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J. A. JONES ETAL

3,261,538

CONTOUR PATTY WRAPPER

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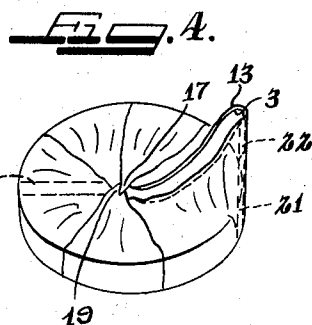
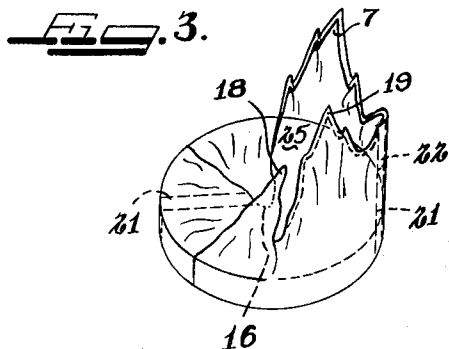
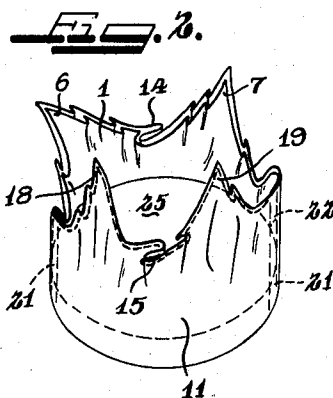
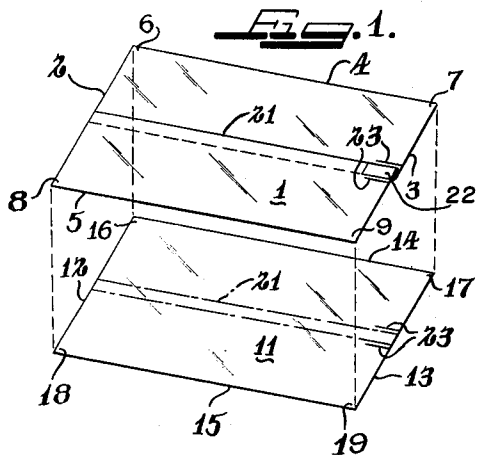


FIG. 5.

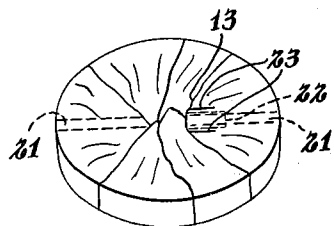


FIG. 6.

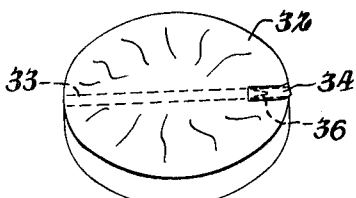
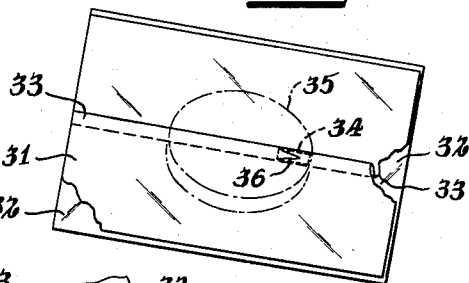


FIG. 7.

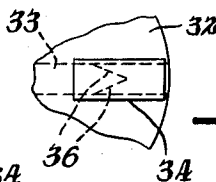


FIG. 8.

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CONTOUR PATTY WRAPPER

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This invention relates generally to wrappers adaptable for enveloping and containing individual units of a bulk-produced consumer product in a shape and of an amount appropriate for distribution and sale at the retail level, the invention relating more particularly to a contour wrapper which is sealed to protect the product from contamination and moisture loss and which may also be readily opened to enable the removal of the product from the wrapper.

