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(54) Tamper-evident zip lock package and method of its manufacture

(57) A reclosable package (10) for the retail display of a food product and for the purchase and storage thereof by a consumer has tamper-evident features to enable the consumer to discern whether the package has been opened prior to purchase. The package (10) includes a header (26) formed by attaching the front and back sheets (12,14) of the package (10) to one another above the interlocking profiles (20,22) of the zipper (18) of the package (20) with a peel seal. Below the interlocking profiles (20,22), the front sheet (12) has a line of weakness (32), such as a line of perforations extending transversely across the package (10) below the interlocking profiles (20,22). A tear in the line of weakness (32) or a breach of the peel seal would readily indicate that the integrity of the package (10) has been compromised.

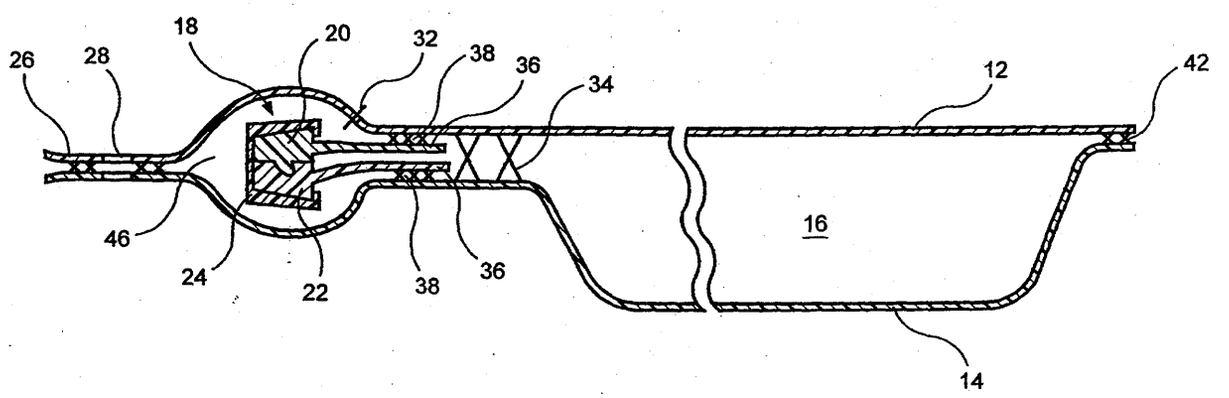

FIG. 2

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Description

[0001] The present invention relates, in general, to the packaging art, and, more particularly, is concerned with a package having a reclosable plastic zipper at its mouth and including tamper-evident features which provide a clear visual indication of the integrity of the package.

[0002] When using plastic bags and packages in the retail sale of foodstuffs, it is important that the bags or packages be hermetically sealed until consumers purchase them and their contents, take them home and open them for the first time. It is then commercially attractive and useful for the consumer for the bag or package to be reclosable so that its contents may be protected and their shelf lives extended. Flexible plastic zippers have proven to function with excellent results in reclosable plastic bags, because they may be manufactured on high-speed equipment and continue to work reliably after repeated reuse.

[0003] A typical plastic zipper has a groove along one side of the bag mouth and a rib along the other side, the rib interlocking into the groove when the two sides of the mouth of the bag are pressed together. Alternatively, a member having a plurality of ribs may be on one side of the bag mouth, while a member having a plurality of channels may be on the other side, the ribs locking into the channels when the sides of the mouth of the bag are pressed together. In such a case, there may be no difference in appearance between the two members, as the ribs may simply be the intervals between the channels on a strip which may lock into one of the same kind.

[0004] In general, and in short, some form of male/female inter-engagement is used to join the two sides of the bag mouth together. The so-called members, or strips, which are commonly referred to as profiles, are bonded in some manner to the material from which the bags themselves are manufactured. In recent years, plastic zippers of this general type have been equipped with sliders, which separate the profiles from one another when moved in one direction and join the profiles to one another when moved in the opposite direction, in the manner of a zipper on an article of clothing.

[0005] Although flexible zippers of this variety have become quite popular with consumers, the inadvertent or deliberate opening of a bag or package within a store or supermarket prior to purchase is possible. In order to alert prospective consumers that the integrity of a package has been breached prior to purchase, various tamper-evident features may be incorporated into the packages.

[0006] The most common feature of this type is the tamper-evident non-reclosable peel seal. Typically, seals of this type are formed across the mouth of the package by polymeric resin materials which seal the opening closed, but which are easily broken when the two sides of the package are pulled apart at the opening. Ideally, the material used to form the peel seal, that is, the peel-seal material, whitens or otherwise discolors when broken, thereby giving a visual indication that the integrity of the package has been compromised.

[0007] The present invention represents an alternate approach toward providing a reclosable package with a tamper-evident feature.

[0008] Accordingly, the present invention is a reclosable package for the retail display of a food product and for the purchase and storage thereof by a consumer. The package comprises a front sheet and a back sheet of thermoplastic sheet material. The front and back sheets define the package having a top, a bottom, a first side and a second side. The front sheet has a line of weakness running transversely thereacross at the top of the package. The front and backs sheets are connected to one another along the bottom and first and second sides of the package. The back sheet may be thermoformed to provide a compartment for a food product within the package.

[0009] A zipper is disposed transversely across the package between the front and back sheets and sealed thereto at the top of the package to provide it with a reclosable opening. The zipper comprises two interlocking profiles, each of which is integrally formed with a web, one of the webs being sealed to the front sheet and the other being sealed to the back sheet. The zipper is disposed such that the interlocking profiles are above the line of weakness relative to the top of the package, while the web sealed to the front sheet is so sealed below the line of weakness. The front and back sheets are connected to one another above the zipper with a peel seal to form a header from which the package may be hung for retail display. The peel seal and the line of weakness in the front sheet below the interlocking profiles provide the package with tamper-evident features.

[0010] The present invention will now be described in more complete detail with frequent reference being made to the drawing figures identified blow.

