

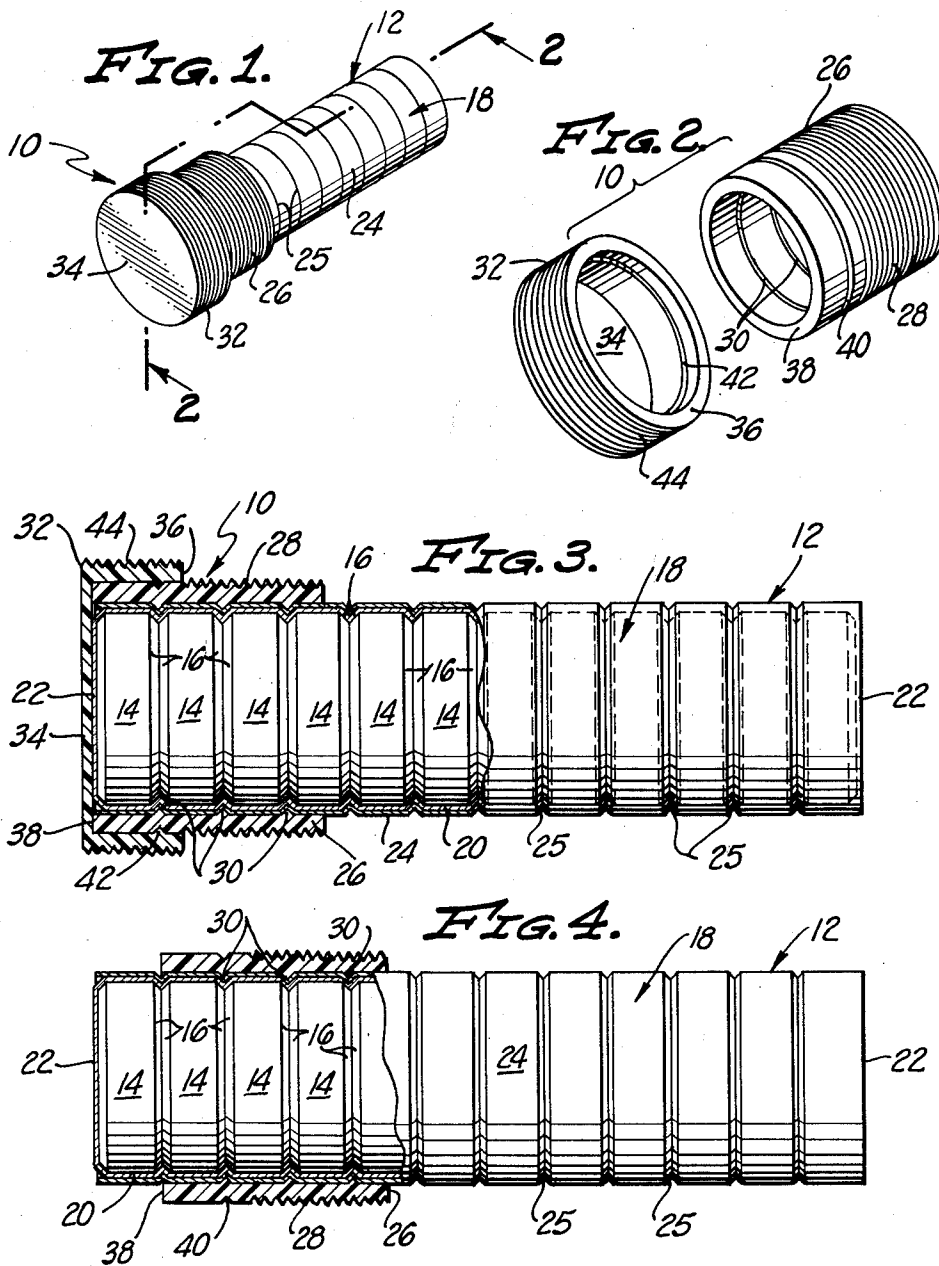
Sept. 8, 1964

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3,147,857

DISPENSING SLEEVE AND CLOSURE CONSTRUCTION

Filed Aug. 10, 1961



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3,147,857

DISPENSING SLEEVE AND CLOSURE CONSTRUCTION

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Filed Aug. 10, 1961, Ser. No. 130,527
4 Claims. (Cl. 206—56)

This invention pertains to a new and improved type of flexible sleeve and closure construction and more specifically to the use of such construction in conjunction with packages for articles such as lozenges and the like.

