July 5, 1966 R. E. SOWLE 3,259,235

TEARABLE SHRINK FILM COVER INCLUDING INTEGRAL PULL TABS

Filed March 4, 1964

Fig. 1

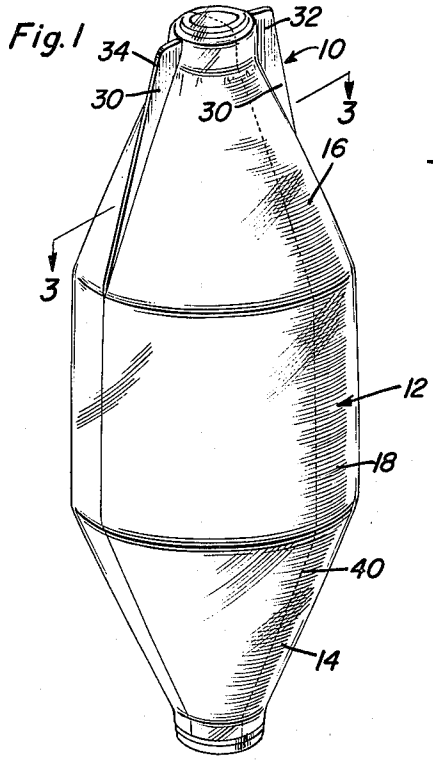


Fig. 2

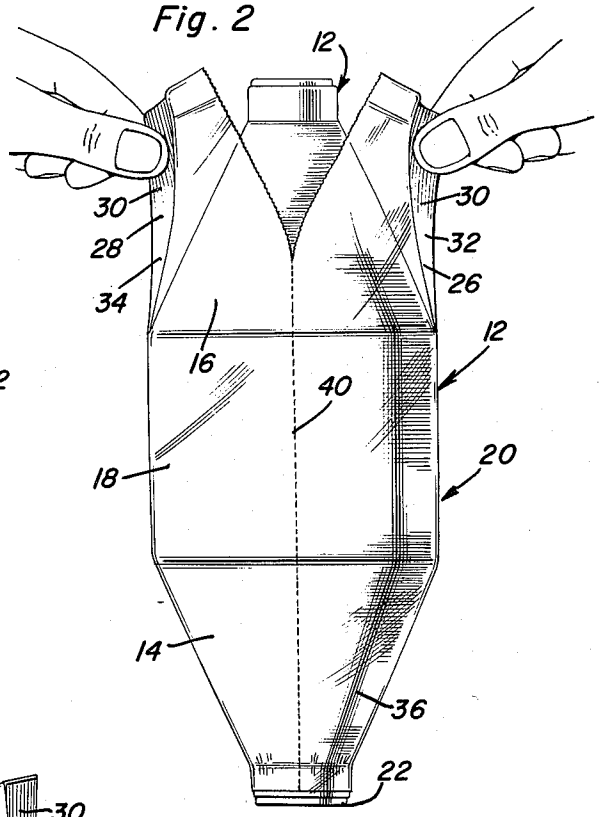


Fig. 4

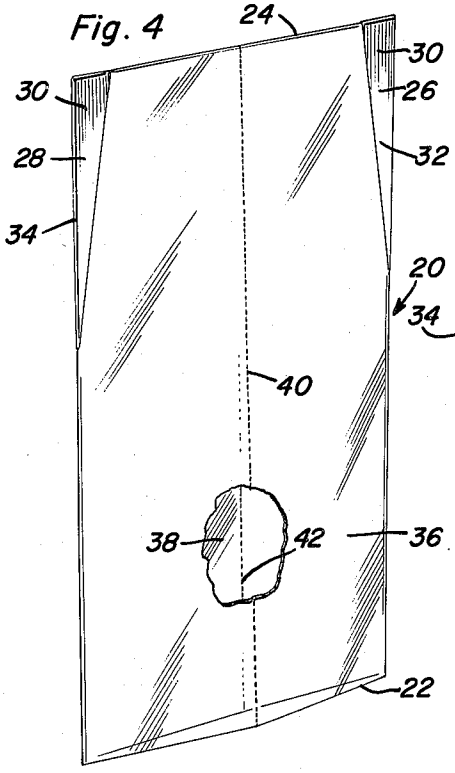
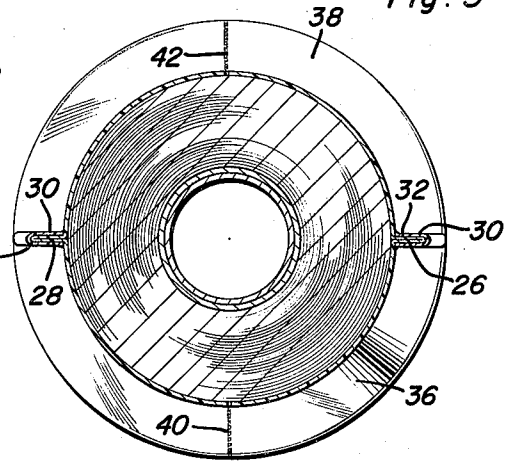


Fig. 3



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TEARABLE SHRINK FILM COVER INCLUDING INTEGRAL PULL TABS

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This invention relates to a novel and useful tearable shrink film cover and more specifically to a film cover or enclosure for an article including integral pull tabs, the film cover or enclosure being constructed of heat shrinkable film in order that it may be shrunk into tight embracing engagement with the article enclosed thereby when the enclosure is subjected to heat.

Shrink film covers or enclosures have been utilized for a number of years for packaging articles of irregular configuration. However, the article has heretofore been placed in an enclosure constructed of heat shrinkable film such as a bag and then the assemblage including the bag having the article disposed therein has been heated. The heat causes the heat shrinkable film to contract and to tightly embrace the article disposed therein. While this type of cover or enclosure forms an extremely satisfactory covering in most instances, it is sometimes quite difficult to remove such a covering inasmuch as it is disposed in tight embracing engagement with the article enclosed thereby. Although a sharp instrument may be utilized to penetrate film covering and to tear the latter so that it may be gripped for pulling from the article, the use of such a sharp implement involves the danger of damaging the article disposed within the closure and is therefore not desirable.

