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 [31] **8,810/68**

3,375,634 4/1968 Jarund..... 53/135 X
 3,415,035 12/1968 Wickersheim..... 53/138 X

FOREIGN PATENTS

1,184,267 12/1964 Germany..... 53/134

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[54] METHOD FOR ATTACHING A TAG TO A BAG DURING CLOSING THEREOF

4 Claims, 2 Drawing Figs.

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 229/74

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 B65d 33/00

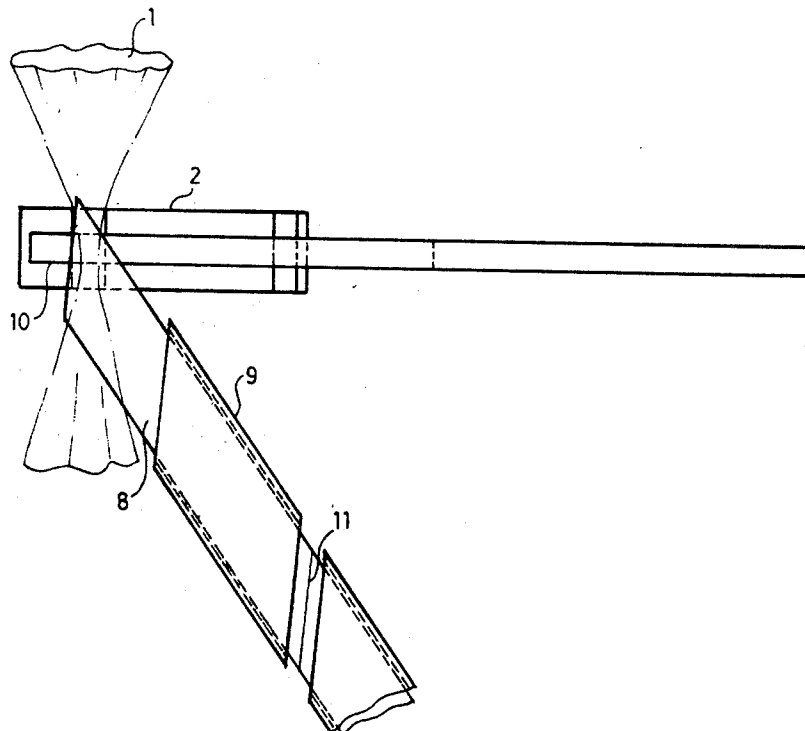
[50] Field of Search..... 53/134,
 135, 137, 138, 198 A, 14; 229/62, 63, 65, 74;
 150/11; 40/2, 21, 305

[56] References Cited

UNITED STATES PATENTS

2,882,663 4/1959 Leighton 53/198

ABSTRACT: A bag is conventionally gathered at one end in preparation for placing a sealing tape around the gathered end of the bag. The longitudinal axis of the bag extends through the gathered end of the bag so that the tape will surround this axis. Prior to placing the tape around the gathered end of the bag, a tag is situated between the tape and the gathered end of the bag. This tag is positioned so that it extends angularly with respect to the longitudinal bag axis, at an angle greater than 90° but less than 180°. As a result, when the tape is extended around the gathered end of the bag, not only is the gathered end of the bag held closed by the surrounding tape but in addition the tape serves to fix to the bag the tag which extends angularly from the bag at its closed end so that any information on the tag is readily visible.