Such articles are commonly marketed at the present time in the form of small tubular packages in which they have end faces in direct contact with one another in which they are surrounded by a flexible, protective wrapper. Normally this wrapper consists of a foil or coated paper wrapping which extends not only around the exterior surfaces of the articles but which is bent or deformed so as to constitute end closures. Such a wrapper also normally includes a tubular paper sleeve located around this wrapping serving as a protective cover and serving as means for displaying, advertising, usage or similar indicia.

During the use of packages of this type it is difficult to obtain a single article without disrupting the entire package in such a manner that the articles remaining in it are satisfactorily protected from contamination of the like. Further, during the use of packages of this general type frequently a "messy" situation results as a consequence of the torn portions of the wrapper being exposed so that undesired tearing of the wrapping tends to occur as the package is handled or stored. These factors are considered material inasmuch as the average individual likes to make certain of the sanitary condition of such articles as throat lozenges or the like before consuming such articles.

A broad object of the present invention is to provide new and improved dispensing sleeve and closure constructions for use with tubular packages of the type indicated in the preceding so as to avoid the undesirable consequences and difficulties briefly indicated in the preceding paragraph. A further object of the present invention is to provide dispensing sleeve and closure constructions of this type which may be easily and conveniently manufactured at a comparatively nominal cost, which may be installed upon existing tubular packages with a minimum of difficulty, and which are easy to utilize for their intended purposes once they are installed upon a package. A still further object of the present invention is to provide in combination a tubular package of the type indicated in the preceding paragraphs of this specification and a dispensing sleeve and closure construction which serves to facilitate the removal of articles from such a package and in the maintenance of sanitary conditions with respect to articles remaining in a package after one or more articles have been removed from it.

These and various other objects of this invention as well as many specific advantages of it will be more apparent from a detailed consideration of the remainder of this specification and the accompanying drawing in which:

FIG. 1 is a perspective view illustrating the combination of a dispensing sleeve and closure of this invention upon an elongated tubular package;

FIG. 2 is a perspective view of an exploded nature showing the parts of the dispensing sleeve and closure illustrated in the preceding figure;

FIG. 3 is a partial sectional view taken along line 2—2 of FIG. 1; and

FIG. 4 is a view similar to FIG. 3 with a cap employed in the dispensing sleeve and closure illustrated in the preceding figures removed with a part of this device in a dispensing position.

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The accompanying drawing is primarily intended so as to clearly illustrate a presently preferred embodiment or form of this invention. From a detailed consideration of this specification and of the drawing those skilled in the packaging field will have no difficulty in realizing that various minor changes of a routine design or engineering nature may be made in the precise structure illustrated without departing from the inventive features or principles of this invention as defined or summarized in the claims appended to this specification.

As an aid to understanding the invention it can be stated in essentially summary form that it concerns the utilization of a tubular sleeve and a cap adapted to be removably secured to one end of this sleeve in conjunction with an elongated tubular package holding disk or other differently shaped articles used for medical, confectionary and/or similar purposes. With the present invention this sleeve is adapted to fit around such a package and is formed so that it is capable of being moved along the length of the package and so as to be located in a desired position in order to expose one or more articles in the package in such a manner that the exposed articles or article may be removed without disturbing the remainder of the contents of the package and in such a manner that the cap may be located upon the sleeve after this operation so as to protect the articles remaining in the package.

