16;

FIG. 18 is an isometric view similar to FIGS. 11 and 14-16 of an alternate apparatus for producing bags; and

FIG. 19 is an isometric view similar to FIGS. 11 and 14-16 of a still further alternate apparatus for producing bags.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referencing to FIG. 1, a reclosable pouch in the form of a thermoplastic storage bag 20 comprises first and second body portions 22, 24 joined to one another to form first and second bag walls 26, 28. The first and second bag walls 26, 28 are joined at first and second side portions 30, 32, respectively, and at a bottom portion 34. An opening 35 is disposed at a top portion 36 of the bag 20. A closure mechanism 38 and two lips 40 are also disposed at the top portion 36 of the bag 20.

Referencing to FIG. 2, female and male closure elements 44a, 44b of the closure mechanism 38 are disposed on opposing inside surfaces 46, 48 of the first and second body portions 22, 24, respectively. According to a first embodiment, guide ribs 50a, 50b are disposed on the inside surface 46 of the first body portion 22 on either side of (i.e., flanking) the female closure element 44a. The guide ribs 50a, 50b extend in a direction generally parallel to the closure elements 44a, 44b and are spaced sufficiently therefrom to guide a user’s finger(s) and facilitate alignment of the closure elements 44a and 44b into interlocking engagement when sealing the closure mechanism 38.

The male closure element 44b comprises a base 58 integral with flanking side members 54 and 56 and an arrow-shaped engagement member 60 that extends from the base 58. The female element 44a comprises a base 62 with a C-shaped profile member 64 extending therefrom, wherein the female element 44a is adapted to receive the male element 44b when pressure is exerted on the closure elements by a user’s finger(s) during closing of the bag. The side members 54 and 56 are of a sufficient size and proximity to the engagement member 60 such that the side members 54 and 56 move together with the member 60 when the members 60 and 64 are engaged and disengaged. The side members 54 and 56 also have a height which is less than the height of the engagement member 60, and the members 54 and 56 extend beyond tips 68 of the female profile member 64 when the engagement member 60 is engaged with the female profile member 64. Thus, at such time, the tips 68 of the female profile member 64 reside between the side members 54 and 56 and the male engagement member 60.

In a preferred embodiment, the guide ribs 50a, 50b are of the same height and such height is greater than the height of the female profile member 64. The guide ribs 50a, 50b can have any suitable cross-sectional configuration, such as an inverted T-shape, as seen in FIGS. 2-4 and 7-8, an inverted Y-shape as seen in FIG. 6, a semi-circular cross-sectional shape as seen in FIG. 5, a triangular cross-sectional shape as seen in FIG. 5, etc. Preferably, the guide ribs 50a, 50b are spaced apart approximately 0.4 inches on center, are approximately 0.09 inches in height and have an approximate width of 0.067 inches at the widest point thereof.

If desired, a number of guide rib(s) 50 other than two may be provided. In the event that two or more guide ribs are provided, the guide ribs 50 may all have the same cross-sectional shapes and dimensions, or the cross-sectional shapes and/or dimensions may be different. The guide rib(s) 50 may be present in various different arrangements. Thus, for example, as seen in FIGS. 3 and 4, a single rib 50c may be provided on each inside surface 46 or 48, wherein the rib 50c is positioned and configured identically to either of the ribs 50a, 50b described above. In this case, the single rib 50c can be disposed on a side of the member 60 or 64 toward the top portion 36 or toward the bottom portion 34 of the bag.

Other various configurations of guide ribs can be seen in FIGS. 5 and 6. In FIG. 5, two guide ribs 50d and 50e may be provided on the inside surface 46. The ribs 50d and 50e are positioned identically to the ribs 50a, 50b described above, but are configured such that the guide rib 50d has a triangular cross-sectional configuration and the guide rib 50e has a semi-circular cross-sectional configuration. The ribs 50d and 50e of FIG. 6 are configured identically to the ribs 50a, 50b described above, but are disposed on the inside surface 48.