The invention is shown herein in embodiments adapted for the wrapping of a food product prepared and molded in the form of a cylindrical or disc-shaped patty. It should be understood, however, that the invention is not limited to the wrapping of food products nor to the wrapping of products having the aforementioned shape. Also, the wrapper in the embodiments herein disclosed is comprised of transparent sheet material, since the product is of a type where the ability to see product texture and color through the wrapper is a factor tending to give the article greater appeal and saleability. However, it should be understood that the inventive concepts herein disclosed are not limited to the use of transparent sheet material as a wrapping medium.

In accordance with the invention, the wrapper may be formed from a blank which consists of at least one sheet which may be of a generally rectangular or square shape, which sheet is comprised of a thin web of a thermoplastic material or, alternatively, of a thermostable material coated with a layer of thermoplastic substance. The term "thermostable" as used herein denotes the quality of not becoming plastic under application of heat. For example, one type of sheet material which may be employed in cellophane covered on each side with a thin coating of Saran. The wrapper blank is formed with a pleat extending from one end to the other and preferably running along the center line of the blank. The pleat may be of relatively narrow width compared to the overall width of the blank, and it will of course be apparent that throughout the area of the pleat the blank presents a longitudinal strip running from one end to the other which is of triple-ply thickness. The area of the pleat is then subjected to pressure and heat so as to heat-seal the three plies forming the pleat one to another, thereby providing an integral three-ply strip extending from one end of the blank to the other. It has been found that a strip so formed by heat-sealing together the several plies constituting the folds of a pleat, due to the increased tensile strength inherent in the multi-ply strip relative to the remaining single-ply portions of the blank, serves very effectively as a tear strip for severing the blank along a well-defined line as the strip is pulled and peeled from the blank to separate the blank into two separate portions. In order to initiate and facilitate the peeling action, one end of the strip has affixed thereto by heat-sealing a pull tab which may be of heavier weight material such as paper coated with a thermoplastic substance, which pull tab is given a distinctive coloring to enable it to be readily located and grabbed to open the wrapper. Preferably, the blank in the area of the pull tab is slit to facilitate the start of the tearing action.

The wrapper blank may consist of a single sheet of web

material containing a heat-sealed longitudinal pleat as just above described or it may comprise such a sheet together with an additional sheet of substantially the same size superimposed thereon to provide in effect a two-ply blank with the additional sheet being heat-sealed to the other at least in the area along the pleat. The provision of the additional sheet gives further protection to products which may be more seriously affected by contamination or moisture loss, and by heat-sealing the additional sheet to the pleated area of the original or first mentioned sheet a four-ply tear strip is formed which has been found to effectively sever both sheets when pulled to peel same from the wrapper in the manner heretofore mentioned. In the case of blanks consisting of two superimposed sheets, an effective tear strip may also be derived by fusing the two sheets together over a strip area which is not pleated.

The wrapper is applied by locating the product centrally on the blank and then drawing the side and end edges, together with the corners of the blank, up and around the sides of the product and folding same down on the upper surface of the product. According to one embodiment the pull tab is affixed to the tear strip at one edge of the blank, in which case the edge of the blank to which the pull tab is affixed is folded down last so as to thereby render the pull tab accessible to one wishing to open the wrapping. Upon pulling the pull tab and peeling the tear strip from the package, the wrapper is severed along the line of the tear strip, thereby enabling it to be readily removed from the product.

According to another embodiment of the invention, which may employ either a single sheet or double sheet blank, the pull tab is affixed to the heat-sealed pleat at a location wherein it will be disposed on the side of the product opposite to that on which the edges of the blank are folded and near to one edge of said side. In this latter embodiment, the heat-sealed pleat forming the tear strip is severed by a V-shaped slit in the area thereof to which the pull tab is affixed, the pull tab covering the V-shaped slit so as to preserve the seal of the wrapper. The tab is not completely sealed to the tear strip but has one end which is unsealed and which may be grabbed to start the peeling action. The peeling action is facilitated by the weakened areas of the tear strip resulting from the V-shaped slit which initially ruptures at the start of the peeling action to cause a break in the tear strip running to opposite edges thereof, whereafter as the peeling continues the tear strip continues to sever the wrapper into separate portions enabling the wrapper to be removed to gain access to the contained product.