[0011] Particular embodiments in accordance with this invention will now be described with reference to the accompanying drawings; in which:-

Figure 1 is a frontal plan view of the thermoformed fill-and-seal (TFFS) package of the present invention;

Figure 2 is a cross-sectional view taken as indicated by line 2-2 in Figure 1;

Figure 3 is a schematic illustration of a method for manufacturing the package shown in Figures 1 and 2;

Figure 4 is a schematic illustration of a method for making a similar package on a horizontal form-fill-and-seal (HFFS) machine;

Figure 5 is a schematic illustration of a method for making a similar package on a vertical form-fill-and-seal (VFFS) machine;

Figure 6 is a schematic illustration of a method for making a similar package having a zipper in the transverse direction; and

Figure 7 is a schematic illustration of a method for making a similar package on a horizontal form, vertical fill-and-seal (HFVFS) machine.

[0012] Turning now to these figures, Figure 1 is a frontal plan view of the thermoform-fill-and-seal (TFFS) package 10 of the present invention, and Figure 2 is a cross-sectional view thereof taken as indicated by line 2-2 in Figure 1. The package 10 comprises a front sheet 12 and a back sheet 14, the latter of which may be thermoformed to provide a compartment 16 for a food product. Both the front sheet 12 and the back sheet 14 may be extruded from a thermoplastic resin material, such as polyethylene, and may, depending on the process used to manufacture the package, have been physically part of a single sheet at the beginning of the manufacturing process. A zipper 18, comprising two interlocking profiles 20,22, each of which is integrally formed with a web 36, and having a slider 24, runs across the top of the package 10 and provides it with a reclosable opening.

[0013] At the top of the package 10, the top being at the left-hand side of the views presented in both Figures 1 and 2, the front sheet 12 and the back sheet 14 form a header 26, from which the package 10 may be hung for display at a retail outlet. To facilitate the hanging, a hole 28 may be punched through the header 26.

[0014] At the header 26, the front sheet 12 and the back sheet 14 are attached to one another with a peel seal, except at one corner 30, where the two sheets 12,14 are not joined to one another. This allows the consumer to grasp the front and back sheets 12,14 separately at the corner 30 to pull the two sheets 12,14 apart to gain access to the zipper 18 and ultimately to the contents of the package 10. Alternatively, instead of leaving the two sheets separated from one another at corner 30, they may be separated, that is, not peel-sealed to one another, at some other portion of the header 26, such as across the top of the header 26.

[0015] Across the front sheet 12, at a point below the interlocking profiles 20,22, that is, to the right of the interlocking profiles 20,22 in both Figures 1 and 2, is a line of weakness 32, which may be a line of perforations, a score formed by some cutting device, or a line of reduced thickness. The line of weakness 32 enables the front sheet 12 portion of the header 26 to be torn from the package 10 when the package 10 is first being opened by the consumer in the manner described in the preceding paragraph. Both the peel seal joining the front and back sheets 12,14 at the header 26 and the line of weakness 32 provide the package 10 with tamper-evident features to alert the consumer that the package 10 may have been opened prior to purchase.

[0016] Optionally, the front sheet 12 and the back sheet 14 may be joined to one another by hermetic peel seal 34 within the package 10 to provide an additional tamper-evident feature, as well as to ensure that no air can be exchanged between the inside and outside of the package 10. Once the zipper 18 is opened, hermetic peel seal 34 may be broken by pulling the front and back sheets 12,14 apart at the mouth of the package 10, giving the consumer access to its interior.

[0017] To complete the description of the package 10, both of the interlocking profiles 20,22 of the zipper 18 are integrally formed with webs 36 extending toward the interior of the package 10. Each of the front and back sheets 12,14 is sealed to the web 36 immediately adjacent thereto with seal 38, the web 36 attached to the front sheet 12 being so attached below (to the right of) line of weakness 32. Moreover, the package 10 is sealed along the sides and the bottom, which is on the right-hand side of both Figures 1 and 2, with seals 40,42,44,

[0018] It will be noted in Figure 2 that the front and back sheets 12,14 wrap around the zipper 18 to form a pocket 46. The size of the pocket 46 may be chosen advantageously to minimize any wrinkling of the front and back sheets 12,14. The pocket 46 may also be sized advantageously to provide easy finger access by which to operate the slider 24 on the interlocking profiles 20,22. In addition back sheet 14 may be sealed to web 36 extending from profile 22 at a point close to interlocking profiles 20,22 to make it easier for a consumer to hold and pull the slider 24.

[0019] A method for making the TFFS package 10 of the present invention is shown schematically in Figure 3, where the process proceeds from left to right. Starting at the left-hand side of Figure 3, back sheet 14 is dispensed from roll 48. Heating device 50 heats the back sheet 14 so that it may be thermoformed at point 52 to provide the compartment 16. A food product may be dispensed into the compartment 16 at point 54.

[0020] Zipper 18 including interlocking profiles 20,22, each of which is integrally formed with a web 36, is dispensed continuously from spool 56, and, at point 58, deformed at intervals equal to the width of the package 10 being produced to limit the movement of the sliders 24 that are being added at point 60. The sliders 24 may optionally be moved to some preselected position on the zipper 18 at point 62 if desired.

[0021] The zipper 18 is united with the thermoformed back sheet 16 at point 64 and attached by sealing the web 36 of one of the interlocking profiles 20,22 thereto.

[0022] Optionally, the ends of the zipper 18 may be deformed at the sides of the packages 10 being manufactured at point 66.

[0023] Front sheet 12 is dispensed from roll 68. Device 70, which may be a perforator, scorer or laser heating device, is used to provide a lengthwise line of weakness 32 on front sheet 12. Thereafter, the front sheet 12 is united with the zipper 18 and back sheet 14 at point 72, air is evacuated from the package 10 and the front and back sheets 12,14 are sealed together as previously described. Specifically, the front sheet 12 is disposed such that the line of weakness 32 is adjacent the zipper 18 with the interlocking profiles 20,22 being above the line of weakness 32 relative to the tops of the packages

10 being produced, and the web 36 of the other of the interlocking profiles 20,22 is sealed to the front sheet 12 below the line of weakness 32. The front and back sheets 12,14 are also sealed to one another above the interlocking profiles 20,22 with a peel seal. Subsequently, the packages 10 are trimmed in the machine direction, if necessary, and are cut from one another in the cross-machine direction, the machine direction being the direction in which the process proceeds and the cross-machine direction being transverse thereto.