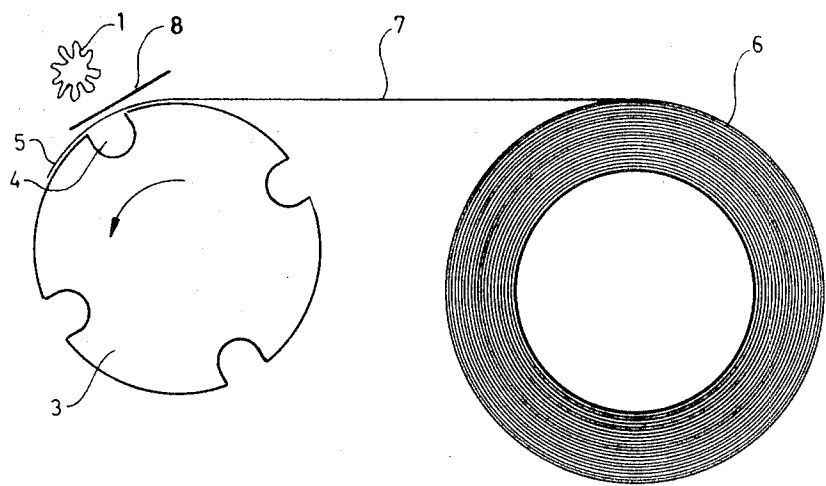


Fig. 1

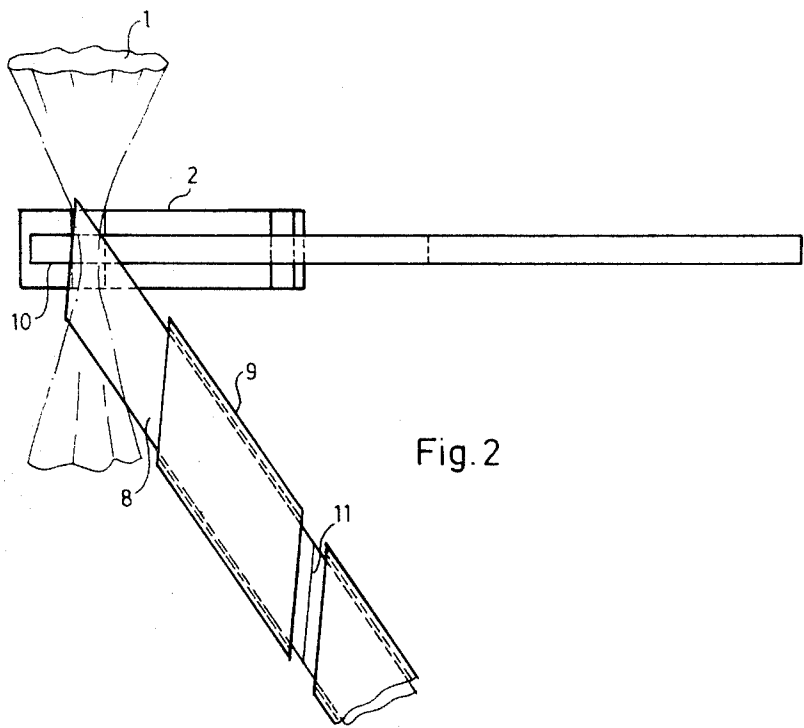


Fig. 2

METHOD FOR ATTACHING A TAG TO A BAG DURING CLOSING THEREOF

BACKGROUND OF THE INVENTION

The present invention relates to the closing of bags which contain articles of the type, which are sold in markets or other commercial establishments.

Bags of this type must be provided with suitable tags, labels, or the like, which carry information such as, for example, the price of the article.

There are already known devices for accomplishing similar results. Thus, in U.S. Pat. No. 3,375,634 there is the disclosure of an elongated bag which is gathered at one end simultaneously with placing a twistable strip around the gathered end of the bag to hold the end of the bag closed. Between the strip and the gathered end of the bag is located a label which carries any desired information. The latter label, however, extends in the longitudinal direction of the bag and projects to an undesirable extent therefrom. Because the twistable closure strip engages the end of the bag only frictionally, it is this friction that is relied upon to hold the label in its position on the bag. Such labels are easily pulled out from between the strip and the gathered end of the bag, due to any possible rough handling of the articles. Also, a considerable amount of free space is required beyond the end of each bag in order to enable the label to extend freely therefrom along the axis thereof. Such labels sometimes prevent a tight seal from being achieved.

SUMMARY OF THE INVENTION

It is a primary object of the present invention to provide a method and apparatus which will avoid the above-referred-to drawbacks.

More particularly, it is an object of this invention to provide a method and apparatus capable of inexpensively and efficiently closing a bag while simultaneously attaching thereto an information-carrying tag which extends from the bag at an angle with respect to the longitudinal axis thereof, so that the tag need not extend to an undesirable great extent beyond the closed end of the bag and can nevertheless have sufficient area to carry all of the desired information.

Another object of the invention is to provide a method and apparatus according to which a simple sealing tape, such as adhesive tape, may be used to surround the gathered end of the bag while attaching a tag thereto.

It is also an object of the invention to attach a tag in such a way that a tight closure will be maintained.

According to the method of the invention the adhesive or sealing tape is initially placed in the proper position to surround the gathered end of the bag at the longitudinal axis of the latter, which extends through the gathered end. Prior to placing the sealing tape around the gathered end of the bag, a tag is, however, positioned between the tape and the gathered end of the bag, with the tag extending angularly with respect to the longitudinal axis at an angle greater than 90° but less than 180°, so that when the sealing tape is placed around the bag to hold the latter closed the sealing tape will also function to maintain the tag fixed to the bag extending angularly therefrom.

With the apparatus of the invention the sealing tape is initially placed across a notch in the periphery of a member which receives the gathered end of the bag in its notch. With the tag positioned between the tape and the gathered end of the bag, when the latter is pressed into the notch, the tape will not only extend around the gathered end of the bag to close the latter but will also fix the tag thereto.

BRIEF DESCRIPTION OF DRAWING

The invention is illustrated by way of example in the accompanying drawing which forms part of this application and in which:

FIG. 1 is a schematic front elevation showing the method and apparatus of the invention; and

FIG. 2 is a schematic top plan view also illustrating the method and apparatus of the invention, FIG. 2 showing in particular the positioning means which positions and guides the information-carrying tags to the gathered ends of the bags.

