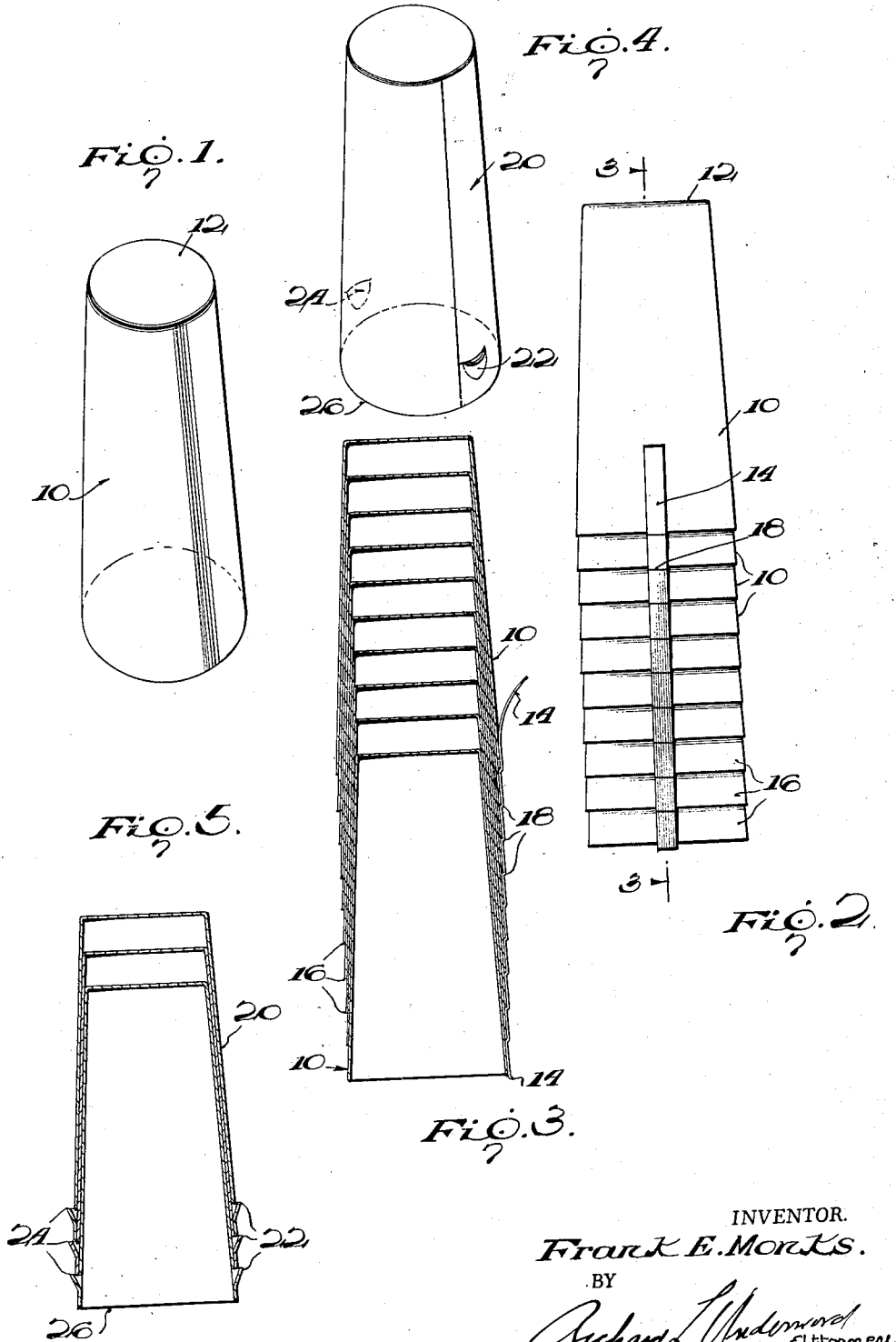


Feb. 23, 1954

2,670,076

F. E. MONKS
STACKED NECKBANDS
Filed July 22, 1949



INVENTOR.
Frank E. Monks.