[0024] While the present invention is primarily directed toward a method of making a thermoform-fill-and-seal (TFFS) package and toward the TFFS package itself, it may be applied to the manufacture of packages according to other methods used in the industry. For example, a method for making a similar, although not thermoformed, package on a horizontal-form-fill-and-seal (HFFS) machine is shown schematically in Figure 4. Starting from the left-hand side of Figure 4, thermoplastic sheet 80 is dispensed from roll 82. A lengthwise line of weakness 84 is provided along one side of the sheet 80, or a sheet 80 already having a lengthwise line of weakness 84 is used. Alternatively, the lengthwise line of weakness 84 could be provided substantially down the center of the sheet 80, or a sheet 80 already having such a lengthwise line of weakness 84 could be used. A food product 86 is placed on the sheet 80 at intervals corresponding to the width of the packages being produced. The sheet 80 is then folded lengthwise over the food product 86 at point 88.

[0025] As above, zipper 18 including interlocking profiles 20,22, each of which is integrally formed with a web 36, is dispensed continuously from spool 90, and, at point 92, deformed at intervals equal to the width of the packages being produced to limit the movement of the sliders 24 that are being added at point 94. The sliders 24 may optionally be moved to some preselected position on the zipper 18 so produced at point 96 if desired.

[0026] At point 98, zipper 18 is fed between the front sheet and back sheet obtained by folding sheet 80, and thereafter, at point 100, is attached to the front and back sheets as previously described. Specifically, the zipper 18 is fed such that the line of weakness 84 is adjacent the zipper 18 with the interlocking profiles 20,22 being above the line of weakness 84 relative to the tops of the packages 10 being produced, and with the sheet having the line of weakness 84 being sealed to the web of one of the two interlocking profiles 20,22 below the line of weakness 84, while the sheet not having the line of weakness 84 is sealed to the web of the other of the two interlocking profiles 20,22. The front and back sheets are also sealed to one another above the interlocking profiles 20,22 with a peel seal. Subsequently, cross seals 102 are formed, and the packages so obtained are separated from one another at the cross seals 102.

[0027] A method for making a similar package on a vertical-form-fill-and-seal (VFFS) machine is shown schematically in Figure 5. Starting from the left-hand side of Figure 5, thermoplastic sheet 104 is dispensed from roll 106. A lengthwise line of weakness 108 is provided along one side of sheet 104, or a sheet 104 already having a lengthwise line of weakness 108 is used.

[0028] The sheet 104 is formed into the shape of a tube by the collar 110 of the fill tube 112 of the vertical form-fill-and-seal machine 114. As above, and as shown in Figure 4, zipper 18 including interlocking profiles 20,22, each of which is integrally formed with a web 36, is dispensed continuously from a spool, and is deformed at intervals equal to the width of the packages being produced to limit the range of movement of the sliders 24 that may be added. As before, the sliders 24 may optionally be moved to some preselected position on the zipper 18.

[0029] The zipper 18 is fed between the two edges of the tube formed by folding sheet 104 around the fill tube 112 at point 116, and is attached to the two edges at point 118 as previously described. Specifically, the zipper 18 is fed such that the line of weakness 108 is adjacent the zipper 18 with the interlocking profiles 20,22 being above the line of weakness 108 relative to the tops of the packages 10 being produced, and with the edge having the line of weakness 108 being sealed to the web of one of the two interlocking profiles below the line of weakness 108, while the sheet not having the line of weakness 108 is sealed to the web of the other of the two interlocking profiles 20,22. The edges of the tube formed by folding sheet 104 are also sealed to one another above the interlocking profiles 20,22 with a peel seal. The packages being produced are sealed in the crosswise direction by transverse sealing bars 120, each package being filled with the food product of interest through fill tube 112 after each cross seal is made. Subsequently, each of the packages so obtained is separated from the next at the cross seals.

[0030] A method for making a similar package with a zipper in the transverse direction of the thermoplastic sheet is shown schematically in Figure 6. Again starting from the left-hand side of the figure, thermoplastic sheet 122 is dispensed from roll 124. Lines of weakness 126 are provided transversely across sheet 122 for approximately one half of its width, or a sheet 122 already having such lines of weakness 126 is used. Preferably, the lines of weakness 126 are centered with respect to the two lateral edges of the sheet 122.

[0031] As above, and as shown in Figure 4, zipper 18 including interlocking profiles 20,22, each of which is integrally formed with a web 36, is dispensed continuously from spool 128, and is deformed at intervals equal to the width of the packages to be produced, that is, approximately one half of the width of the sheet 122, to limit the range of motion of the sliders 24 that are being placed thereon. As before, the sliders 24 may optionally be moved to some preselected position on the zipper 18.

[0032] The zipper 18 is then cut at the deformed points, and attached to the sheet 122 adjacent to the lines of weakness 126. Specifically, the cut zipper inter-

vals are sealed to the thermoplastic sheet 122 adjacent and substantially parallel to each of the lines of weakness 126 with the webs 36 being on one side of the lines of weakness 126 and the interlocking profiles 20,22 being on the other side of the lines of weakness 126. The resulting sheet 122 with zipper 18 and lines of weakness 126 may be used on both vertical and horizontal form-fill-and-seal machines, or on premade pouch machines to produce the packages of the present invention.

[0033] Typically, such processes may include the steps of folding the thermoplastic sheet 122 lengthwise over the cut zippers 18, and sealing the lateral edges of the thermoplastic sheet 122 to one another and the folded thermoplastic sheet 122 to the cut zippers 18. Then, peel seals would be formed between the thermoplastic sheet 122 and the folded portions thereof adjacent to the interlocking profiles 20,22 and opposite the interlocking profiles 20,22 from the lines of weakness 126.

[0034] Finally, cross seals would be formed at intervals equal to the lengths of the reclosable packages, and the packages would be separated from one another.