DESCRIPTION OF A PREFERRED EMBODIMENT

Referring to the drawing in greater detail now, an article enclosure in the form of an elongated bag 1 is fragmentarily illustrated, the drawing showing only the portion where the gathered end of the bag is located prior to providing around this gathered end a closure tape which may be in the form of a length of adhesive tape 5 cut from a strip 7 that is unwound from a supply reel 6 of the adhesive tape. The length 5 is cut from the strip 7 in any suitable known manner which does not form part of the invention. The upper surface of the tape 7 is coated with adhesive, while the lower surface is not adhesive and rests on a rotary wheel 3 which is formed at its periphery with notches 4. The wheel 3 is turned in a stepwise manner by any well-known structure to situate the notches 4 successively in the operating position shown for the upper left notch 4 of FIG. 1.

The device 2 for situating the adhesive tape around the gathered end of the bag (see FIG. 2) is in itself well known so that it is not illustrated in all of its details.

As may be seen from FIGS. 1 and 2, an information-carrying tag 8 is situated between the tape 5 and the gathered end of the bag 1 prior to locating the tape around the gathered end of the bag surrounding the longitudinal axis thereof, which passes through the gathered end of the bag. For this purpose, a positioning means 9 is provided to guide the tag toward the bag and to position it with respect thereto. The arrangement of the positioning means 9 which may, for instance, be a simple, flat tubular guide is such that the tag 8 which projects beyond the guide 9 will be situated over the tape 5 between the latter and the gathered end of the bag, as is apparent from FIG. 1.

An elongated strip of the tag material is in the form of a continuous length extending through the guide 9 from a suitable supply reel which is not illustrated. A device which is in itself known serves to cut the tag tape 8 along the line 11 indicated in FIG. 2, so that the tag has a substantially rhombic configuration and is provided with a substantially pointed end, extending across the tape 5 with an end edge extending substantially parallel to the longitudinal axis of the bag 1. Thus, an end portion 10 of each information-carrying tag 8 is of pointed configuration, and each tag is applied in a position extending angularly with respect to the longitudinal bag axis at an angle greater than 90° but less than 180° with respect thereto. It will be seen that with this arrangement it is only the pointed free end portion 10 of the tag which is covered by the sealing tape 5. There is, therefore, no problem in providing a satisfactory seal for the bag. The relatively small pointed end portion of the tag 8 does not materially interfere in any noticeable manner with the tight, sealed closure of the bag by the tape 5.

The tag 8 may be provided with any desired printed matter in a well-known manner before the tag is applied to the bag between the gathered end thereof and the sealing tape. Any conventional printing structure can be used to print the desired information on the tag 8, and in the same way, the intermittent feeding of the tags along the positioning means 9 can be carried out in a well-known manner, as is also the case with the intermittent rotary movement of the notched wheel 3, and the feeding and cutting of the strip 7 from the reel 6 so as to derive the individual tape 5 therefrom.

With the structure shown in FIG. 1, the gathered end of the bag 1 is simply depressed into a notch 4, and the adhesive tape 5 is placed in a well-known manner around the gathered end of the bag, closing the latter tightly while at the same time fixing between the tape and the gathered end of the bag only the pointed end region of the tag 8 so that the latter is reliably fixed to the bag without interfering with the seal thereof in any way. Upon completion of these operations the next increment of tape is fed from the reel 6 while the wheel 3 is turned to

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situate the next notch 4 in the operating position, and all of these operations are repeated. Synchronously with the stepwise turning of the wheel 3 the tag strip is fed in a stepwise manner to provide the separate tags in proper timed relationship so that just prior to depressing the gathered end of the next bag 1 into the next notch 4 to locate the tape 5 around this next bag another tag 8 will be situated in the proper position.

I claim:

1. In a method of attaching an information-carrying tag to a bag simultaneously with the closing of one end thereof, the steps of situating a sealing tape in a position to be placed around a gathered end of the bag, with said tape surrounding a longitudinal bag axis which extends through the gathered end thereof, supplying a tag of a rhombic configuration having one end edge extending substantially parallel to the longitudinal bag axis and providing the tag with a relatively small pointed end extending across the tape, positioning the pointed end of said information-carrying tag between the gathered end of the bag and said tape prior to placing of the latter around the

gathered end of the bag with the tag extending angularly with respect to the longitudinal bag axis at an angle which is greater than 90° but substantially less than 180°, and then placing said tape around the gathered end of the bag and the pointed end of said tag to releasably maintain the bag tightly closed at its gathered end while the information-carrying tag extends angularly from between the tape and the closed end of the bag.

2. In a method as recited in claim 1 and wherein said tape is initially placed across a notch into which the gathered end of the bag is pressed to locate the tape around the gathered end of the bag with the tag extending between the tape and the gathered end of the bag.

3. In a method as recited in claim 1, the step of cutting a tag from a continuous strip.

4. In a method as recited in claim 3 and wherein the tape is initially placed across a notch into which the gathered end of the bag is pressed to locate the tape around the gathered end of the bag with the tag extending angularly from the longitudinal bag axis.

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