BY
Richard L. Underwood
Attorney

UNITED STATES PATENT OFFICE

2,670,076

STACKED NECKBANDS

Frank E. Monks, Pittsburgh, Pa., assignor to
Fuller Label & Box Company, Pittsburgh, Pa.,
a corporation of Pennsylvania

Application July 22, 1949, Serial No. 106,311

1 Claim. (Cl. 206—65)

1

This invention relates to neckbands for bottles and has particular reference to a stack of nested bands so arranged as to prevent jamming of the individual bands against adjacent bands and a method of accomplishing such prevention.

Inasmuch as the invention was developed primarily in connection with neckbands for whiskey bottles, the description will be directed more particularly to that type of neckband. While in some instances tubular neckbands are used on whiskey bottles and forced to assume the contour of the bottle neck by crimping machines or in some other manner, more often than not neckbands for use in this field are made of blanks so formed as to produce so-called conical bands, which are in reality frustums of a cone. These may be either open or closed at the top.

In general it is the practice in the alcoholic beverage field for the bottler to purchase large stocks of bands from the manufacturer of neckbands. These bands are customarily printed or lithographed by the manufacturer and as the bands are formed they are nested or stacked for shipment. Various means are used for stacking the bands and in some instances they are ejected by air pressure from a forming mandrel into a tubular receptacle, thus automatically nesting the bands in a stack or tubular form as long as desired, containing a large number of individual bands.

During shipment and handling the nested bands of each stack tend to move downwardly, collapsing the stack and becoming jammed by reason of frictional engagement of the walls of the bands with the walls of respective adjacent bands.

It is an object of this invention to eliminate such jamming and facilitate removal by the bottler of individual bands singly for placement on the bottles at the distillery. Much time and material is wasted where the bands of a stack become so jammed that two, three, and sometimes even four or more bands are removed from the stack when the operator seeks to remove an individual band to place it upon an individual bottle. The bands must be separated before a single band becomes available for disposition on the waiting bottle. Thus it will be seen that elimination of such jamming of the individual bands in a nested stack expedites the banding operation considerably.

Referring now to the drawings, wherein like numerals indicate like parts throughout the several figures:

Fig. 1 is a perspective of a typical neckband of the type under consideration;

2

Fig. 2 is a side elevation illustrating one arrangement for preventing jamming of the bands when stacked;

Fig. 3 is a section through 3—3 of Fig. 2;

Fig. 4 is a perspective of a typical neckband embodying means for preventing jamming in a different manner from that illustrated in Figs. 1-3, and

Fig. 5 is a section through a stack of bands like that illustrated in Fig. 4.

As heretofore suggested, many bands for whiskey bottles are conical as illustrated in Fig. 1, the particular form illustrated embodying a conical tube 10 which is closed at the top as indicated at 12. The material from which the bands are made varies. However, it is always flexible and deformable, such as paper, foil, paper-backed foil, plastic, etc. For shipping purposes a plurality of these bands are nested to form a stack as indicated in Fig. 2. To prevent movement of the bands in a direction toward the base of the cones and consequent jamming of adjacent bands by reason of the resultant frictional engagement, I apply a strip 14 of adhesive tape along the wall of the entire stack. This tape is preferably of the pressure-sensitive type, known as Scotch tape, and it is applied in such manner that it adheres to the exposed skirt portions 16 of each neckband in the nested stack. Application is made while the bands of the stack are loosely engaged with one another.

Any force tending to cause any of the bands in the stack to separate from its adjacent band in an upward direction as viewed in Fig. 2 will be effectively resisted by the pull of the tape adhered to its skirt 16. In like fashion, any tendency of the bands to move together into more collapsed form will be resisted by that portion 18 of the tape which is adhered to the skirt portion 16 of the band immediately below and adjacent the band tending to collapse.

Thus each band of the nested stack is effectively limited in its movement with reference to adjacent bands and long stacks of bands such as that illustrated in Fig. 2 may be shipped by the manufacturer to the bottler and used by the latter without any substantial risk of the bands becoming jammed upon one another. After the tape is removed by the bottler from the stack, individual bands may be easily and quickly pulled from the stack successively as needed. Any tendency on the part of any of the bands to rotate with reference to an adjacent band is also effectively precluded by the applied tape 14.