[0035] Finally, a method for making a similar package according to a HFVFS (horizontal-form, vertical-fill-and-seal) technique is shown schematically in Figure 7. Again, starting from the left-hand side of the figure, thermoplastic sheet 130 is dispensed from roll 132. A lengthwise line of weakness 134 is provided along one side of the sheet 130, or a sheet 130 already having a lengthwise line of weakness 134 is used.

[0036] Zipper 18 including interlocking profiles 20,22, each of which is integrally formed with a web 36, is dispensed continuously from spool 136, and, at point 138, deformed at intervals equal to the width of the packages being produced to limit the movement of the sliders 24 that are being added at point 140. The sliders 24 may optionally be moved to some preselected position on the zipper 18 at point 142 if desired.

[0037] Sheet 130 is folded in half vertically at point 144, and zipper 18 is fed between the two vertically oriented sheets so obtained so as to be adjacent to the lengthwise line of weakness 134 running along one side of the sheet 130. Alternatively, the lengthwise line of weakness 134 may be provided substantially down the center of sheet 130, or a sheet 130 already having a lengthwise line of weakness 134 running substantially down its center may be used. In this case, the zipper 18 is fed down to the fold to be adjacent to the lengthwise line of weakness 134.

[0038] In either case, zipper 18 is fed such that the lengthwise line of weakness 134 is adjacent to the zipper 18 with the interlocking profiles 20,22 being above the line of weakness 134 relative to the tops of the packages 10 being produced, and with the side having the lengthwise line of weakness 134 being sealed to the web of one of the two interlocking profiles 20,22 below the lengthwise line of weakness 134, while the side not having the lengthwise line of weakness 134 is sealed to the web of the other of the two interlocking profiles 20,22.

[0039] Subsequently, side seals are made and individual packages are made by cutting one from the next at the side seals. Then, the individual packages are filled and the final package seals are made, including a peel seal above the zipper 18 on the header of the package.

Claims

1. A reclosable package comprising:

a front sheet and a back sheet, said front and back sheets defining said package having a top, a bottom a first side and a second side, said front sheet having a line of weakness running transversely thereacross at said top of said package, said front sheet and said back sheet being connected to one another along said bottom, first side and second side of said package; and

a zipper disposed transversely across said package between said front and back sheets and sealed thereto at said top of said package to provide a reclosable opening therefor, said zipper having two interlocking profiles each integrally formed with a web, one of said webs being sealed to the front sheet and the other of said webs being sealed to the back sheet, whereby said zipper is sealed to said front and back sheets, said interlocking profiles being above said line of weakness relative to said top and said front sheet being sealed to one of said webs below said line of weakness, said front and back sheets being connected to one another with a peel seal above said zipper, thereby forming a header above said zipper relative to said top, to provide said package with tamper-evident features.

2. A reclosable package as claimed in claim 1 wherein said front sheet and said back sheet are extruded from a thermoplastic resin material.

3. A reclosable package as claimed in claim 1 wherein said header has a hole for hanging said package.

4. A reclosable package as claimed in claim 1 wherein said header includes a portion in which said front sheet and said back sheet are not connected to one another with a peel seal, so that a user can grasp said front sheet and said back sheet at said portion and pull them apart to gain access to said zipper.

5. A reclosable package as claimed in claim 1 wherein said front sheet and said back sheet are joined to one another with a peel seal below said zipper relative to said top of said package to provide an ad-

ditional tamper-evident feature.

6. A reclosable package as claimed in claim 1 wherein said line of weakness is a line of perforations across said front sheet.

7. A reclosable package as claimed in claim 1 wherein said line of weakness is a line of reduced thickness across said front sheet.

8. A reclosable package as claimed in claim 1 wherein said line of weakness is a score across said front sheet.

9. A reclosable package as claimed in claim 1 wherein said back sheet is thermoformed to provide a compartment for a food product.

10. A reclosable package as claimed in claim 1 wherein said zipper further comprises a slider to facilitate the opening and closing thereof.

11. A method for making reclosable packages, said method comprising the steps of:

dispensing a back sheet from a first roll;
thermoforming said back sheet to provide a plurality of compartments for a food product;
dispensing a zipper having two interlocking profiles, each being integrally formed with a web, from a spool;
sealing the web of one of said two interlocking profiles to said back sheet to join said zipper to said back sheet;
dispensing a front sheet from a second roll;
providing said front sheet with a lengthwise line of weakness;
disposing said front sheet onto said zipper and back sheet with said line of weakness adjacent to said interlocking profiles;
sealing the web of the other of said two interlocking profiles to said front sheet opposite said line of weakness from said interlocking profiles;
forming a peel seal between said front sheet and said back sheet adjacent to said interlocking profiles opposite said interlocking profiles from said line of weakness, said peel seal and said line of weakness providing said package with tamper-evident features;
sealing said front sheet and said back sheet to one another at the bottom of said packages;
cross-sealing said front sheet and said back sheet to one another; and
separating each package from the next at the cross seals.

12. A method as claimed in claim 11 further comprising the step of deforming said zipper at intervals equal to the width of said reclosable packages.

13. A method as claimed in claim 12 further comprising the step of providing said zipper with a slider for each of said package-width intervals.

14. A method as claimed in claim 11 further comprising the step of dispensing a food product into said compartments.

15. A method for making reclosable packages, said method comprising the steps of:

dispensing a thermoplastic sheet from a roll;
providing said thermoplastic sheet with a lengthwise line of weakness;
folding said thermoplastic sheet lengthwise to form a front sheet and a back sheet, said front sheet having said lengthwise line of weakness;
dispensing a zipper having two interlocking profiles, each being integrally formed with a web, from a spool;
feeding said zipper between said front sheet and said back sheet with said interlocking profiles of said zipper adjacent to said line of weakness;
sealing said webs of said zipper to said front and back sheets to join said zipper to said front sheet and back sheet, said front sheet being sealed to one of said webs opposite said line of weakness from said interlocking profiles;
forming a peel seal between said front sheet and said back sheet adjacent to said interlocking profiles and opposite to said interlocking profiles from said line of weakness, said peel seal and said line of weakness providing said package with tamper-evident features;
forming cross seals at intervals equal to the width of said reclosable packages; and
separating each package from the next at said cross seals.