Still more configurations of guide ribs are shown in FIGS. 7 and 8. FIG. 7 illustrates a first guide rib 50h positioned on the inside surface 46 and a second guide rib 50i positioned on the opposite inside surface 48, wherein the guide ribs are configured similarly to the ribs 50a, 50b as described above. In FIG. 8, a first set of guide ribs 50j and 50k is positioned on the inside surface 46 and a second set of guide ribs 50m and 50n is positioned on the inside surface 48. The ribs 50j, 50k are disposed within the ribs 50m, 50n and the ribs 50j, 50k, 50m and 50n are otherwise configured similarly to the ribs 50a, 50b as described above and shown in FIG. 2.

Preferably, although not necessarily, if two guide ribs 50 are positioned adjacent a closure element 44a or 44b, the guide ribs 50 may be spaced equidistant from and on opposite sides of the closure element. Also, if a single rib 50 is positioned on the inside surface 48 adjacent the male
closure element 44b and a second single rib 50 is positioned on the opposite inside surface 46 adjacent the female closure element 44a, the guide ribs 50 are preferably (although not necessarily) disposed on opposite sides of the closure elements 44a, 44b and equidistant therefrom.

[0034] No matter what configuration is chosen, the guide rib(s) 50 provide raised portions that can be felt by a user's fingers when the user's fingers are brought in contact with one or both external surfaces 70, 72 of the bag walls 26, 28. The raised portion(s) act as a guide for a user's fingers to facilitate the engagement of the male and female closure elements 44a and 44b, and thus sealing of the bag 20.

[0035] If desired, one or more gripping ribs 74 may be disposed on the internal surfaces 46, 48 of the bag 20 between the closure elements 44a and 44b and the top portion 36 of the bag 20, wherein the gripping ribs 74 are integrally extruded with the walls of the bag. Any number of gripping ribs 74 can be used, although space is necessary between adjacent ribs in order to facilitate a gripping action with a user's fingers. In a preferred embodiment, about six or seven gripping ribs 74 are disposed on each lip 40 of the bag.

[0036] According to an alternate embodiment, one or more intermittent ribs may be provided, as opposed to the continuous ribs 50a-50w described above. FIG. 9 illustrates the second bag wall 28 of the bag 20, wherein two guide ribs 50p and 50q are disposed on the inner surface 48, parallel to and spaced apart from the male closure element 44b and wherein the two ribs 50p, 50q extend intermittently from the first side portion 30 to the second side portion 32 of the bag 20. The cross-sectional shape of the intermittent ribs may be an inverted T-shape, an inverted Y-shape, triangular, semi-circular, or another geometric shape.

[0037] Yet another embodiment as shown in FIG. 10 comprises a zipper tape 140. The zipper tape 140 includes first and second thermoplastic strips 142, 144, wherein female and male closure elements 44a, 44b are attached to or otherwise formed on the first and second thermoplastic strips 142, 144, respectively. Continuous or intermittent guide ribs 50v, 50w may be disposed on the first or second thermoplastic strips 142, 144, parallel to and spaced apart from the female or male closure elements 44a, 44b in any configuration as described above. Alternatively, a single guide rib or three or more guide ribs may be disposed on the strips 142, 144 as noted above. The zipper tape 140 may be attached to a folded thermoplastic sheet by any suitable conventional process and apparatus and the resulting structure may be severed and sealed at spaced locations to form individual bags.

[0038] Reclosable thermoplastic storage bags as described herein can be produced by any conventional bag-making process, such as a cast post applied process, a cast integral process, a blown process or any other process known in the art. Alternatively, any one of the processes implemented by the apparatus shown in FIGS. 11-19 could be used to produce the bag described herein.

