

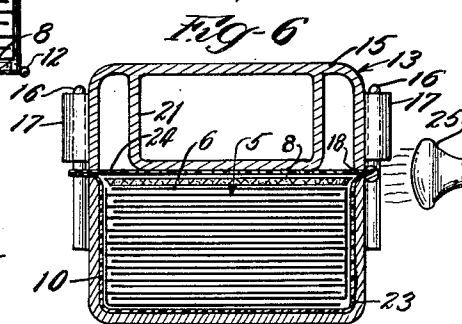
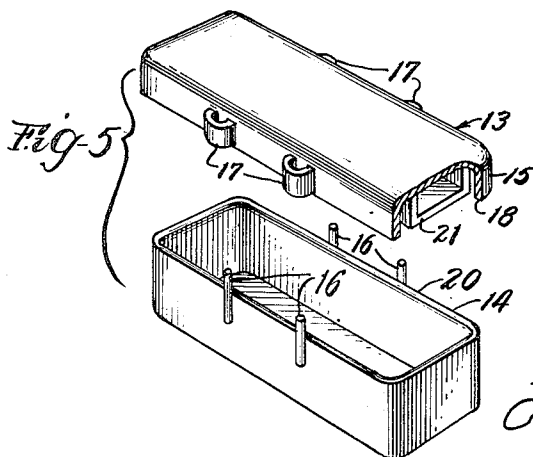
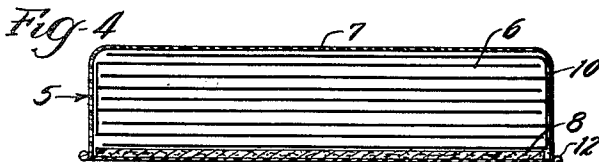
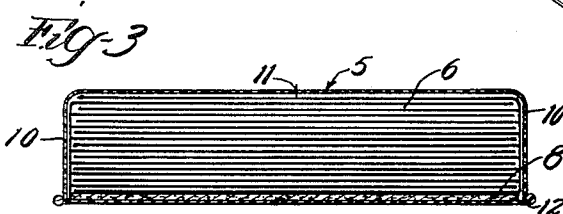
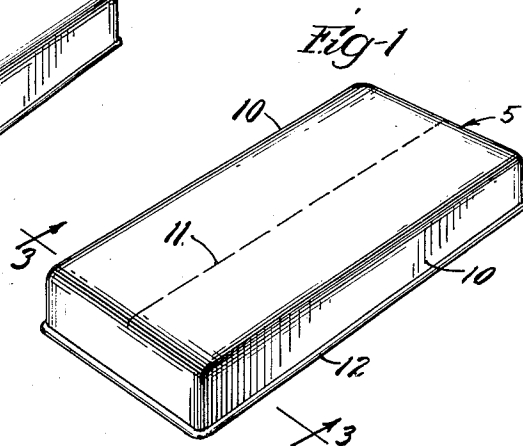
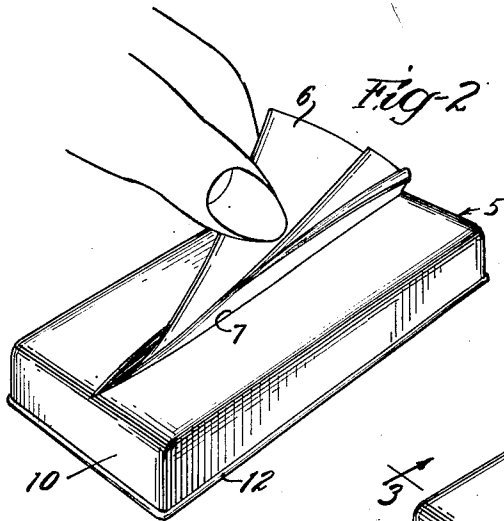
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PACKAGE

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UNITED STATES PATENT OFFICE

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PACKAGE

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1 Claim. (Cl. 206—57)

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This invention relates, generally, to new and useful improvements and innovations in packages wherein the contents are in the form of a compressible stack of individual tissues. More specifically, the invention relates to packages containing stacks of folded cellulosic cleansing tissues, which packages are of a size and type adapted to be carried on the person in a garment pocket or in a handbag.