16. A method as claimed in claim 15 wherein the step of providing said lengthwise line of weakness is carried out adjacent a lateral edge of said sheet.

17. A method as claimed in claim 15 wherein the step of providing said lengthwise line of weakness is carried out substantially down the center of said sheet and further comprising the step of sealing the lateral edges of said sheet to one another.

18. A method as claimed in claim 15 further comprising the step of deforming said zipper at intervals equal to the width of said reclosable packages.

19. A method as claimed in claim 18 further comprising the step of providing said zipper with a slider for

each of said package-width intervals.

20. A method as claimed in claim 15 further comprising the step of dispensing a food product onto said sheet at intervals equal to the width of said reclosable packages.

21. A. method for making reclosable packages, said method comprising the steps of:

dispensing a thermoplastic sheet from a roll;
providing said thermoplastic sheet with a lengthwise line of weakness along one of its two edges;
forming said thermoplastic sheet into the shape of a tube;
dispensing a zipper having two interlocking profiles, each being integrally formed with a web, from a spool;
feeding said zipper between said two edges of said tube formed from said thermoplastic sheet with said interlocking profiles of said zipper adjacent to said lengthwise line of weakness;
sealing said webs of said zipper to said edges of said tube to join said zipper thereto, said edge having said lengthwise line of weakness being sealed to one of said webs opposite said lengthwise line of weakness from said interlocking profiles;
forming a peel seal between said two edges of said tube adjacent to said interlocking profiles and opposite said interlocking profiles from said lengthwise line of weakness, said peel seal and said line of weakness providing said package with tamper-evident features;
forming cross seals at intervals equal to the width of said reclosable packages; and
separating each package from the next at said cross seals.

22. A method as claimed in claim 21 further comprising the step of deforming said zipper at intervals equal to the width of said reclosable packages.

23. A method as claimed in claim 22 further comprising the step of providing said zipper with a slider for each of said package-width intervals.

24. A method as claimed in claim 21 further comprising the step of dispensing a food product into said tube of thermoplastic sheet after forming each of said cross seals.

25. A method for making reclosable packages, said method comprising the steps of:

dispensing a thermoplastic sheet from a roll;
providing said thermoplastic sheet with a plurality of lines of weakness, each said line running transversely across said thermoplastic sheet for approximately one half of its width and being separated from adjacent lines of weakness by an interval equal to the length of said reclosable packages;
dispensing a zipper having two interlocking profiles, each being integrally formed with a web, from a spool;
cutting said zipper at intervals equal to the width of said reclosable packages and substantially equal in length to said lines of weakness;
sealing said cut zipper intervals to said thermoplastic sheet adjacent and substantially parallel to each of said lines of weakness, said webs being on one side of said lines of weakness and said interlocking profiles being on the other side of said lines of weakness;
folding said thermoplastic sheet lengthwise over said cut zipper intervals;
sealing the lateral edges of said thermoplastic sheet to one another;
sealing the folded thermoplastic sheet to said cut zipper intervals;
forming peel seals between said thermoplastic sheet and the folded portions thereof adjacent to said interlocking profiles and opposite said interlocking profiles from said lines of weakness, said peel seals and said lines of weakness providing said packages with tamper-evident features;
making cross seals at intervals equal to the length of said reclosable packages; and
separating the reclosable packages from one another.

26. A method as claimed in claim 25 further comprising the steps of deforming said zipper at intervals equal to the width of said reclosable packages and cutting the zipper at the deformed points.

27. A method as claimed in claim 26 further comprising the step of providing said cut zipper intervals with sliders.

28. A method as claimed in claim 25 further comprising the step of dispensing a food product into said thermoplastic sheet at intervals equal to the length of said packages.

29. A method for making reclosable packages, said method comprising the steps of:

dispensing a thermoplastic sheet from a roll;
providing said thermoplastic sheet with a lengthwise line of weakness along one of its two edges;
folding said thermoplastic sheet lengthwise

vertically to form a first sheet and a second sheet, said first sheet having said lengthwise line of weakness;
dispensing a zipper having two interlocking profiles, each being integrally formed with -a web, from a spool;
feeding said zipper between said first sheet and said second sheet with said interlocking profiles of said zipper adjacent to said line of weakness;
forming cross seals at intervals equal to the width of said reclosable packages;
sealing said webs of said zipper to said first and second sheets to join said zipper to said first sheet and said second sheet, said first sheet being sealed to one of said webs opposite said line of weakness from said interlocking profiles;
separating said package from one another at said cross seals; and
forming a peel seal between said first sheet and said second sheet adjacent to said zipper, said peel seal and said line of weakness providing said package with tamper-evident features.

30. A method as claimed in claim 29 further comprising the step of deforming said zipper at intervals equal to the width of said reclosable packages.

31. A method as claimed in claim 30 further comprising the step of providing said zipper with a slider for each of said package-width intervals.

32. A method as claimed in claim 29 further comprising the step of dispensing a food product between said first and second sheets at intervals equal to the width of said reclosable packages before said zipper is sealed to both of said first and second sheets.

33. A method as claimed in claim 29 further comprising the steps of opening said zipper and of dispensing a food product between said first and second sheets at intervals equal to the width of said reclosable packages before the step of forming said peel seal.

34. A method as claimed in claim 31 further comprising the steps of using said slider to open said zipper and of dispensing a food product between said first and second sheets at intervals equal to the width of said reclosable packages before the step of forming said peel seal.

35. A method for making reclosable packages, said method comprising the steps of:

dispensing a thermoplastic sheet from a roll;
providing said thermoplastic sheet with a lengthwise line of weakness running substantially down the center thereof between its two edges;
folding said thermoplastic sheet lengthwise vertically to form a first sheet and a second sheet, said first sheet having said lengthwise line of weakness;
dispensing a zipper having two interlocking profiles, each being integrally formed with a web, from a spool;
feeding said zipper between said first sheet and said second sheet with said interlocking profiles of said zipper adjacent said lengthwise line of weakness;
sealing said webs of said zipper to said first sheet and said second sheet to join said zipper to said first sheet and said second sheet, said first sheet being sealed to one of said webs opposite said line of weakness from said interlocking profiles;
forming a peel seal between said first sheet and said second sheet adjacent to said interlocking profiles and opposite said interlocking profiles from said line of weakness providing said package with tamper-evident features;
forming cross seals at intervals equal to the width of said reclosable packages;
sealing said first sheet to said second sheet along said two edges of said thermoplastic sheet; and
separating said packages from one another at said cross seals.