A modified arrangement is illustrated in Figs. 4 and 5 wherein the neckband 20 is provided with

3

tabs 22 and 24 struck from the wall of the band. These tabs are preferably struck outwardly from the band wall and are diametrically oppositely disposed to one another. When stacking bands of this type the base 26 of each neckband rests upon the tabs 22 and 24 of the next adjacent lower band, thus preventing telescoping or collapsing of successive bands to an extent which would cause sufficient frictional engagement between their walls to cause jamming. For obvious reasons the tabs are located adjacent the base of the bands, the exact distance from the base being determined by the extent to which adjacent bands may be telescoped or collapsed without creating a jamming frictional engagement.

It will be apparent that any portion of a stack of bands arranged in the manner illustrated in Fig. 5 may be removed as a body inasmuch as upward movement of any intermediate band in the stack will carry with it the bands above it by virtue of engagement of tabs 22 and 24 with the base or bottom margin of the band disposed above it. Relative rotation of the bands in a nested stack of this type is immaterial inasmuch as the engagement between the base or bottom margin of each band with the tabs of the band immediately therebelow remains constant regardless of such rotation.

While in the embodiment disclosed in Figs. 4 and 5 two tabs are struck from the wall of the neckband, one tab is quite sufficient to obtain the desired result. Where one tab only is utilized, such tab is preferably struck or embossed from the overlap of the band, where the ends of the blank are adhered to each other and the two plies or laminations provide increased strength. The tabs are preferably formed under the heat and pressure of a sealing iron and are thus actually molded into the overlap of the neckband and retain their shape permanently.

Where the bands are ejected into a stack by air pressure, the force of the air is so regulated that the bottom edge of the last band in the stack cuts slightly into the tab of the previously ejected band, thereby interlocking the bottom edges and tabs so that sidewise pressure will not disengage the tab of one band from the edge of the next band which it abuts. This is clearly shown in Fig. 5 of the drawings.

The tabs may be shaped in any way desired and need not be limited to the particular configura-

4

tion disclosed in the drawings. As illustrated and described heretofore, the tabs are located adjacent the bottom of the band. However, the tab or tabs of the arrangement illustrated in Figs. 4 and 5 may be located near the top of the neckband and embossed inwardly. Under such circumstances the tab or tabs will abut the top edge of each incoming ejected band and the same purpose will be served as has hitherto been described in connection with the illustrated modification of Figs. 4 and 5 wherein the tabs are struck outwardly adjacent the bottom of the band.

Having thus described certain preferred embodiments of the invention, various modifications may be apparent to those skilled in the art and for that reason I wish to limit myself only within the scope of the appended claim.

What I claim is:

An article of manufacture comprising a stack of preformed conical neckbands for bottles in loosely nested relation without complete wall-to-wall contact to allow independent movement of each band, said bands being formed of foil-like, thin-walled, flexible and deformable material, and means for restricting rotational and axial movement to maintain the loosely nested condition of the neckbands including a single strip of pressure-sensitive adhesive material extending axially along the outside surface of the stack from the base end of said stack to the lower portion of the skirt portion of the uppermost neckband, said pressure-sensitive adhesive material adhering to the exposed skirt portions of said neckbands for absorbing shock without allowing movement of said neckbands sufficient to cause jamming by complete frictional wall-to-wall engagement of adjacent neckbands.

FRANK E. MONKES.

References Cited in the file of this patent
UNITED STATES PATENTS

Number	Name	Date
1,005,083	Tansey	Oct. 3, 1911
1,185,538	Rand	May 30, 1916
1,337,838	Hammond et al.	Apr. 20, 1920
1,633,983	Dawson et al.	June 28, 1927
1,710,393	Williams	Apr. 23, 1929
1,764,569	Knee	June 17, 1930
2,088,181	Swift, Jr.	July 27, 1937
2,323,342	McManus	July 6, 1943
2,379,934	Sieferth	July 10, 1945