[0039] If the female and male closure elements 44a, 44b are to be added to a section of film subsequent to the formation of one or more guide ribs 50 thereon, an apparatus as seen in FIGS. 11-13 can be employed. FIG. 11 depicts an apparatus for forming one or more ribs at high speeds that includes a rotatable first roll 160, a rotatable second roll 162, an extrusion profile die 166, and an air nozzle 168 disposed below the extrusion profile die 166. The extrusion profile die 166 includes a profile plate 167 having at least one, and preferably two outlet orifices 169, 171 through which molten polymeric material is extruded into a like number of associated grooves 173, 174, respectively, formed in the first roll 160 at a first axial end 160a thereof. The grooves 173, 174 in the first roll 160 have the same cross-sectional shapes as the desired end shapes of the ribs 50. Preferably, although not necessarily, the grooves 173, 174 have cross-sectional shapes that are substantially identical to one another and the outlet orifices 169,171 have shapes that are substantially identical to one another. Also preferably, (although not necessarily, as noted below) each of the outlet orifices 169,171 has a shape similar or substantially identical to the cross-sectional shape of the associated groove 173, 174 of the first roll 160, whether that shape is an inverted T-shape, an inverted Y-shape, triangular, semi-circular, or another geometric shape. As seen in FIGS. 11, 15, 16, 18, a positioning system 150 includes the second roll 162 and the film 172 and, in other embodiments such as FIG. 14, may include another rotatable roll 164.

[0040] In an alternative embodiment, the outlet orifices 169,171 have cross-sectional shapes that are substantially different than the cross-sectional shapes of the grooves 173, 174. For example, the outlet orifices 169,171 may have a circular shape while the grooves 173, 174 may be triangular in cross-section.

[0041] The method includes the steps of feeding molten polymer to extrusion profile die 166 by way of an extruder or melt pump and extruding molten polymer into the grooves 173, 174 of the rotating first roll 160 at an extrusion rate that ensures that the grooves 173, 174 are filled with molten polymer. Thereafter, the air nozzle 168 directs an air flow onto the molten polymer before it is deposited in the grooves 173, 174.

[0042] If desired, a different fluid may be directed against the molten polymer in the grooves 173, 174. Also, the single air nozzle 168 may be replaced by two air nozzles wherein each air nozzle directs air against molten polymer in an associated groove 173, 174. Still further, it is possible to eliminate the air nozzle 168 from this process; however, this may require greater positioning accuracy so that the extrude falls exactly into the grooves 173, 174.

[0043] The method further includes the step of moving a section of plastic film 172 over the rotating second roll 162 toward the first roll 160 and into contact with the molten polymer in the grooves 173, 174. Thereafter, the section of plastic film 172 is drawn around a predetermined angular extent of the first roll 160, for example, one half to three quarters of the entire angular extent of the first roll 160. It is also preferred that the first roll 160 be chilled, preferably by passing water therethrough to facilitate bonding of the ribs to the film 172. As should be evident, the larger the diameter of the roll 160, the more cooling can be imparted to the ribs. If desired, water, air or another coolant can be directed against the outer surface of the film section 172 as the film 172 and ribs 50 are moving about the first roll 160 to aid further in cooling of the ribs.

[0044] Again, if the female and male closure elements 44a, 44b are added to the film in a step subsequent to the step
of adding or forming guide ribs 50, another method implemented by the apparatus shown in FIG. 14 can be employed. The apparatus of FIG. 14 is similar to that of FIG. 11, except that it further includes a third rotatable roll 164 positioned below the second roll 162. During movement of the section of plastic film 172, the third roll 164 further presses the section of plastic film 172 overlying the grooves 173, 174 into intimate contact with the molten polymer in the grooves 173, 174 to facilitate bonding and proper formation of the ribs. The third roll 164 is controlled by a hydraulic actuator 175 that controls the amount of pressure exerted on the plastic film 172 by the third roll 164.

[0045] If the female and male closure elements 44a, 44b have already been applied to the film section 172, the embodiment of FIG. 15 can be employed to add or form the guide ribs 50. In FIG. 15, a rotatable roll 176 is situated adjacent the first roll 160. The method includes the same steps as described above in connection with FIGS. 11-13, except that pressure may be applied by the roll 176 against the roll 160 so that the film is brought into intimate contact with the molten polymer in the grooves 173, 174 without deforming the female and male closure elements 44a, 44b. Thereafter, the section of plastic film 172 is drawn around substantially the entire perimeter of the first roll 160. The position of the second roll 176 is controlled by hydraulic actuators 178 that control the amount of pressure exerted by the roll 176 on the roll 160.

