Oct. 3, 1950 H. H. ALLEN 2,524,030

METHOD OF CLOSING BAG TUBE ENDS

Original Filed Oct. 5, 1942

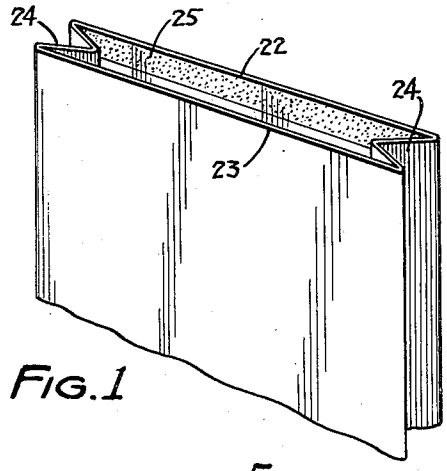


FIG. 1

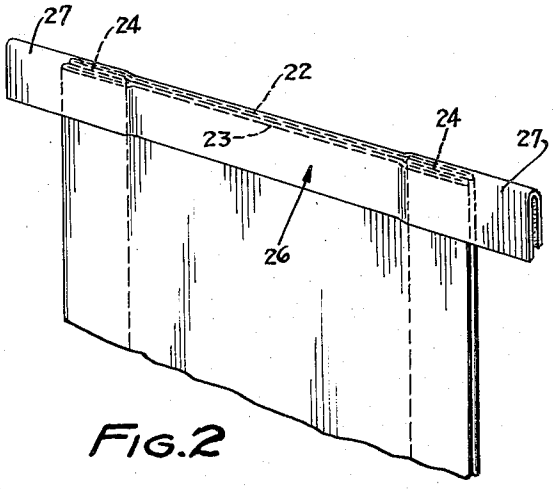


FIG. 2

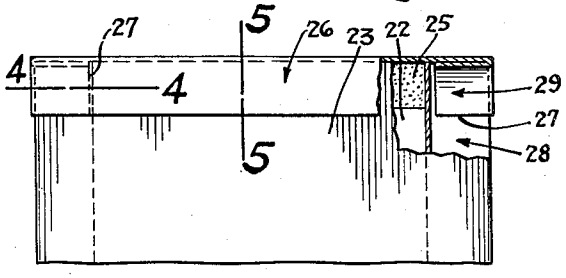


FIG. 3

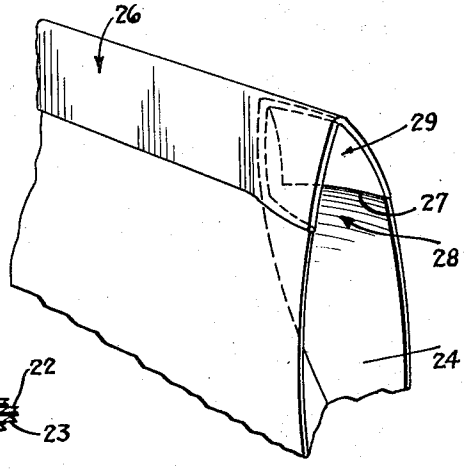


FIG. 6

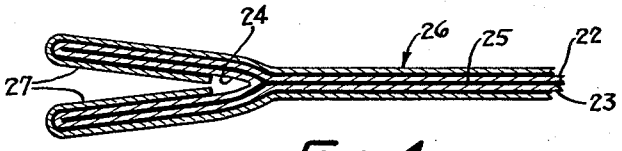


FIG. 4

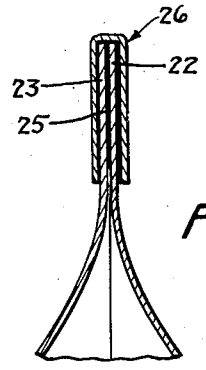


FIG. 5

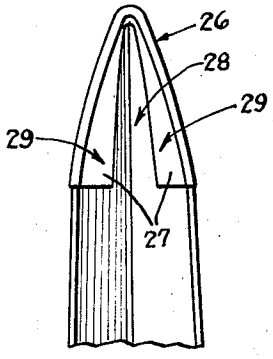


FIG. 7

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METHOD OF CLOSING BAG TUBE ENDS