Accordingly, it is the main object of this invention to provide a tearable shrink film cover for articles including at least one integral pull tab whereby the pull tab may be readily grasped by a person wishing to strip the cover from the article, the cover being weakened along lines defining a removable section of said cover on which said pull tab is disposed whereby the removable section may be readily parted from the cover by pulling on the pull tab in order to strip the removable section of the cover from the remainder thereof.

Another object of this invention, in accordance with the immediately preceding object, is to provide a means whereby integral pull tabs may be preformed on a shrink film cover in a simple and inexpensive manner thereby maintaining the cost of the shrink film cover at a minimum.

Another object of this invention is to provide a tearable shrink film cover including pull tabs which may be constructed in a manner so as to readily adapt the cover for enclosing substantially all shapes of articles.

A final object of this invention to be specifically enumerated herein is to provide a tearable shrink film cover including integral pull tabs which will conform to conventional forms of manufacture, be of simple construction and easy to remove so as to provide a device that will be economically feasible, long lasting and relatively easy to handle when removing the cover from the article enclosed thereby.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of an article enclosed by the tearable shrink film cover of the instant invention which includes integral pull tabs;

FIGURE 2 is an elevational view of the embodiment illustrated in FIGURE 1 showing the manner in which the tearable shrink film cover may be readily torn from the article disposed therein;

FIGURE 3 is an enlarged horizontal sectional view taken substantially upon a plane indicated by section line 3—3 of FIGURE 1; and

FIGURE 4 is a perspective view of the shrink film cover of the instant invention showing the manner in which it may be prepared so as to define integral pull tabs before the article to be enclosed thereby is inserted therein and the cover is heated to shrink the cover about the article enclosed thereby.