The actual details of this invention will be more fully apparent from a detailed consideration of the accompanying drawing. Here there is shown a dispensing sleeve and closure construction 10 of the present invention used in conjunction with a known type of elongated cylindrical package 12. This package holds a plurality of disk-shaped articles 14, each of which has beveled edges 16. The articles 14 are located within the package 12 in a coaxial manner so that their ends abut one another; they are held in this configuration by means of a flexible wrapper 18.

Normally this wrapper consists of a foil or coated paper wrapping 20 which is deformed so as to extend around the articles 14 and so as to have ends 22 which are bent so as to enclose and cover the ends of the articles 14 at the ends of the package 12. The wrapper 18 normally also includes a cylindrical paper or similar sleeve 24 which is disposed about the exterior of the wrapper 20 and which holds this wrapping 20 so as to prevent it from coming apart. The sleeve 24 normally is formed so that its exterior contains display, advertising usage and/or other similar indicia (not separately indicated). It will be realized from the foregoing that the wrapper 18 is of a character such that it can be readily deformed by contact with the digits of the hand or the like and such that it is capable of being easily torn as the package 12 is opened. Preferably the wrapper 18 is deformed so as to create peripheral grooves 25 fitting between the beveled edges 16 of the articles 14.

The dispensing sleeve and closure 10 of the present invention includes a cylindrical sleeve 26 formed out of a deformable material which is self-supporting and which is incapable of being readily torn and/or permanently deformed to other than a desired position as, for example, if it should accidentally become bent. This sleeve 26 may be easily formed out of any of a large number of known different plastic materials such as cellulose acetate, polystyrene or the like. Such materials are capable of temporary deformation and of returning to an initial configuration or position after such deformation.

From an examination of FIGS. 3 and 4 of the drawing it will be seen that sleeve 26 is formed so as to fit closely against the exterior of the sleeve 24 forming the exterior of the wrapper 18. Preferably the dimensions

of the sleeve 26 are such that its interior is capable of forming what may be referred to as "friction fit" against the exterior of the wrapper 18 so that this sleeve 26 may be engaged by digits of the hand and moved along the length of the package 12. In order to facilitate such movement serrations 28 or other similar knurled or related surfaces (not illustrated) may be formed on the exterior of the sleeve 26.

Preferably the interior of the sleeve 26 is formed so as to include at least one continuous internal projection 30 which extends in a plane perpendicular to the axis of the sleeve 26 completely around the interior of the sleeve 26. As illustrated in FIGS. 3 and 4 of the drawing a plurality of these projections 30 are preferably employed with the present invention. Each of the projections 30 is preferably dimensioned with respect to the package 12 so as to be capable of temporarily deforming adjacent parts of the wrapper 18 generally between the articles 14 so as to fit between the beveled edges 16 of these articles during the utilization of the dispensing sleeve and closure 10 shown. When a plurality of the projections are preferably regularly spaced from one another so as to all fit between the beveled edges 16 on adjacent articles 14 in the package 12. When the projections 30 fit they deform the wrapper 18. This wrapper 18 and the individual parts of it set forth above are capable of temporary deformation so as to allow the projection 30 illustrated to pass over the exterior of the package 12 as the sleeve 26 is being moved along its length.

The dispensing sleeve and closure shown also includes a cap 32 having a top wall 34 and a peripheral cylindrical skirt 36. This skirt is dimensioned so as to fit closely against the exterior of the sleeve 26 with the wall 34 resting against an end 38 of this sleeve. Preferably the cap is formed of a similar material used in forming the sleeve 26. Also preferably coating means (not separately numbered) are formed on the interior of the skirt 36 and the exterior of the sleeve 26 so as to hold the cap 32 with respect to the sleeve 26. These coating means may include a groove 40 located on the exterior of the sleeve 26 adjacent to the end 38 so as to extend completely around the sleeve 26 in a plane transverse to the axis of it, and a projection 42 of similar character adapted to fit within the groove 40 which projection 42 is formed on the inside of the cylindrical skirt 36. If desired serrations or the like 44 may be located on the exterior of the skirt 36 so as to facilitate its being engaged by the digits of the hand and so as to facilitate its being temporarily deformed as it is being located or moved upon the sleeve 26.