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Original application October 5, 1942, Serial No. 460,780. Divided and this application May 28, 1945, Serial No. 596,232

3 Claims. (Cl. 93—35)

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This invention relates to new and useful improvements in methods of closing and sealing the open ends of tubular bag bodies, and is a division of my co-pending application, Ser. No. 460,780, filed October 5, 1942, now abandoned.

An object of the present invention is to provide a simple and inexpensively constructed bag closure which is particularly applicable to bag closures of the type where the edge walls are intucked between the side walls and comprise a strip of sealing tape which is folded over the flattened bag top walls and adhered thereto, the overall length of the tape being relatively greater than the width of the bag top, whereby the tape ends initially project beyond the ends of the bag closure, and said tape ends being tucked into the recesses or gussets provided at the corners of the partially closed bag top and suitably bonded to the adjacent surfaces of the intucked edge walls, thereby to hermetically seal the bag top.

A further object is to provide a bag closure for bags of the intucked or gusseted type, wherein the edge walls at the open end of the bag are intucked between the side walls and all of said walls being pressed in flatwise relation and bonded together, and a strip of sealing tape being folded over the marginal edge portions of the bag top walls with its walls bonded to the side walls of the bag top, and the projecting ends of the tape being intuck into the recesses provided at the ends of the bag closure, and having its walls bonded to the adjacent wall surfaces of the edge walls, and whereby the bag top is provided at each end with finger-receiving recesses to facilitate moving the bag about from place to place.

Other objects of the invention will appear from the following description and accompanying drawing and will be pointed out in the annexed claims.

In the accompanying drawing there has been disclosed a structure designed to carry out the various objects of the invention, but it is to be understood that the invention is not confined to the exact features shown, as various changes may be made within the scope of the claims which follow.

In the drawing:

Figure 1 is a perspective view showing one end of an intucked tubular bag body prior to being closed;

Figure 2 is a perspective view showing the bag top walls pressed into flatwise relation and a strip of tape applied thereto;

Figure 3 is a view partially in section, showing

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the ends of the tape tucked into the recesses provided at the ends of the closed bag top;

Figure 4 is a sectional plan view on the line 4—4 of Figure 3 on a larger scale;

Figure 5 is a detail sectional view on the line 5—5 of the Figure 3;

Figure 6 is a perspective view showing one of the tape ends tucked into one of the recesses provided at the bag ends; and

Figure 7 is an end view of Figure 6.

In the selected embodiment of the invention herein disclosed, there is illustrated in Figure 1, for purposes of disclosure, the upper portion of a tubular bag body comprising opposed side walls 22 and 23 and the edge walls 24, shown intucked between the side walls. Before pressing the walls into flatwise relation, a suitable adhesive 25 may be applied to the upper inner marginal surface of the side wall 22 and 23, whereby, when said walls are pressed into flatwise relation with the edge walls, all of said walls will be bonded together, as will readily be understood.

In the next step of completing the novel closure herein disclosed, a strip of sealing tape 6 is folded over the upper marginal edges of the flattened bag top walls and secured thereto by a suitable adhesive applied either to the upper outside portions of the bag top walls, or to the inner surfaces of the tape walls, or to both.

After the tape has been applied to the bag top walls, as shown in Figure 2, the projecting end portions 27 of the tape are tucked into the recesses 28 provided at the upper outside corner of the bag top, and the walls of the tape ends are then pressed into flatwise engagement with the adjacent surfaces of the upper portions of the intucked edge walls 24 and adhered thereto, as will readily be understood by reference to Figures 3, 4, 5, and 6.