[0046] If the female and male closure elements 44a, 44b have already been applied to the film section 172, the first roll 160 can include first and second additional grooves 182a, 182b, as seen in FIG. 16. The groove 182a is disposed between the grooves 173, 174 at a first end 184 of the roll 160, while the second groove 182b is disposed at a second end 186 of the roll 160. The grooves 182a, 182b accommodate the female and male closure elements 44a, 44b, respectively, in the event that the ribs are to be applied to the same side of the film section 172 as the closure elements 44a, 44b. FIG. 17 shows a cross-sectional view of the three grooves 173, 174 and 182a of FIG. 16. The groove 182a has dimensions that are just slightly larger than the cross-sectional dimensions of the female closure element 44a so that the fit of the closure element 44a in the groove 182a is tight so that positioning accuracy is established and maintained. If desired, the male closure element 44b may also have a tight fit within the groove 182b to obtain further positioning accuracy.

[0047] As a still further alternative, where the ribs are to be applied to a side of the plastic film 172 opposite to the side that carries the female and male closure elements 44a, 44b, grooves may be provided in the first roll 160 and the second roll 162 (or the rolls 164 and/or 176, if used), as shown in FIG. 18. The groove 188a is disposed at a first end 190 of the second roll 162, while the second groove 188b is disposed at a second end 192 of the second roll 162. The grooves 188a, 188b accommodate the female and male closure elements 44a, 44b, respectively. The grooves 188a, 188b have dimensions similar to the grooves 182a, 182b of FIG. 16.

[0048] If desired, any or all of the rolls 162, 164 and 176 may be made of rubber or another deformable material that assists in applying pressure to the film while minimizing permanent deformation of the rib(s) and/or closure elements 44a, 44b.

[0049] FIG. 19 illustrates yet another alternative apparatus wherein a further pair of grooves 200, 202 substantially identical to the grooves 173, 174 are provided at a second axial end 160b of the roll 160. An extrusion profile die 206 identical or similar to the extrusion profile die 166 is provided having outlet orifices aligned with the grooves 200, 202. The extrusion profile die 206 deposits extrudate into the grooves 200, 202 and the roll 162 presses the film 172 into intimate contact with the extrudate in the grooves 200, 202 to form ribs adjacent an edge 208 of the film 172 opposite an edge 210 at which the ribs 50 are formed in accordance with the apparatus of FIGS. 11-13. An air nozzle 212 directs air against the extrudate before deposit thereof into the grooves 200, 202. As in all of the preceding embodiments, once the ribs are formed by the apparatus of FIG. 19, the film 172 is folded lengthwise and severed and sealed at spaced locations to form individual bags, for example, as seen in FIG. 8.

[0050] If desired, the apparatus of FIG. 19 can be modified in accordance with the teachings of any of FIGS. 14-16 and 18.

[0051] As should be evident from the foregoing, the bag of FIG. 3 can be produced by any of the apparatus of FIGS. 11-17, so long as a single orifice is provided in the profile plate 167 and a single groove is provided in the roll 160. The same is true of the bag of FIG. 5, so long as grooves 173, 174 of different cross-sectional shape are provided in the roll 162. The bags of FIGS. 4 and 6 can be produced by the apparatus of FIG. 19, so long as the extrusion profile die 166 and the grooves 173, 174 are omitted and the desired number of orifices are provided for the die 206 and a like number of grooves are provided in the roll 160 at the second axial end 160b. The bag illustrated in FIG. 7 can be produced by the apparatus of FIG. 19, modified as noted above to provide a single groove at each axial end 160a, 160b and a single outlet orifice for each die 166 and 206.

Industrial Applicability

The bag described herein advantageously includes at least on guide surface that guides a user’s fingers during closure of the bag. Thus, closing efficiency is increased and the expenditure of wasted effort by the user is minimized.