From the foregoing, it will be apparent that practice of the invention in accordance with either of its embodiments results in a wrapper which effectively seals the wrapped product and which at the same time provides means which enable it to be easily and quickly opened when it is desired to remove the contents therefrom. Furthermore, the formation of a tear strip by the simple expedient of sealing together a multiplicity of plies constituting a pleat in the wrapper sheet material itself results in a simplified and economical tear strip structure which avoids the need for applying separate tear strip means to the wrapper material as currently practiced in the wrapping and packaging art.

It is therefore an object of this invention to improve upon easy-opening wrappers adapted to seal the wrapped product against contamination and reduction of moisture content.

It is a further object of the invention to improve upon the structural formation of a tear strip opener for wrappers adapted to enseat a wrapped product.

It is a further object of the invention to provide an

easy-opening contour wrapper comprised of a plurality of plies of sheet material.

It is a further object of the invention to provide in a wrapper comprised of a plurality of plies of sheet material a single tear strip effective for severing each ply of said material to enable the removal of the wrapped product from said wrapper.

Further objects of the invention, together with the features contributing thereto and the advantages accruing therefrom, will be apparent from the following description when read in conjunction with the drawing wherein:

FIG. 1 is an exploded view in perspective showing two sheets of wrapping material which may comprise the wrapper blank.

FIGS. 2, 3, and 4 illustrate in sequence and in enlarged scale various stages of drawing the wrapper around and folding down to enclose a product having a substantially cylindrical shape.

FIG. 5 illustrates in perspective the completely wrapped article with the face, against which the edges and corners of the wrapper are folded, being shown uppermost.

FIG. 6 is a view in perspective of a wrapper blank comprised of two individual sheets of wrapping material in accordance with another embodiment of the invention.

FIG. 7 is a view in perspective of the wrapper blank of FIG. 6 applied to a cylindrically shaped product, with the face of the product opposite to that on which the edges of the blank are folded being shown uppermost.

FIG. 8 is a detailed view in plan and in an enlarged scale illustrating the pull tab feature of the FIG. 7 embodiment of the invention.

Referring now to FIG. 1, the blanks from which the wrapper is formed are comprised preferably of two sheets of flexible and transparent wrapping material 1 and 11, respectively, each of said sheets being a relatively thin web of a thermoplastic material or, alternatively, a thermostable material coated on each side thereof with a thin film of thermoplastic substance. The sheets are of substantially the same size, being of rectangular, preferably square shape, the overlying sheet 1 having parallel end edges 2 and 3, parallel side edges 4 and 5, said side and end edges terminating at corner portions 6, 7, 8, and 9. The lower sheet 11 of the wrapper blank is shaped as aforesaid to present end edges 12, 13, side edges 14, 15 and corner areas 16, 17, 18, and 19. Said upper sheet 1 is folded over upon itself, preferably along its center line, to form a pleat 21 extending longitudinally across the sheet from end edge 2 to end edge 3. The pleat 21 consists of a double reverse fold placed in the sheet 1, the pleat thereby constituting a longitudinal strip extending between the end edges of the sheet having a three-ply thickness. The three plies of sheet material constituting the pleat 21 are subjected to heat and pressure to cause said multiple plies to fuse together and thereby become an integral strip of increased thickness and tensile strength relative to the remainder of the sheet 1 to thereby serve as a tear strip. Preferably, the several plies defining said pleat are fused together along a longitudinal area thereof intermediate the folded edges of the pleat. Thus, the folded edges of the pleat are not sharply creased nor subjected to a degree of heat which could alter the crystalline formation thereof to lessen the tensile strength of said folded edges. The sheet 11 which underlies the upper sheet 1 is joined to sheet 1 along the area of the pleat 21 by the same application of heat and pressure, thereby providing an additional ply of sheet material in the tear strip.