Disposable cellulosic cleansing tissues, such as those sold commercially under the trade-mark "Kleenex," were initially sold in cardboard cartons or boxes of a size and rigidity which did not permit them to be carried on the person or in a handbag. As the use of such tissues increased, a demand was created for a smaller package of a type adapted to be carried in a garment pocket or in an ordinary sized handbag. The previous packages for these tissues being of a rigid, non-deformable type, were not suitable for carrying on the person, even when reduced substantially in size.

The object of the present invention, generally stated, is the provision of a package containing a compressible stack of individual tissues, preferably cellulosic type cleaning tissues, which package is non-rigid and particularly adapted to be carried in a garment pocket or in a handbag.

An important object of the invention is a non-rigid package of cleansing tissues which are retained in a compressed stack and adapted to be withdrawn through an elongated opening provided by a weakened line in a continuous type film envelope drawn taut or stretched around the stack.

Still another object of the invention is a non-rigid package of individual tissues arranged in a compressible stack and enclosed in an envelope of stretchable film material, a weakened line being provided in the envelope across the top of the stack but not extending down the sides thereof so that the weakened line upon being separated permits the individual tissues to be withdrawn without permitting the shape of the envelope to be lost or destroyed.

An important object of the invention is a non-rigid package containing a stack of cleansing tissues compressed within an envelope formed of elastic or stretchable continuous film material, such as polyethylene, a panel of relatively rigid material located at the bottom of the stack serving to prevent excessive deformation of the packages.

Certain other objects of the invention will in part be obvious and will in part appear hereinafter.

For a more complete understanding of the na-

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ture and scope of the invention, reference may now be had to the following detailed description thereof taken in connection with the accompanying drawings, wherein:

Fig. 1 is a perspective view of a non-rigid package of cleansing tissues constituting a preferred embodiment of the invention;

Fig. 2 is a perspective view showing the package of Fig. 1 in opened condition and illustrating the removal of an individual cleansing tissue therefrom;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1 showing diagrammatically the fully compressed condition of the stack of individual tissues in the unopened package;

Fig. 4 is a sectional view corresponding to Fig. 3 and showing diagrammatically the released condition of the stack of tissues after a number of them have been withdrawn from the package;

Fig. 5 is a perspective, partly broken away, view of a package forming device in opened condition, which may be used in forming packages in accordance with this invention; and

Fig. 6 is a sectional view taken transversely through the apparatus of Fig. 5 showing the final operation in forming therein the package shown in Fig. 1.

In the drawings, the reference numeral 5 designates, generally, a non-rigid package of cleansing tissues. Preferably, the package 5 is of pocket size so that it may be carried in the pocket of a garment such as a coat, or in a lady's handbag.

The package 5 comprises a compressible stack of individual tissues 6, such as cellulosic cleansing tissues. These tissues are individually folded to conform to the dimensions of the package 5 and then are stacked one on the other as shown in Figs. 3 and 4. When the package 5 is opened, the individual tissues in the stack may be removed through an elongated opening 7.

The stack of tissues 6 is supported on the bottom by a cardboard panel or insert 8 which prevents undue deformation of the package 5 and maintains the stack of tissues properly aligned therewithin. It will be noted that the panel 8 has dimensions slightly less than the corresponding dimensions of the stack of tissues so that the peripheral edge of the panel 8 does not extend all the way to the bottom edges of the stack of tissues.

The tissues 6 in stacked form are enveloped or encased in the package 5 in an envelope 10 formed of continuous film material. It has been found that polyethylene is the preferred film material for this purpose since it has the proper amount of stretch or elasticity and it may be

readily heat-sealed so as to permit large scale packaging operations.

The film material is weakened along a central line 11 as shown in Fig. 1, which serves to provide the elongated slot opening 7 shown in Fig. 2. The weakened line 11 may be provided by a perforating operation, or a tear strip could be used. It is important that the weakened line 11 extend only across the top of the package but not down its opposite ends. In this way, the elongated slot opening 7, which is formed by separating the film along the weakened line 11, is terminated so as not to extend down the opposite ends of the package. With the side walls and ends of the package thus being maintained intact, the envelope 10 maintains the shape of the package 5 after being opened and even after several of the individual tissues 6 have been removed.