Further, the apparatus and method described herein extrude polymer from a profile die into grooves on a first grooved and cooled roller to create ribs. The still molten ribs are combined with a film and cooled as it rotates around the grooved roller. The use of grooves in the roller to create the ribs allows the ribs to have a uniform size and shape, whereas, when molten polymer is extruded directly onto a film to create ribs, the ribs may deform or spread out.

The method described herein also has the advantage of being a continuous process that has relatively high production rates of up to or greater than 500 feet per minute. Other similar processes cannot reach such production levels because the time necessary to cool the ribs and film is longer.

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
I claim:

1. A reclosable pouch, comprising:
   a body portion having first and second opposing bag walls, wherein each bag wall has an internal side;
   first and second closure elements disposed on the internal sides of the first and second bag walls, respectively; and
   a rib disposed on the internal side of the first wall, wherein the rib is parallel to and spaced apart a sufficient distance from the first closure element to guide a user’s finger when sealing the closure elements.

2. The reclosable pouch of claim 1, wherein a second rib is disposed on the internal side of the first wall parallel to the first-named rib and wherein the first closure element is between the first-named and the second ribs.

3. The reclosable pouch of claim 2, wherein the first-named and second ribs extend continuously from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

4. The reclosable pouch of claim 2, wherein the first-named and second ribs extend intermittently from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

5. The reclosable pouch of claim 2, wherein each of the first-named and second ribs has an inverted T-shape cross-section.

6. The reclosable pouch of claim 2, wherein each of the first-named and second ribs has an inverted Y-shape cross-section.

7. The reclosable pouch of claim 2, wherein a height of each of the first-named and second ribs is greater than a height of the first closure element.

8. The reclosable pouch of claim 2, wherein a third rib is disposed on the internal side of the second wall and wherein the third rib is parallel to and spaced apart a sufficient distance from the second closure element to guide a user’s fingers when sealing the closure elements.

9. The reclosable pouch of claim 8, wherein a fourth rib is disposed on the internal side of the second wall parallel to the third rib and wherein the second closure element is between the third and fourth ribs.

10. The reclosable pouch of claim 9, wherein the first-named, second, third, and fourth ribs extend continuously from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

11. The reclosable pouch of claim 9, wherein the first-named, second, third and fourth ribs extend intermittently from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

12. The reclosable pouch of claim 9, wherein at least one of the first-named, second, third and fourth ribs has an inverted T-shape cross-section.

13. The reclosable pouch of claim 9, wherein a height of the first-named and second ribs is greater than a height of a first closure element and a height of the third and fourth ribs is greater than a height of the second closure element.

14. The reclosable pouch of claim 1, wherein a second rib is disposed on the internal side of the second wall parallel to the second closure element.

15. The reclosable pouch of claim 14, wherein the first-named and second ribs extend continuously from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

16. The reclosable pouch of claim 14, wherein the first-named and second ribs extend intermittently from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

17. The reclosable pouch of claim 14, wherein at least one of the first-named and second ribs has an inverted T-shape cross-section.

18. The reclosable pouch of claim 14, wherein a height of the first-named rib is greater than a height of the first closure element and a height of the second rib is greater than a height of the second closure element.

19. The reclosable pouch of claim 14, wherein the rib extends continuously from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

20. The reclosable pouch of claim 14, wherein the rib extends intermittently from a first side of the thermoplastic storage bag to a second side of the thermoplastic storage bag.

21. The reclosable pouch of claim 14, wherein the rib has a T-shape cross-section.

22. The reclosable pouch of claim 14, wherein the rib has a triangular cross-section.

23. The reclosable pouch of claim 14, wherein the rib has a semi-circular cross-section.

24. The reclosable pouch of claim 14, wherein the rib has an inverted Y-shape cross-section.

25. The reclosable pouch of claim 14, wherein a height of the rib is greater than a height of the first closure element.

26. A zipper tape, comprising:
   first and second closure elements disposed on first and second surfaces; and
   a guide rib disposed on the first surface, wherein the guide rib is parallel to and spaced apart a sufficient distance from the first closure element to guide a user’s finger when sealing the closure elements.