36. A method as claimed in claim 35 further comprising the step of deforming said zipper at intervals equal to the width of said reclosable packages.

37. A method as claimed in claim 36 further comprising the step of providing said zipper with a slider for each of said package-width intervals.

38. A method as claimed in claim 35 further comprising the step of dispensing a food product between said first and second sheets at intervals equal to the width of said reclosable packages before the step of sealing said first sheet to said second sheet along said two edges of said thermoplastic sheet.

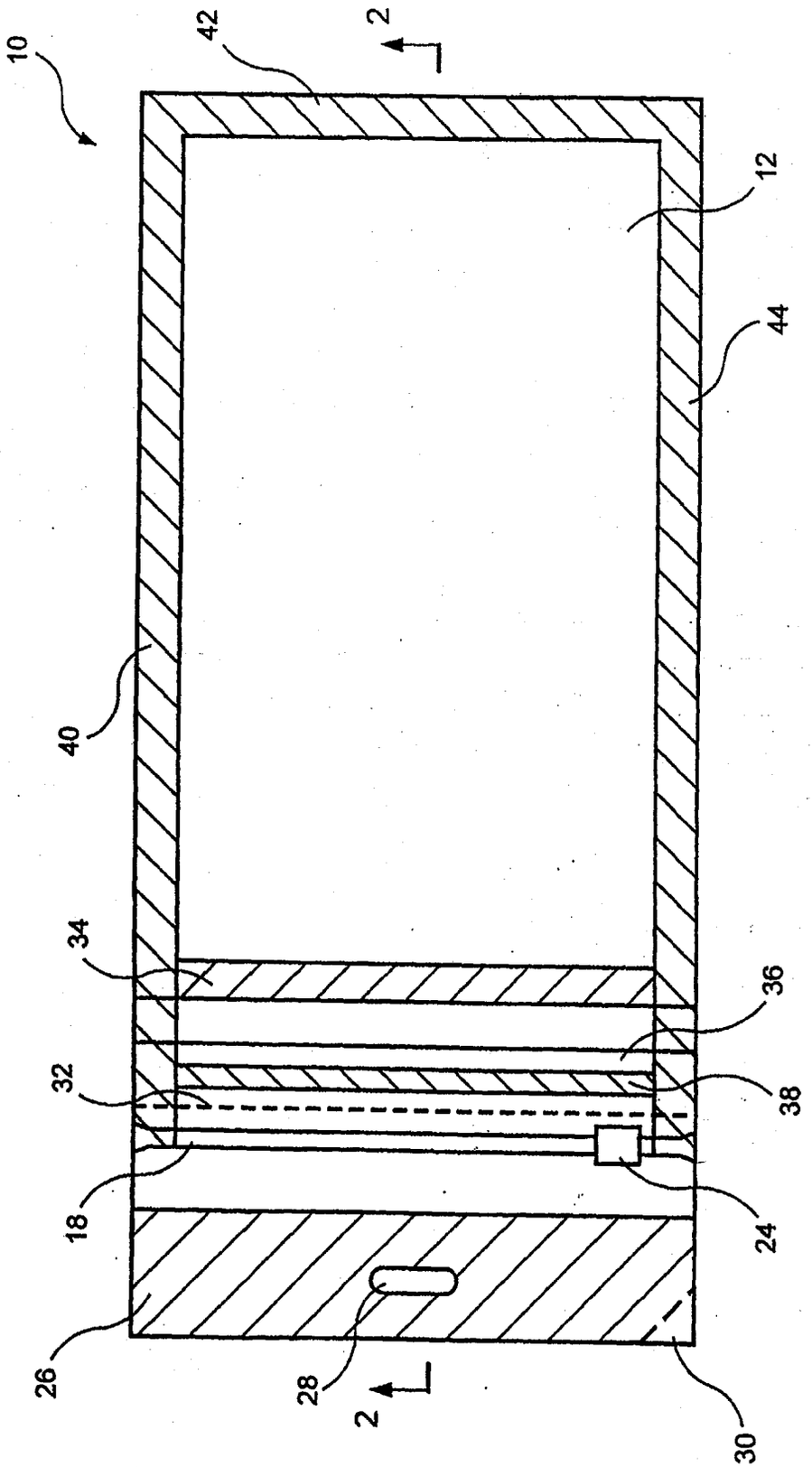

FIG. 1

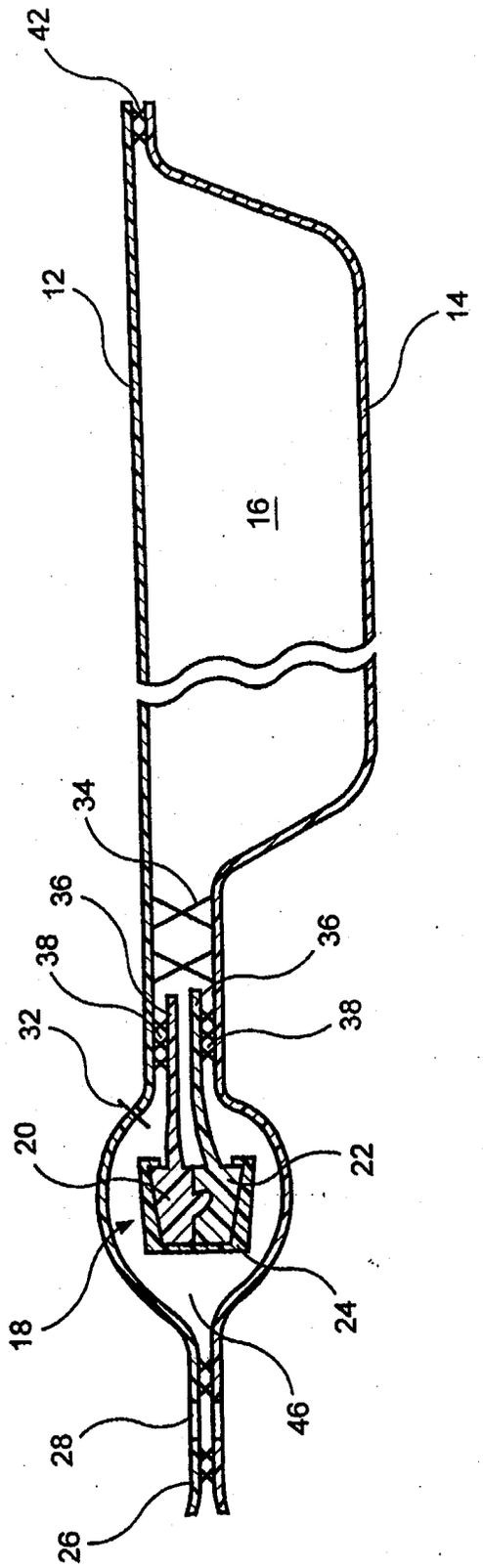

FIG. 2

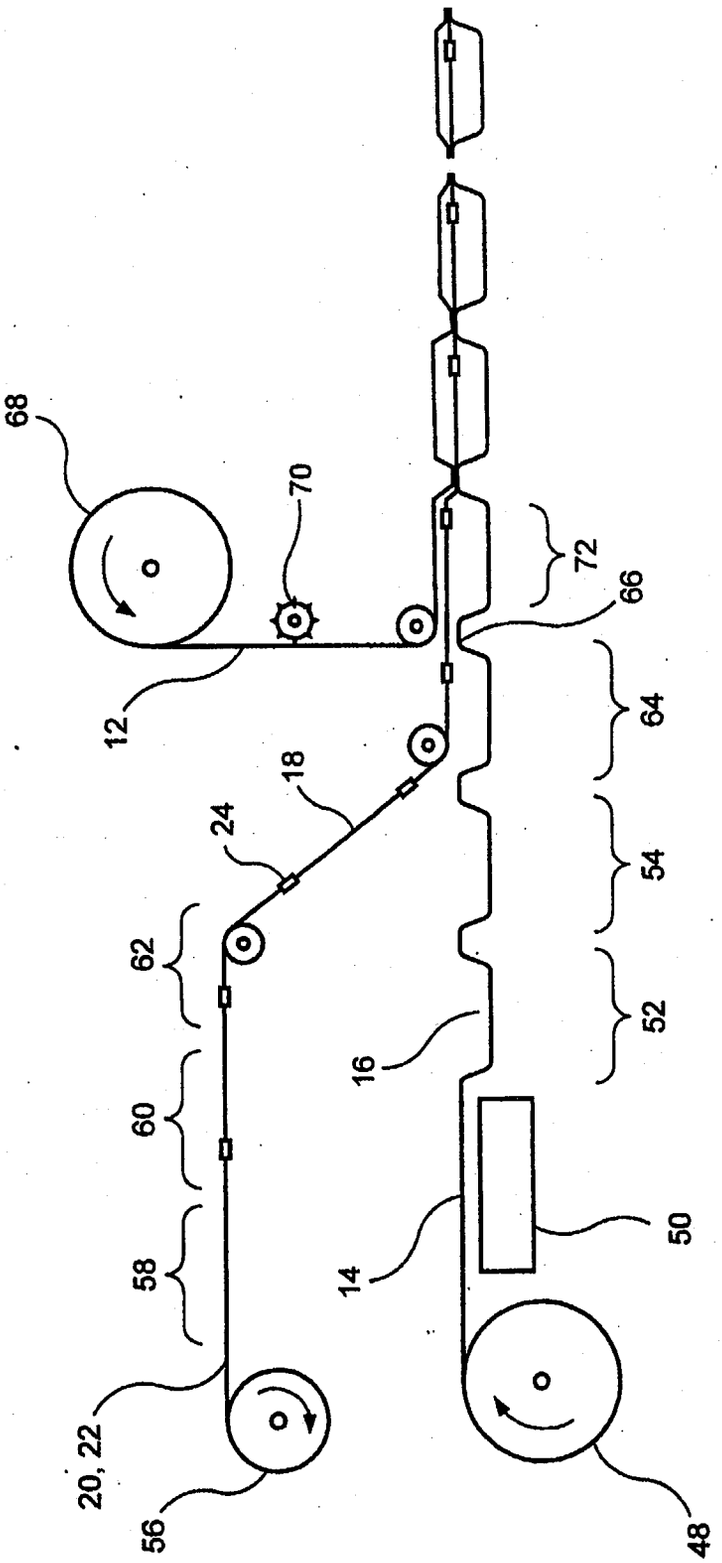

FIG. 3

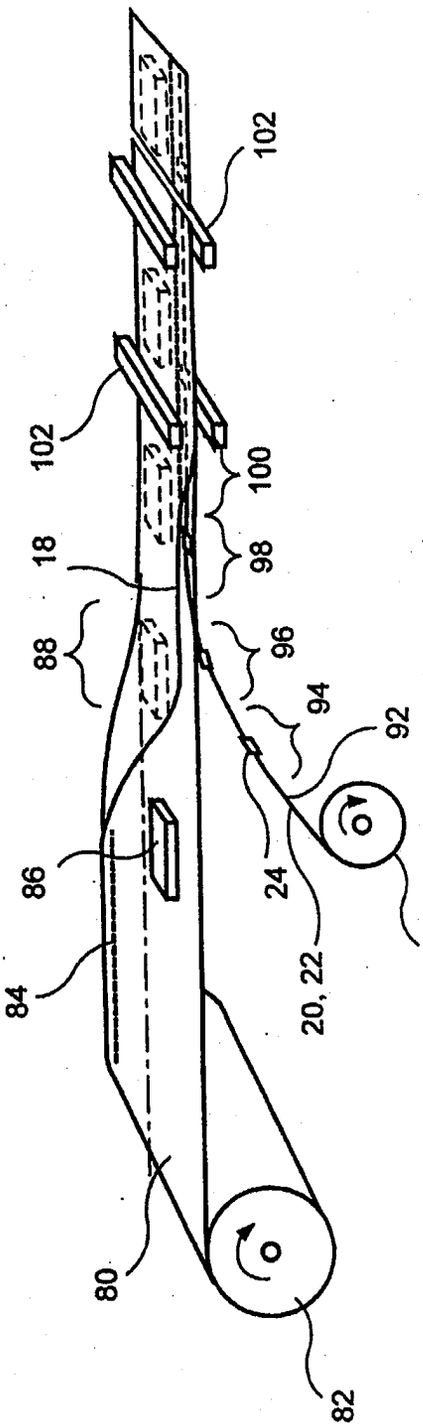
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FIG. 4