After the tape has been folded over the top edges of the bag top walls, and its ends 27 have been tucked into the recesses 28, as shown in Figures 3 and 6, pressure is applied to the tape to press its walls into intimate bonding engagement with the walls of the bag top, thereby to provide a bag closure which is leak-tight. If desired, a suitable adhesive may be applied to the inner surfaces 29 of the tape ends 27, whereby when the end portions of the tape are subjected to pressure, the walls of the inwardly tucked tape ends 27 will be bonded together to thereby assure a closure that cannot leak at the corners of the closed bag top, as will be readily understood.

Experience has shown that in most cases it is not necessary to thus secure together the tape

surfaces 29, whereby the recesses 28 provided at the ends of the closed bag top may serve as finger-receiving openings to facilitate moving the sealed bags about from place to place.

The novel closure herein disclosed is simple and inexpensive in construction and may readily be performed on conventional bag closing and sealing equipment. It provides a very neat closure, and one which readily lends itself for rough handling, as the intucked tape ends positively eliminate all danger of the tape ends opening and eventually causing leakage.

It will be apparent to those skilled in the art that I have accomplished at least the principal objects of my invention, and it will also be apparent to those skilled in the art that the embodiments herein described may be variously changed and modified, without departing from the spirit of the invention, and that the invention is capable of uses and has advantages not herein specifically described; hence it will be appreciated that the herein disclosed embodiments are illustrative only, and that my invention is not limited thereto.

I claim as my invention:

1. A method of closing and sealing an open bag top, which consists in pressing the walls of the open bag end into flatwise relation with the edge walls intucked between the side walls, thereby to provide an outwardly facing recess at each end of the bag top, bonding together the marginal edge portions of all of said walls along the length of the bag top, applying a strip of tape of uniform width its full length over the flattened bag top with its end portions projecting beyond the side edges of the partially sealed bag top and whereby said projecting end portions are U-shaped in cross-section, tucking the projecting U-shaped tape ends into the recesses provided at their respective ends of the bag top and adhering them to the adjacent outer surfaces of the intucked edge walls, and subsequently applying an adhesive to the exposed surfaces of the intucked tape ends and pressing said surfaces into intimate bonding engagement with each other at each corner of the bag top.

2. A method of closing and sealing an open bag top, which consists in pressing the walls of the open bag top into flatwise relation with the edge walls intucked between the side walls, thereby to provide an outwardly facing recess at each end of the bag top, folding a strip of tape of uniform width its full length over the flattened bag top and adhering it thereto with its end

portions projecting beyond the side edges of the partially sealed bag top and whereby said projecting end portions are U-shaped in cross-section, tucking the projecting U-shaped tape ends into the recesses provided at their respective ends of the bag top and adhering them to the adjacent outer surfaces of the intucked edge walls, and finally applying an adhesive to the exposed surfaces of the intucked ends of the tape and to adjacent surfaces of the intucked edge walls, and applying pressure to said walls to securely bond them together.

3. As an article of manufacture, a flexible walled bag body having the top ends of the side wall portions collapsed in flatwise relation with the edge walls intucked between said side walls to provide a gusset, and a strip of adhesive coated sealing tape secured to the outer faces of the side wall portions of said bag at the top ends of said portions to seal the bag, said sealing tape extending longitudinally beyond each corner end of said bag top and being substantially U-shaped in cross-section, the longitudinally extending portions of said tape each being tucked inwardly within an adjacent gusset, the adhesive coated portions of said intucked portions of said tape being secured to the adjacent faces of the intucked edge walls of said bag gussets, the opposed faces of the intucked portions of said tape being provided with an adhesive coating, each pair of opposed faces of said intucked portions of the tape being secured together by said last named adhesive coating, whereby relative movement is prevented between the intucked edge walls and the side walls at the corner ends of the bag to provide a sift-proof closure.

HENRY H. ALLEN.

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