Secured to one end of the tear strip 21, said one end in the illustrated embodiment of FIG. 1 being the end terminating at the end edge 3 of sheet 1, is a pull tab 22 consisting of a relatively short strip of thermostable material such as paper or the like coated on one side with thermoplastic material for fusion thereof with the tear strip, said tab having a distinctive color different from the coloring of the sheets 1 and 11 so as to enable the end of the tear strip to be located. The opposite uncoated side

of the tab presents a surface of thermostable material to prevent fusion thereof with a contiguous surface of the blank so that the tab may be grasped after the blank has been applied to enclose the product in the manner hereinafter described. In order to facilitate the start of the tearing action, a pair of slits 23 are cut into the end edges 3, 13 of the sheets 1, 11, respectively, with each slit extending for a short distance along the side of the pull tab 22 to thereby provide a starting cut for peeling the tear strip to open the wrapper.

FIG. 2 illustrates the wrapper blank drawn partly around a disc-shaped product 25 which has been located preferably centrally of the wrapper blank. In FIG. 2 the edges and the corners of the blank are shown after having been drawn around the sides of the product 25 and preparatory to being folded down onto the upper face of the product.

In FIG. 3 the end edges 2 and 12 of the blank have been folded down onto the upper face of the product 25 with the adjoining corners 8, 6 and 18, 16 of the respective sheets 1 and 11 being folded down in overlapping fashion. In FIG. 4 the remaining corners 7, 9 and 17, 19 of the respective sheets 1 and 11 have been folded down leaving remaining to be folded only the end edges 3, 13 of the respective sheets, the edge 3 having applied thereto the pull tab 22. FIG. 5 illustrates the wrapper after all edges and corners have been folded down and heat-sealed one to another with the end edges 3, 13 of the respective sheets 1 and 11 being folded down last to render the pull tab 22 which is affixed to the sheet 1 accessible when it is desired to open the wrapper. To open the wrapper, the pull tab 22 may be separated from the other underlying folds of the wrapper, since it has one surface which will not fuse, as aforementioned, which separation also unseals the end of the tear strip to which the tab is affixed, whereupon the tab is pulled back and around the product in the direction of the tear strip to peel the tear strip from the wrapper and thus sever the wrapper into two disconnected portions except for the short folded-over area of the wrapper lying between the ends of the tear strip. When thus severed, the wrapper may be readily removed from the product by stripping off the severed portions thereof. Although the preceding description discloses a specific sequence through which the respective end edges, side edges and corners of the wrapper blank are folded down to result in overlapping folds having a specific overlying relation one to another, it will of course be understood that the specific overlying relationship of the folds as described is not critical and may be varied from that described as long as the folds overlap one another to the extent of completely ensealing the product and, further, that the edge of the wrapper to which the pull tab 22 is affixed is folded down last so as to dispose the pull tab exteriorly of the other folded-over edges and corners to facilitate the grasping and peeling off of the tear strip in the manner heretofore described.

FIGS. 6, 7 and 8 disclose a slightly modified embodiment of the invention, said modified embodiment being generally similar to the embodiment of FIGS. 1-5 except for the location of the pull tab and the associated slits for facilitating the start of the tear strip peeling operation. As illustrated, this latter embodiment is comprised of superimposed sheets 31, 32 having the same shape and formed of the same material as those of the first described embodiment. The uppermost sheet 31 of the wrapper blank is formed with a pleat 33 extending between opposite ends of the blank, the plies of sheet material forming said pleat being heat-sealed together and the upper sheet 31 being heat-sealed to the lower sheet 32 along the area of the pleat 33, thereby forming a multi-ply strip running longitudinally across the wrapper blank to define a tear strip as described in connection with the FIG. 1 embodiment. In the case of the FIG. 6 embodiment, however, a pull tab 34 is affixed to the pleat or tear strip 33 in a location whereat the tab will be disposed on