Referring now more specifically to the drawings, the numeral **10** generally designates the tearable shrink film cover of the instant invention which is illustrated in FIGURE 1 of the drawings tightly enclosing an article referred to in general by the reference numeral **12** including a pair of generally truncated cone-shaped opposite end portions **14** and **16** and a substantially cylindrical portion **18**.

With attention now directed more specifically to FIGURE 4 of the drawings, it may be seen that the cover **10** comprises a bag generally referred to by the reference numeral **20** constructed of heat shrinkable film. The bag **20** is open at one end as at **22** and comprises a flattened generally cylindrical member with the opposite flattened end edges of one end of the bag **20** secured together as at **24** in any convient manner such as by thermo-welding.

It will be seen from a comparison of FIGURES 1 and 4 of the drawings that when the article **12** is disposed within the bag **20** that the upper closed end of the bag will define unoccupied portions as at **26** and **28**. These unoccupied portions **26** and **28** are flattened previous to the article **12** being inserted into the bag **20** and are coated with a shrink resistant coating **30** which may be of any suitable substance such as varnish, shellac or a pigmented ink which stiffens the shrinkable material and prevents it from shrinking when heated and adhering to another part of the bag **20**. The coated portions of the bag **20** define opposite pull tabs **32** and **34**. Before the article **12** is inserted in the bag **20**, the opposite sides **36** and **38** of the bag **20** are weakened along tear lines **40** and **42**, respectively. The tear lines **40** and **42** are defined by aligned longitudinally spaced short cuts formed through the opposite sides **36** and **38**. After the bag **20** has been weakened along the tear lines **40** and **42**, the article **12** may be inserted in the bag **20** from the open lower end **22** thereof. Thereafter, the assemblage formed by the bag **20** and the article **12** disposed therein is heated whereupon the non-coated portions of the bag **20** will shrink into tight embracing engagement with the article **12** as illustrated in FIGURE 1 of the drawings. Then, when it is desired to remove the bag or cover **20** from the article **12**, the pull tabs **32** and **34** may be grasped as illustrated in FIGURE 2 of the drawings and pulled apart whereupon the cover or bag **20** will tear along the tear lines **40** and **42** and enable the bag **20** to be readily removed from the article **12**.

It is to be noted that the coating **30** may have heat conducting properties such that the heat shrinkable and weldable film disposed therebeneath may be heated to an extent, when the assemblage defined by the bag **10** and the article **12** enclosed thereby is heated, that the inner surfaces thereof will fuse together. In this manner, the pull tabs **32** and **34** will be of stiff two-ply construction with the two-plies of each pull tab being secured together.

Although the bag **20** has been illustrated as being generally rectangular and the article **12** has been illustrated as being in the form of an irregular member thereby enabling the bag **20** to define the unoccupied areas or portions **26** and **28**, it is to be understood that the

bag **20** would be of irregular configuration if the article **12** were regular in shape whereby the bag **20** would still define at least one unoccupied portion which could be coated to form a pull tab. Further, it is to be understood that the cover **10** may be in the form of a sleeve or any folded or otherwise shaped enclosure and that the pull tabs formed thereon by coating **30** will not adhere to the adjacent portions of the cover **10** as they would if they were not coated when heated.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A shrink film cover including at least one pull tab, said cover comprising an enclosure member constructed of heat shrinkable film and adapted to receive therein an article to be packaged of a size and shape leaving at least one portion of the area enclosed by said closure member unoccupied by said article, at least portions of said closure member defining said one portion being coated with a shrinkage preventing coating adhered to said portions and defining said one pull tab.

2. The combination of claim **1** wherein one pair of sections of the last mentioned portions of said closure member are disposed with their inner surfaces in surface-to-surface contacting relation with the outer surfaces of said sections being coated with said shrinkage preventing coating.

3. The combination of claim **1** wherein said enclosure member is of a size and shape adapted to define a pair of spaced areas enclosed by said closure member remaining unoccupied by said article, the portions of said enclosure member defining said pair of spaced unoccupied areas of said closure member each being coated with a shrinkage preventing coating adhered thereto and defining a pair of said pull tabs.

