Aug. 9, 1966 ETSUO INOUE 3,265,286

UNPACKING ARRANGEMENT FOR FILMY PACKAGES

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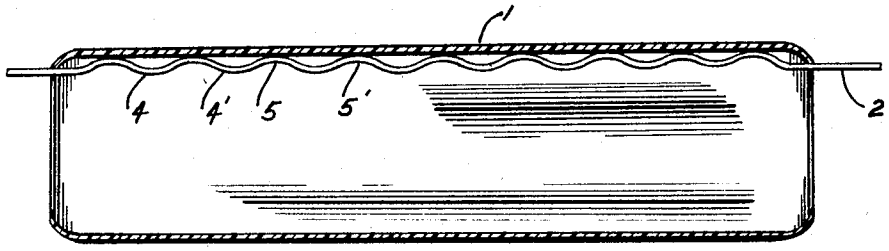


FIG. 1

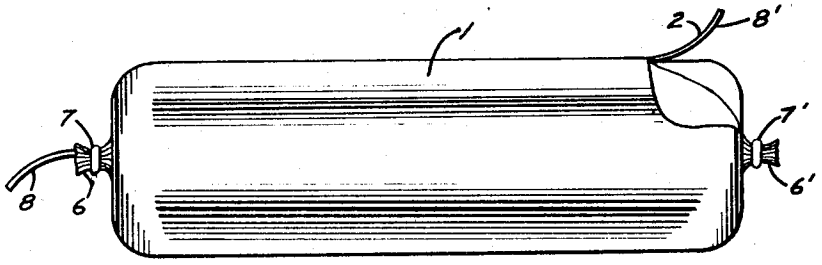


FIG. 2

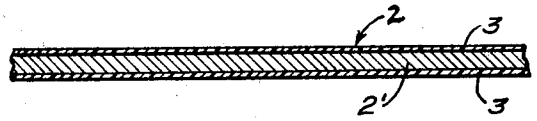


FIG. 3

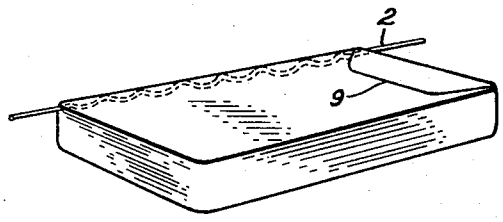


FIG. 4

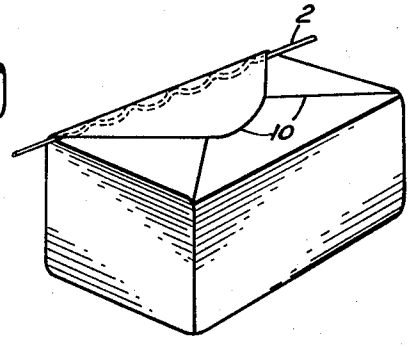


FIG. 5

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3,265,286 UNPACKING ARRANGEMENT FOR FILMY PACKAGES

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The present invention relates to an arrangement for unpacking foodstuffs and other goods out of filmy packages which are made of synthetic resin or synthetic rubber chloride or the like.

Foodstuffs and sundry goods are often packed in airtight filmy packages of synthetic resin or synthetic rubber chloride to protect foodstuffs from oxidation of their fatty contents and to keep sundry goods fresh and clean. Conventionally, however, a knife or other blade is frequently required to open the filmy packages and such blades are dangerous to users and damaging to packed goods because the blade may cut a person or may cut the goods in the package. If a blade is not available for instance in picnic or camp, the filmy packages may be broken by human teeth or finger nails, which is not desirable from the standpoint of bacteria contamination. Moreover, once unpacked, foodstuffs will not be kept fresh because of soiling or spoilage due to difficulties in repacking and lack of sufficient sanitation knowledge.

A major object of the invention is to provide an arrangement for unpacking a filmy package with a string not only in an easy way, but also in a way to dispense foodstuffs or sundry goods partially or in small quantities without damaging them while making it possible to preserve the rest in good condition in the package.

Other objects and advantages of the invention will appear from the following description when taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a longitudinal section of a filmy package of cylindrical shape, inside of which an opening string is attached at spaced points along the inner surface with the string between points of attachment being of greater length than the distance between the attaching points of the filmy package and with both ends of the string led out of the package for unpacking in accordance with the invention.

FIG. 2 is an elevational view of a filmy package of cylindrical shape provided with an unpacking arrangement in accordance with the invention, where the contained foodstuff is partially unpacked while both ends of the package are secured with wires.