27. The zipper tape of claim 26, wherein a second guide rib is disposed on the first surface parallel to the first-named rib and wherein the first closure element is between the first-named and second ribs.

28. The zipper tape of claim 27, wherein the first-named and second ribs extend continuously along the first surface.

29. The zipper tape of claim 27, wherein the first-named and second ribs extend intermittently along the first surface.

30. The zipper tape of claim 27, wherein at least one of the first-named and second ribs has an inverted T-shape cross-section.

31. The zipper tape of claim 27, wherein at least one of the first and second ribs has an inverted Y-shape cross-section.

32. The zipper tape of claim 27, wherein a height of the first-named and second ribs is greater than a height of the first closure element.

33. The zipper tape of claim 27, wherein a third rib is disposed on the second surface and wherein the third rib is parallel to and spaced apart a sufficient distance from the second closure element to guide a user’s fingers when sealing the closure elements.
34. The zipper tape of claim 33, wherein a fourth rib is disposed on the second surface parallel to the third rib and wherein the second closure element is between the third and fourth ribs.

35. The zipper tape of claim 34, wherein the first-named, second, third, and fourth ribs extend continuously along the first and second surfaces.

36. The zipper tape of claim 34, wherein the first-named, second, third and fourth ribs extend intermittently along the first and second surfaces.

37. The zipper tape of claim 34, wherein at least one of the first-named, second, third and fourth ribs has an inverted T-shape cross-section.

38. The zipper tape of claim 34, wherein a height of the first-named and second ribs is greater than a height of the first closure element and a height of the third and fourth ribs is greater than a height of the second closure element.

39. The zipper tape of claim 26, wherein a second rib is disposed on the second surface and wherein the second rib is parallel to and spaced apart a sufficient distance from the second closure element to guide a user's fingers when sealing the closure elements.

40. The zipper tape of claim 39, wherein the first-named and second ribs extend continuously along the first and second surfaces.

41. The zipper tape of claim 39, wherein the first-named and second ribs extend intermittently along the first and second surfaces.

42. The zipper tape of claim 39, wherein at least one of the first-named and second ribs has an inverted T-shape cross-section.

43. The zipper tape of claim 39, wherein a height of the first-named rib is greater than a height of the first closure element and a height of the second rib is greater than a height of the second closure element.

44. The zipper tape of claim 26, wherein the rib extends continuously along the first surface.

45. The zipper tape of claim 26, wherein the rib extends intermittently along the first surface.

46. The zipper tape of claim 26, wherein the rib has an inverted T-shape cross-section.

47. The zipper tape of claim 26, wherein the rib has a triangular cross-section.

48. The zipper tape of claim 26, wherein the rib has a semi-circular cross-section.

49. The zipper tape of claim 26, wherein the rib has an inverted Y-shape cross-section.

50. The zipper tape of claim 26, wherein a height of the rib is greater than a height of the first closure element.

51. A thermoplastic bag, comprising:
   first and second body portions joined to one another to form bag walls;
   a first closure element disposed on an inside surface of the first body portion;
   a second closure element disposed on an inside surface of the second body portion opposite the first closure element; and
   a pair of guide ribs disposed on the inside surface of the first body portion adjacent the first closure element and spaced from the first closure element by a distance sufficient to guide a user's fingers during closure of the bag.

52. The thermoplastic bag of claim 51, wherein the guide ribs are disposed on either side of the first closure.

53. The thermoplastic bag of claim 51, wherein the first closure element comprises a female closure element and the second closure element comprises a male closure element.

54. The thermoplastic bag of claim 51, wherein each guide rib is disposed approximately 0.2 inch from the first closure element.

55. The thermoplastic bag of claim 54, wherein each guide rib has a height of approximately 0.09 inch.

56. The thermoplastic bag of claim 54, wherein each guide rib has a width at the widest point thereof of approximately 0.67 inch.

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