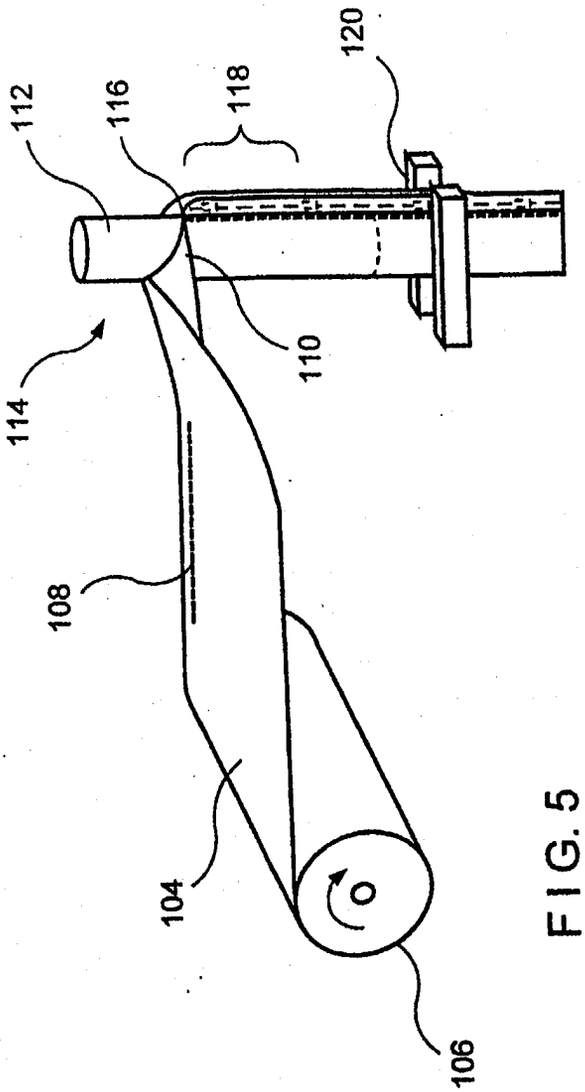
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FIG. 5

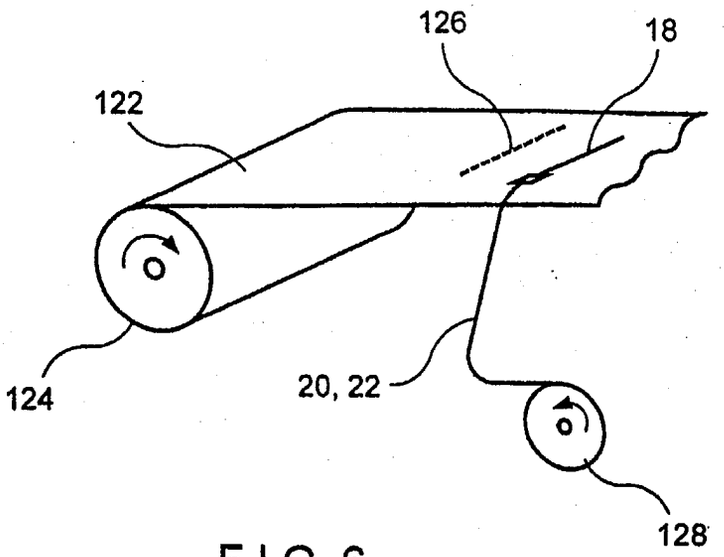
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FIG. 6

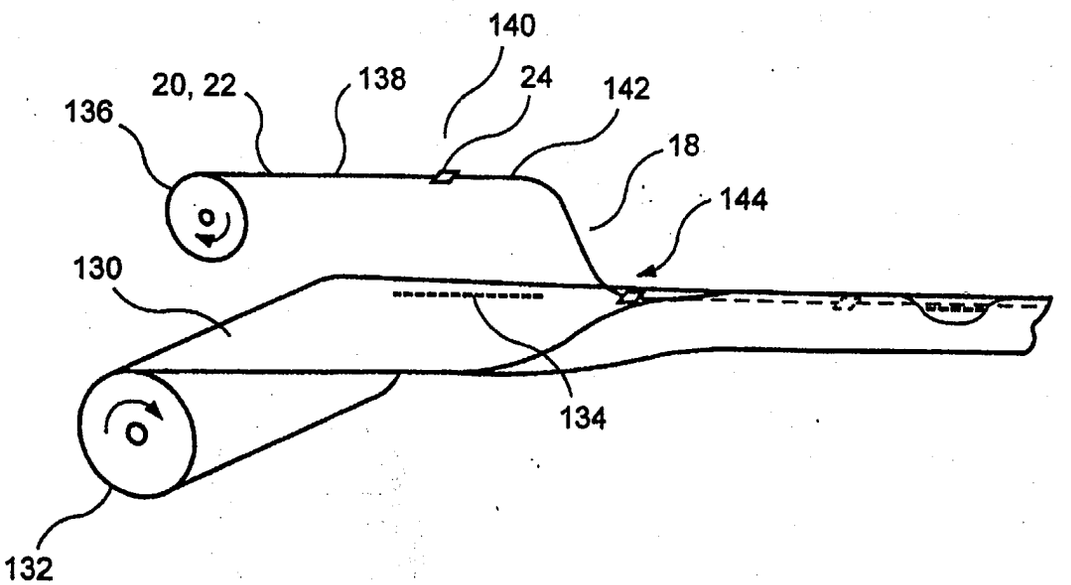
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FIG. 7