FIG. 3 is a longitudinal section, showing the structure of a string for unpacking arrangement in accordance with the invention, with the string including a core covered with the same material as the filmy package.

FIG. 4 is a perspective view of a bag-shape filmy package provided with an unpacking arrangement in accordance with the invention.

FIG. 5 is a perspective view of a folded filmy package provided with an unpacking arrangement in accordance with the invention.

As illustrated by way of example in the drawings, the unpacking arrangement in accordance with the invention consists in a string **2** attached, by high frequency heating or with heating plate at spaced location **5**, **5'** with suitable string portions **4**, **4'** of greater length than the distance between attaching points **5**, **5'** attached along the inside surface of a cylindrical, a bag-shaped, or a folded package **1** which is made of synthetic resin or synthetic rubber chloride film for enclosing foodstuffs or sundry goods in it. The string core **2'** is primarily made of a strong fiber such as vegetable including palm fibers, synthetic or mixed, and is coated with synthetic film **3** which is preferably made of same material as the package itself so as to be secured easily and firmly on the package by high frequency heating or with heating plate.

In FIG. 2, a cylindrical filmy package **1** encloses foodstuff in it in a manner that wire clips or pieces **7**, **7'** secure ends **6**, **6'** in closed substantially sealed relation with the string **2** having its ends **8**, **8'** led out of the package **1** adjacent the clips **7**, **7'**. In FIGS. 4 and 5, bag-shape and folded packages, respectively, enclose foodstuffs in them by a heat seal **9** and usual seal **10**, respectively.

In unpacking the arrangement illustrated in FIG. 2, one of the wire pieces or clips **7** or **7'** which close the ends of the package and also surround the string ends **8** and **8'**, respectively, is initially removed, and the string **2** is pulled radially away from the package tearing the package along the string **2** to expose the required portion of the contents. After the required portion of the contents of foodstuff or the like is taken out, the remaining portion is enclosed again by gathering the unpacked portion of packing film into a tightly closed state and reapplying the wire clip or other closing device **7** or **7'**. Other packages, such as shown in FIGS. 4 and 5, may be partially unpacked and closed again in a similar manner.

The unpacking arrangement in accordance with the invention is especially suitable for unpacking foodstuffs to obtain the desired quantity out of a package easily and cleanly every time it is required for table, while facilitating preservation of the unpacked remaining portion. In other words, the unpacking arrangement in accordance with the invention makes it possible for a filmy package to be unpacked partially for the desired quantity without using a knife or other blade since the strong string **2** performs the controlled opening function most satisfactorily when a controlled pull is applied to the string **2** to the desired extent. The remaining portion of the contents can be kept clean and safely protected by closing the package and securing the closed ends of the package with the same wire clip or the like as often as desired. This protects the contents from being soiled or spoiled for a further substantial time. Moreover, the unpacking arrangement in accordance with the invention does not damage the packing film at all in its its moisture repellency, elasticity, moderate breakability, and strength. The strength of conventional heat sealed packages is often weakened by heat sealing. In the present invention the strong fiber core **2'** is coated with a film of same material as the package itself and is secured in spaced relation on the inner surface of the package so the effective thickness and strength of the package is maintained even where the string is attached. The string may be easily caught on either or both the ends to initiate unpacking. Further, for economy, the unpacking arrangement of the invention can be mass-produced for filmy packages because it is secured on them in a very simple way.

It will be apparent that changes can be made within the scope of the invention as defined by the valid scope of the claims.

What I claim is:

1. A package comprising a thin film of tearable material, a string covered with a material similar to the package film, said covered string being secured to the interior surface of the package film at locations along the string and along the package film with sufficient adhesion that the string will remain in secure relation to the package film whereby when the string is pulled in a direction transversely to the adjacent portion of the package film and away from the surface of the package film to which the string is attached toward the other surface of the package film, the package film will be severed along the string in controllable increments whereby the user may open a limited portion only of the package from which a portion of the contents is to be dispensed and the

remaining portion of the package may remain closed retaining the remaining portion of the contents of the package in its original packaged condition thereby avoding damage and soilage of the contents of the unopened portion of the package.

2. The invention according to claim 1 wherein the string is secured at spaced positions to the inner surface of the film package only along the string and package film and is free of the package film along the adjacent portions of the package between said spaced locations whereby unintentional opening or breakage of the package is avoided and the strength of the package film is maintained throughout.

3. The invention according to claim 1 in which at least one end of the string projects outside of the package.

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