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the face of the wrapper opposite to the face containing the folded-in edges of the wrapper and near the peripheral edge of the wrapped product 35. The portion of the tear strip 33 to which the pull tab is affixed, preferably by heat-sealing adhesion as in the first described embodiment, is provided with obliquely directed slits 36, as best seen in the detailed view of FIG. 8, which intersect at the longitudinal center line of the tear strip and run to opposite edges of the tear strip to in effect constitute a V-shaped cut completely severing the tear strip. The pull tap 34 is affixed to the tear strip so as to completely cover the slits 36 and thereby maintain the sealing qualities of the wrapper. One end of the pull 34 is preferably not adhered to the sheet 32 of the wrapper to facilitate the grabbing of the pull tab for peeling the tear strip from the wrapper for the purpose of opening same. The slits 36 defining a V-shaped cut across the tear strip 33, although covered by the pull tab, constitute weakened lines which when pulling force is applied to the tab cause the tear strip to easily separate along the lines of said slit. This directs the tear to opposite sides of the tear strip, and as the pulling force is continued the tear strip peels from the wrapper to separate at least the face of the wrapper to which the pull tab is affixed, enabling the separate portions of the wrapper to be stripped from the product and completely removed therefrom.

From the foregoing, it will be evident that the wrapper in either of its heretofore above described embodiments provides an effective medium for sealing the contained product and, further, that the provision of tear strip means formed in a novel manner from multiple plies of the wrapper material itself affords the wrapper with a simple, economical but effective means whereby the wrapper may be removed to gain access to the contained product.

While there has been shown and described what are regarded as preferred embodiments of the invention, it of course will be understood various changes in form could be made without departing from the spirit of the invention, and it is intended, therefore, that the invention be not limited to the exact forms herein shown and described nor to anything less than the whole of the invention as hereinafter claimed.

We claim:

1. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together to comprise an integral undivided multiple-ply tear strip of which all the plies are coextensive with one another, said sheet being drawn snugly around the surface of said product disposing a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, one of said opposite edges having slits extending partly along opposed sides of the tear strip, said tear strip being manually peelable from said sheet along lines starting with said slits to sever said blank and enable removal thereof from said product.

2. The invention according to claim 1 wherein the material of which said sheet is composed is transparent.

3. The invention according to claim 1 including a pull tab comprised of a thermoplastic substance and fused with said tear strip to facilitate the peeling of said tear strip from said blank.

4. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material coated on opposite surfaces with a thermoplastic substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form

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a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together to comprise an integral tear strip of which all the plies are coextensive with one another, said sheet being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, one of said opposite edges having slits extending partly along opposed sides of the tear strip, said tear strip being manually peelable from said sheet along lines starting with said slits to sever said blank and enable removal thereof from said product.

5. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from first and second sheets of superimposed flexible material, each of said sheets being comprised of a thermoplastic heat-sealable substance enabling contiguous areas thereof to be fused together, said first and second sheets being fused together along a strip portion extending across said sheets between two opposite edges thereof, the fused portions of said sheets comprising an integral undivided multiple-ply tear strip for said blank of which all the plies are coextensive with one another, said sheets being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, one of said opposite edges having slits extending partly along opposed sides of the tear strip, said tear strip being manually peelable from said sheet along lines starting with said slits to sever said blank and enable removal thereof from said product.

6. The invention according to claim 5 including a pull tab comprised of a thermoplastic substance and fused to said tear strip to facilitate the peeling of said tear strip from said blank.

7. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from a first and second sheet of superimposed flexible material, each of said sheets being comprised of a thermoplastic heat-sealable substance enabling contiguous surface areas thereof to be fused together, one of said sheets being folded upon itself to form a pleat extending across the sheet between two opposite edges thereof, the multiple plies of said one sheet defining said pleat and the contiguous area of the other said sheet being fused together to comprise an integral undivided multiple-ply tear strip for said blank, said sheets being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheets being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, said tear strip being manually peelable from said sheet to sever said blank and enable removal thereof from said product.