The stack of tissues 6 within each package 5 is under compression which is maintained by the tautness of the envelope 10. As successive tissues are withdrawn from the stack after the package has been opened, the stack expands or bulks to take up the slack so that a substantial portion of the individual tissues can be removed from each stack and yet the package will be full, although not as dense as when initially packaged. The expanded condition of the stack after a number of tissues have been withdrawn is shown in Fig. 4, whereas, the initial compressed condition of the stack when the package 5 is closed and before any tissues have been withdrawn, is shown in Fig. 3.

In Figs. 1 through 4 the reference numeral 12 designates a peripheral bead which is formed in sealing the envelope 10 during the packaging operation. The bead 12 not only provides a strong and durable seal between the two portions of film forming the envelope 10, but it also serves as a reinforcing element to maintain the shape and configuration of the package 5.

One satisfactory method of forming the packages 5 will be described in connection with Figs. 5 and 6 of the drawings. In Fig. 5 a two-part package forming device is indicated generally at 13 comprising a bottom section 14 and a cover section 15. The bottom section 14 is in the form of an open receptacle having a depth and length and width corresponding to the dimensions of the package to be formed. Connecting pins 16—16 project from opposite sides of the section 14 so as to fit into ears 17 provided therefor on the sides of the cover section 15, as shown in Fig. 6. In this way the section 15 is secured in alignment on the bottom section 14 with the bottom edge 18 of the upper section fitting against the upper edge 20 of the section 14.

A U-shaped or channel-shaped section 21 extends lengthwise within the upper section 15 of the package forming device 13 with the bottom of the channel being approximately even with the bottom edge 18. It will be noted that there is a peripheral margin or space 22 between the bottom edge of the channel section 21 and the bottom edge 18.

In forming the package 5 using the device 13, a sheet of continuous film material, such as polyethylene, is first laid over the bottom section 14 and then a stack of the individual tissues 6 is placed on this sheet and the upper section 15 is used to compress the film 23 and the stack into the cavity of the bottom section 14. A cover sheet 24 (Fig. 6) of polyethylene is then placed over the top of the stack and the cover section

15 is brought to the closed position as shown in Fig. 6 so as fully to compress together the opposed edges of the films 23, 24 between the opposing edges 18 and 20. Excess portions of the films 23 and 24 are trimmed away and then a radiant heater, indicated diagrammatically at 25 in Fig. 6, is used to form a bead seal between the opposed edges of the films 23 and 24, as indicated at 12. It will be noted that the channel member 21 serves to maintain the stack of tissues 6 under compression during this packaging operation.

Although several different commercially available films may be used for forming the envelope 10 and may be heat sealed, polyethylene is unique in the formation of a bead type seal when opposed edges of this type of film are radiantly heated. Furthermore, polyethylene film has elasticity or stretchability characteristics which serve to maintain the stack of tissues at proper compression within the envelope 10.

It will be understood that those skilled in the art will be able to manufacture the packages 5 using other equipment and methods than those described in connection with Figs. 5 and 6.

While the invention has been specifically described in connection with the packaging of cellulosic cleansing tissues, it will be appreciated that it is applicable to the packaging of other items of a like nature.

It will be apparent that certain obvious modifications may be made in the specific embodiment of the invention described above and shown in the accompanying drawings. For example, the reinforcing bead seal 12 may be located at any elevation in the side wall of the envelope.

Having fully described the invention and set forth the preferred embodiments thereof, what is claimed as new is:

A non-rigid package comprising, in combination, a stack of individually folded cellulosic cleansing tissues; a relatively rigid panel member on the bottom of said stack, and a snug fitting envelope of polyethylene completely enveloping said stack and panel member, said stack being essentially in the form of a rectangular parallelepipedon, said film being weakened by perforations along a center line extending lengthwise across the top of said stack and terminating at opposite ends so as not to extend down the opposite ends of said stack, the bottom wall of said envelope being joined to the remainder thereof which is in the form of a cover by means of a heat-formed bead extending peripherally around the bottom of said package, said envelope being stretched so as to maintain said stack compressed to a degree which allows a substantial number of said individual tissues to be withdrawn through the slot provided by separating said film along said weakened line while the remaining tissues in said stack will expand to fill up said enclosure.

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