The utilization of the complete dispensing sleeve and closure construction 10 illustrated in the drawing is comparatively simple. This sleeve and closure construction 10 may be located upon the package 12 either by the manufacturer or by an ultimate consumer if such a consumer should purchase the sleeve and closure construction 10 separate and apart from the package 12 so as to be positioned as indicated in FIGS. 1 and 3 of the drawing. When so located an article 14 may be removed from the package 12 by the simple expedient of removing the cap 32 from the sleeve 26 and moving this sleeve 26 along the length of the package 12 so as to place one or more articles 14 beyond the end 38 of the sleeve 26. The projections 30 will tend to "snap" into place into the grooves 25 during this operation so as to insure that when motion is stopped that the end 38 is located in a dispensing position as indicated in FIG. 4. At this time the portions of the wrapper 18 beyond this end 38 are exposed and may be readily torn off of the complete package 12 using the end 38 as a tear guide. When this occurs obviously the exposed articles 14 are available for use. The cap 32 may be replaced upon the sleeve 26.

Operations of this type may be thus performed until such time as only a minor portion of the package 12 fits within the sleeve 26. At this point the remaining part

of the package may be easily thrust into an accessible position with respect to the end 38 forcing a digit of the hand or the like into the interior of the sleeve remote from the end 38.

From a consideration of the preceding discussion of the sleeve and closure construction 10 it will be realized that the term "tubular" can be applied to this construction as designating the various cylindrical parts of it and that the package 12 may also be considered as being of a tubular form. It will be obvious from a consideration of this that the sleeve and closure constructions falling within the scope of this invention can be formed so as to have elliptical or other similar configurations corresponding to the shapes of various packages of the same broad category as the package 12 previously described.

Because of the nature of this invention and the fact that various changes of a routine engineering nature may be made in the structure shown this invention is to be considered as being limited solely by the appended claims forming a part of this disclosure.

I claim:

1. In combination,

an elongated cylindrical package, said package including a plurality of disk-shaped articles, each of said articles having beveled edges, said articles being arranged coaxially so that their ends abut one another, said package also including a flexible exterior wrapper located around said articles;

a cylindrical sleeve having a length corresponding to the thickness of at least two of said articles, said sleeve fitting closely against the exterior of said wrapper, said sleeve including at least one continuous projection extending around its interior, said projection being capable of deforming said wrapper so as to fit between the beveled edges of two of said adjacent articles in order to hold said sleeve against movement along the length of said package, said sleeve and said wrapper being capable of temporary deformation so as to permit said sleeve to be moved along the length of said package;

a cap having a top wall and a peripheral cylindrical skirt, said peripheral skirt fitting against the exterior of said sleeve adjacent to an end of said sleeve so as to hold said top wall against said end of said sleeve; and

coating holding means for securing said cap to said sleeve formed on said skirt and on said sleeve.

2. A combination as defined in claim 1 wherein the distance between said projection on the interior of said sleeve and said end of said sleeve is the same as the thickness of one of said articles.

3. A combination as defined in claim 1 wherein said cap is formed of a material capable of temporary deformation and wherein said holding means comprises:

a continuous internal projection located on the interior of said skirt so as to extend around the interior of said skirt and a groove formed on the exterior of said sleeve so as to extend around the exterior of said sleeve, said cap being capable of being deformed so that said projection on said skirt fits into said groove on the exterior of said sleeve.

4. A dispensing sleeve and closure combination which comprises:

an elongated cylindrical package having a flexible exterior wrapper enclosing a plurality of articles;

a tubular sleeve having a hollow interior bore surface and open ends, said sleeve being provided on its interior surface with means for engaging between separate articles of said multi-article package, said package extending snugly through said bore, said means being disposed intermediate the open ends of said sleeve; and

cap means comprising a closure for one of said ends and a peripheral skirt disposable in removable en-

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