

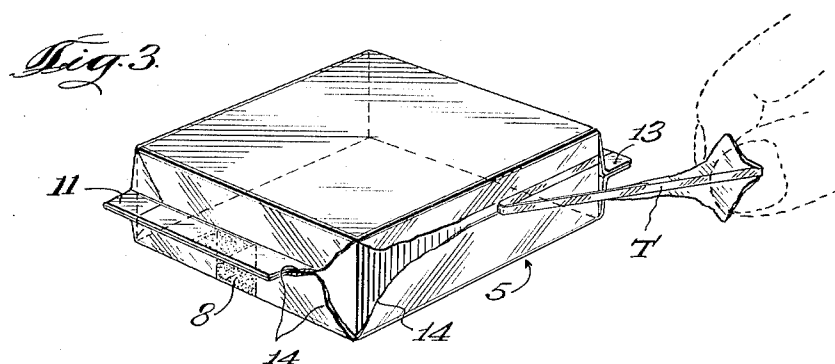
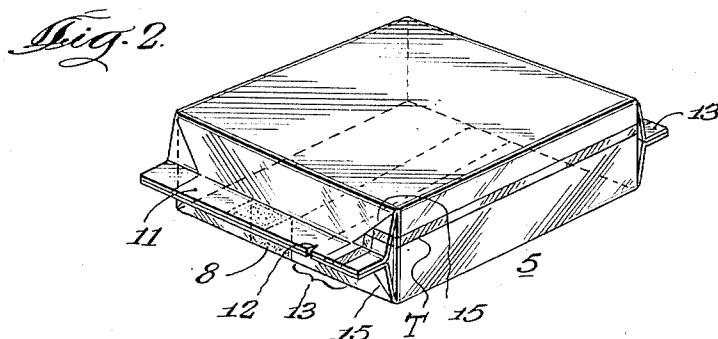
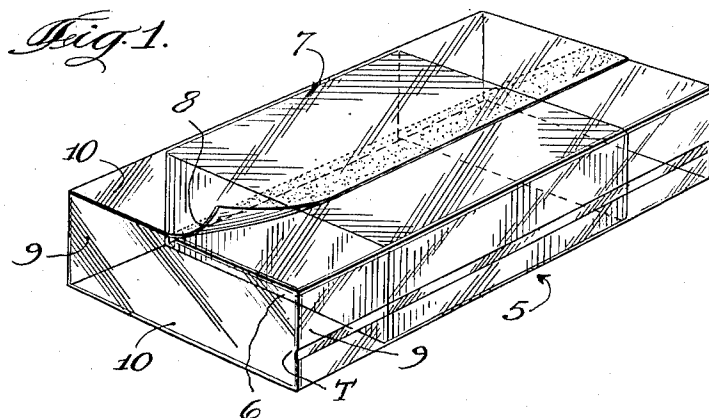
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PACKAGING

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PACKAGING

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This invention relates generally to packaging and, more particularly, to the incorporation of a tear tape into a package to facilitate its being readily opened.

While the use of tear tapes with packages which constitute a wrapper of sheet material is well-known, most of the known arrangements have been of the type where the package is sealed by overlapping two marginal portions of the wrapper with the tear tape extending outwardly beyond the overlapped portions of the wrapper. With this arrangement of the tear tape and wrapper, the tape may be pulled back against the overlapping marginal portion of the wrapper, thereby tearing the wrapper along a line defined by the tape. It is understood, of course, that most commonly used wrapping materials, while relatively strong in tension, are susceptible to being rather easily torn by shearing forces applied along their edges.

However, in packaging applications wherein it is not practical to extend the tear tape out of an overlapped marginal portion of the wrapper, the use of tear tapes has been greatly restricted. In some extreme cases, there have been no known means for economically disposing a tear tape in a wrapper in such a manner that it will assure that the package may be easily opened.

For example, in the packaging of perishable foods such as cheese, a sheet or film of moisture-resistant elastic-flexible material such as cellophane, rubber hydrochloride, co-polymerized vinyl chloride and vinyl acetate, etc., or any of these materials coated with wax or paraffin or paraffin and rubber mixtures, is disposed about the article to be packaged and heat sealed to provide a moisture resistant, substantially air-tight container. In one particular desirable and common sealing method, opposed portions of the wrapper are pressed together and heat-sealed to provide a two layer leaf or fin which stands out from the package wall. It is difficult, however, to so incorporate a tape into such a seal that a tear may be initiated in the film on one side of the fin-like seal without having to break, in tension, the portion of the film on the other side of the seal. This problem is especially acute in wrappers which are shaped so as to tightly enclose an article of regular outline.