4. The combination of claim **1** wherein said enclosure member comprises a bag.

5. The combination of claim **1** wherein said enclosure member is of a size and shape adapted to define a pair of spaced areas enclosed by said closure member remaining unoccupied by said article, the portions of said enclosure member defining said pair of spaced unoccupied areas of said closure member each being coated with a shrinkage preventing coating adhered thereto and defining a pair of said integral pull tabs, said enclosure member comprising a bag, the last mentioned portions of said enclosure member being disposed on opposite sides of said bag.

6. The combination of claim **1** wherein said enclosure member is of a size and shape adapted to define a pair of spaced areas enclosed by said closure member remaining unoccupied by said article, the portions of said enclosure member defining said pair of spaced unoccupied areas of said closure member each being coated with a shrinkage preventing coating adhered thereto and defining a pair of said integral pull tabs, said enclosure member comprising a bag, the last mentioned portions of said enclosure member being disposed on opposite sides of said bag, said bag including means defining a pair of longitudinal tear lines along which said film is structurally weakened, said tear lines defining a pair of sections of said bag disposed on opposite sides of a plane extending through said bag and in which said tear lines lie, said coated portions of said bag being disposed on corresponding sections.

7. The combination of claim **6** wherein the other coated portions of said bag are disposed on the other of the last mentioned sections.

8. In combination, a shrink film cover including at least one pull tab, said cover comprising an enclosure member constructed of heat shrinkable film, an article to be packaged disposed in said enclosure member and being of a size and shape leaving at least one portion of the area enclosed by said closure member unoccupied, at least portions of said closure member defining said one area being coated with a shrinkage preventing coating adhered thereto and defining said one pull tab.

9. The combination of claim **8** wherein said enclosure member is of a size and shape defining a pair of spaced areas enclosed by said closure member unoccupied by said closure member remaining unoccupied by said article, the portions of said enclosure member defining said pair of spaced unoccupied areas of said closure member each being coated with a shrinkage preventing coating adhered thereto and defining a pair of said integral pull tabs.

10. The combination of claim **9** wherein said closure member comprises a bag and said pull tabs are disposed on opposite sides of the closed end of said bag.

11. The combination of claim **10** wherein said enclosure member comprises a bag, the last mentioned portions of said enclosure member being disposed on opposite sides of said bag, said bag including means defining a pair of longitudinal tear lines along which said film is structurally weakened, said tear lines defining a pair of sections of said bag disposed on opposite sides of a plane extending through said bag and in which said tear lines lie, said coated portions of said bag being disposed on one of said sections.

12. The method of packaging an article within a heat shrinkable enclosure member of a size and shape defining at least one unoccupied area within said enclosure when said article is disposed therein comprising the following steps: coating at least some of the portions of said enclosure member defining said one occupied area with shrinkage preventing coating in a manner such that the coating adheres to said some portions, and heating said enclosure member to shrink all of said enclosure member excepting the coated portions thereof tightly about said article.

13. The method of claim **12** including the step of coating portions of said enclosure member defining a second unoccupied area within said enclosure with shrinkage preventing coating before said step of heating said enclosure member.

14. The method of claim **12** including the step of weakening said closure member along a line passing between the first and second mentioned areas before said closure member is heated.

15. The method of packaging an article within a heat shrinkable enclosure member of a size and shape defining at least one unoccupied area within said enclosure when said article is disposed therein comprising the following steps: coating at least some of the portions of said enclosure member defining said one occupied area with a shrinkage preventing coating in a manner such that the coating adheres to said some portions, inserting said article in said closure member, and heating said enclosure member to shrink all of said enclosure member excepting the coated portions thereof tightly about said article.

16. The method of claim **15** including the step of defining a second unocupied area within said enclosure and coating at least some of the portions of said enclosure member defining said second unoccupied area with a shrinkage preventing coating before said step of heating said enclosure member, weakening said closure member along a line passing between the first and second mentioned areas before said article is inserted in said closure member.

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