8. The invention according to claim 7 including a pull tab comprised of a thermoplastic substance and fused to said tear strip to facilitate the peeling of said tear strip from said blank, and wherein said blank contains slits in the vicinity of said pull tab to direct the tearing of said sheet along the edges of said tear strip when the tab is initially pulled to start the peeling of said tear strip from said blank.

9. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together to comprise an integral un-

divided multiple-ply tear strip of which all the plies are coextensive with one another, said sheet being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, one of said opposite edges having slits extending partly along opposed sides of the tear strip, and a pull tab fused to one end of said tear strip where it terminates at said one edge of said sheet for facilitating the peeling of said tear strip from said blank, the edge of said sheet at which said pull tab is placed being in the exterior one of said overlapping folds.

10. The invention according to claim 9 wherein said pull tab comprises a strip of material coated on one side only with a thermoplastic substance for fusion with the inner surface of said tear strip, the opposite side of said pull tab presenting a surface of thermostable character for preventing fusion of said pull tab with a contiguous surface of an underlying fold of said sheet.

11. The invention according to claim 10 wherein said pull tab is provided with a distinctive color visually distinguishing said tab from said sheet.

12. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together to comprise an integral undivided multiple-ply tear strip of which all the plies are coextensive with one another, said sheet being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, and a pull tab fused to the exterior surface of said tear strip near one end of the length thereof disposed across said one face of the product for facilitating the manual peeling of said tear strip from said sheet to sever said blank and enable removal thereof from said product, the portion of said tear strip to which said pull tab is fused having been severed by slits intersecting at the longitudinal center line of said tear strip and running to opposite edges thereof to define initial tear lines when said tab is pulled to peel said tear strip from said blank.

13. The invention according to claim 12 wherein said pull tab includes a portion which is not fused to said tear strip to enable said tab to be manually grasped to effect the peeling of said tear strip from said blank.

14. The invention according to claim 12 wherein said pull tab is provided with a distinctive color visually distinguishing said pull tab from said blank.

15. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together over a longitudinal area intermediate and exclusive of the folds in said sheet defining the edges of said pleat to comprise an integral undivided multiple-ply tear strip, said sheet being drawn snugly around the surface of said product disposing a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds

against the opposite face of said product and fused together to completely enseal said product within said blank, said tear strip being manually peelable from said sheet to sever said blank and enable removal thereof from said product.

16. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together over a longitudinal area intermediate and exclusive of the folds in said sheet defining the edges of said pleat to comprise an integral undivided multiple-ply tear strip, said sheet being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, and a pull tab fused to one end of said tear strip where it terminates at one edge of said sheet for facilitating the peeling of said tear strip from said blank, the edge of said sheet at which said pull tab is placed being in the exterior one of said overlapping folds.

17. A wrapper for containing a patty-shaped product comprising, a wrapper blank formed from at least one sheet of flexible material comprised of a thermoplastic heat-sealable substance enabling discrete surface areas of said sheet to be fused together when folded upon one another, said sheet being folded upon itself to form a pleat extending across said sheet between two opposite edges thereof, the multiple plies of said sheet defining said pleat being fused together over a longitudinal area intermediate and exclusive of the folds of said sheet defining the edges of said pleat to comprise an integral undivided multiple-ply tear strip, said sheet being drawn snugly around the surface of said product to dispose a length of said tear strip completely across one face of said product, the edges of said sheet being folded down in overlapping folds against the opposite face of said product and fused together to completely enseal said product within said blank, and pull tab fused to the exterior surface of said tear strip near one end of the length thereof disposed across said one face of the product for facilitating the manual peeling of said tear strip from said sheet to sever said blank and enable removal thereof from said product.

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