Accordingly, it is the principal object of our invention to provide a package wrapper having a seal of the preferred type which incorporates a tear tape in such manner as to obviate the need for fracturing any portion of the wrapper film in tension in order to open the package.

Other objects and advantages of the invention will be appreciated and the invention will be better understood from the following specification wherein the invention is described by reference to the particular embodiment illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a perspective view of a partially wrapped article showing our improved wrapper before the seal is made;

Figure 2 is a perspective view of the completed package illustrating the fin-like seals at the package ends and the disposition of the tear tape relative to the seals; and

Figure 3 is a perspective view showing the completed package being opened.

The particular embodiment of our invention illustrated in the drawings is a package 5 which is especially adapted for packaging a block of cheese 6. The package 5 is formed from a single sheet of wrapping material 7 which is large enough to extend around the block 6 and to provide overlapping margins 8 which extend longitudinally of the wrapper and to provide side marginal por-

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tions 9 and top and bottom marginal portions 10 at each end of the package (Fig. 1).

A particularly suitable sheet material for wrapping cheese is a moisture-proof cellophane film having on one of its sides a paraffin coating, the coated side being disposed toward the article to be wrapped, that is, on the inside of the package in contact with the cheese surface. A coated film of this type may be readily sealed to itself and to the cheese by slight heat and pressure without requiring additional adhesives. However, it will be understood that other sheet materials may be employed and the sealing may be accomplished by the use of adhesives or of mechanical sealing means.

A tear tape T is provided on the inside of the wrapper. The tape T may be fabricated from any flexible material, for example, cellophane, having sufficient strength to fracture the wrapping material when pulled. The tape T may be disposed in any suitable manner within the wrapper so that when the package 5 is finally sealed, one of the ends of the tape T will be anchored within the package 5 and the other of its ends will be accessible in a manner subsequently to be described. In many cases, it may be desirable to cut the individual wrappers from a strip of sheet material to which a tear tape has been continuously bonded longitudinally of the strip and in this event the tear tape will be co-extensive with the length of the wrapper sheet 7 as shown in Figure 1. This arrangement has not only the obvious advantage of incorporating the tear tape automatically into the package, but also orients the tear tape in the "machine" or grain direction of the film strip so as to take maximum advantage of the lesser, cross-grain, shear strength of these plastic films.

The first step in forming the package 5 is to wrap the sheet of wrapping material 7 about the block of cheese 6 with the margins 8 overlapping as shown in Figure 1. The overlapped margins 8 are then sealed together, either by heat sealing, by an adhesive, or by mechanical sealing means. Preferably, the overlapping portions are heat-sealed to provide an air and moisture proof seal. Both ends of the package are sealed by tucking in the side margins 9 which extend beyond the ends of the block 6 and by bringing together the top and bottom margins 10 to provide a laminar fin 11 at the end of the package (Figure 2). While it is desirable, for appearance sake, in the packaging of a block or other article of definite outline to first tuck in the side margins 9, this initial step may be omitted and the margins 10 brought directly together for sealing. The final seal may then be made, by applying heat and pressure to the top and bottom margins 10, the heat and pressure causing the coatings or even the films themselves to coalesce to completely seal the package 5. In some instances, the seal may be made by applying an adhesive between the juxtaposed margins 10, or by joining them mechanically by a variety of known means. In any event, the sealed-together margins project from the end of the package as a single leaf or fin 11.

While in the particular embodiment illustrated, the wrapper is desirably applied as a flat sheet to the article to be wrapped and then sealed along overlapping marginal portions 8, as illustrated in Figure 1, it will be understood that the initial seam and one of the end seals may be pre-formed so as to provide a bag or sack for the packaging, for example, of articles or materials which have no particular shape of their own, but which tend to assume the shape of the confining wrapper.

The extremity of the tear tape T is located within the fin 11 formed by sealing together the overlying margins 10 of the wrapper. In the illustrated embodiment of the invention, the tape T is disposed to lie along the side of the package 5 with each of its extremities located in one of the fins 11 at the ends of the package. In order to provide means for grasping the tape T, a small slit 12 is formed in the edge of the fin inwardly of the end of the tape T to separate a small area of the fin from the main fin portion. This small area constitutes a tab 13 which may be grasped and pulled to initiate the tear and to bring the tape T into place to continue the tear, as shown in Figure 3. The slit 12 weakens the fin 11 and permits the tab portion 13 to be pulled sidewardly

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away from the main body of the fin 11. As the tab is pulled, it separates from the main body of the fin 11 along an uneven line 14 beginning at the end of the slit 12 and extending toward the tucked-in side margins 9. The tear then radiates outwardly toward the corners of the package generally along lines 15 which form the edges of the tucked side margins 9.

From the corners of the package, the lines of tear 14 tend to converge upon the tape T, the location of the tear lines being finally determined by the width of the tape. With the tab 13 serving as a handle, the tape continues the tear until the side of the package 5 is opened along its entire length.

In the particular embodiment of the invention illustrated, wherein the wrapper is tightly applied to a substantially rigid article having more or less fixed dimensions, the tear tape T is preferably disposed slightly above or below the center of the side of the wrapped article, so that the tape ends will be positioned centrally within the tab 13 after the side margin 9 is tucked and sealed. While the disposition of the tear tape along the side of the package is desirable in such a case, it is not essential, it being understood however, that one end of the tape must lie within the tab portion 13 of the fin 11 defined between the slit 12 and the end of the fin, irrespective of whether the wrapper is tucked so as to tightly enclose a rigid article, or untucked as in forming a simple crimp seal in a wrapper for loose materials.

It will be apparent from this description and by reference to Figure 3 of the drawings that a simple and easy method has been provided for opening a package wrapper having seals of the described type, and that no portion of the wrapping sheet need be fractured in tension in opening the package.

While we have described our invention by reference to the particular embodiment illustrated, it will be apparent to those skilled in the art that variations and modifications thereof may be made without departing from the scope of the invention set forth in the following claims.

We claim:

1. A package wrapper comprising a sheet of tearable material having marginal portions which extend beyond said package at opposite ends thereof, said wrapper being folded into a rectangular form to provide a top, bottom and opposed side walls, a tear tape coextensive with the length of said wrapper and positioned along one of said side walls, the portion of said margins which form extensions of the sides of the package being tucked inwardly toward each other across a portion of the end of the package and then extended outwardly of the end of the package between the marginal portions of said top and bottom walls, whereby said tear tape extends along said one side wall, across a portion of the end of the package and then longitudinally outwardly from the package to the end of said wrapper, the marginal edges of said top, bottom and side walls being sealed together into integral

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5 fins at both ends of said package with the end of the tear tape embedded in said fins at positions spaced intermediate the center and one side edge of said fins, the edge of at least one of said fins being slit inwardly of said tape end and said inwardly tucked portions of the wrapper to define a tab portion located in proximity to an edge of said package, whereby tearing away said tab portion is effective to tear off a corner edge between said one side wall and an adjoining end wall and to produce a longitudinal slit along said one side wall.

10 2. A package wrapper comprising a sheet of tearable material having marginal portions which extend beyond said package at opposite ends thereof, said wrapper being folded into a tubular, rectangular form to provide a top, bottom and opposed side walls, a tear tape coextensive with the length of said wrapper and positioned along one of said side walls along a line intermediate the longitudinal center and an edge of said side wall, the portion of said end marginal portions which form extensions of the sides of the package being tucked inwardly toward each other across a portion of the end of the package and then extended longitudinally outwardly of the end of the package between the marginal portions of said top and bottom walls, whereby said tear tape is positioned along said one side wall, across a portion of the end of the package and then longitudinally outwardly from the package to the end of said wrapper, the marginal edges of said top, bottom and side walls being sealed together into integral fins at both ends of said package with the end of the tear tape embedded in said fins at positions spaced intermediate the center and one side edge of said fins, the edge of at least one of said fins being slit inwardly of said tape end and the tucked-in portions of the side walls to define a tab portion located in proximity to a side edge of said package, whereby tearing away said tab portion is effective to tear off a corner edge of said package between said one side wall and an adjoining end wall and to produce a longitudinal slit along said one side wall.

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