Oct. 3, 1939. H. K. STEEN **Re. 21,228**

SHOPPING BAG

Original Filed July 27, 1935 2 Sheets-Sheet 1

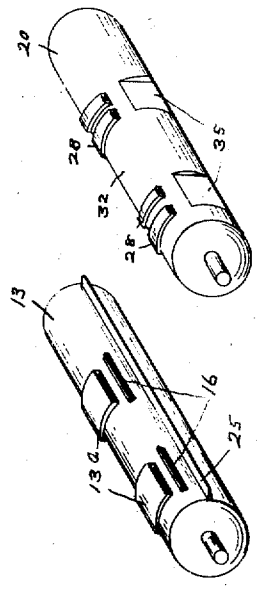
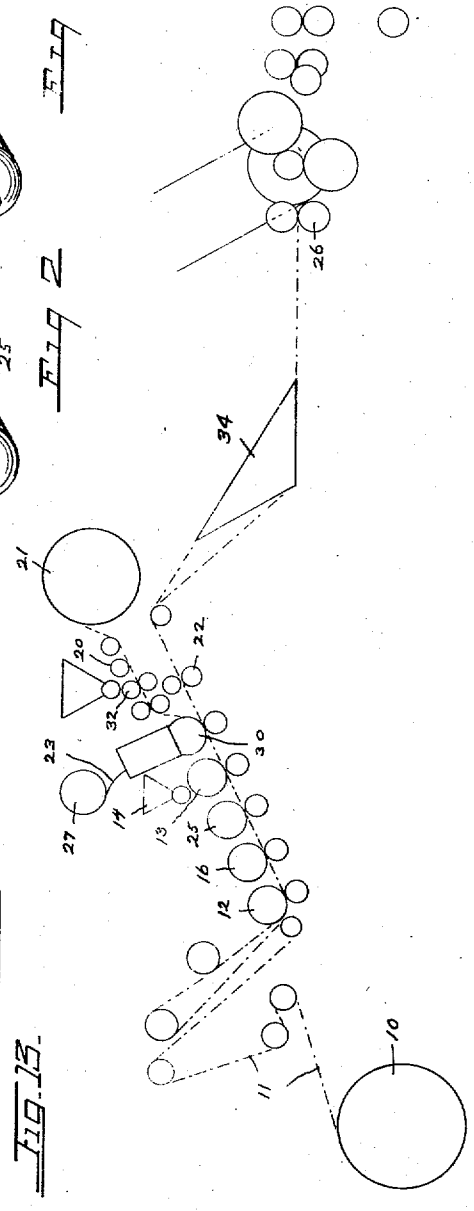


FIG 3

FIG 2



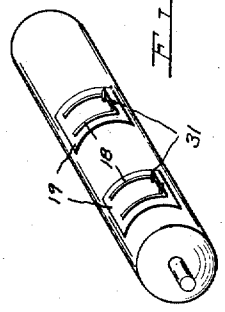


FIG 12

FIG 1

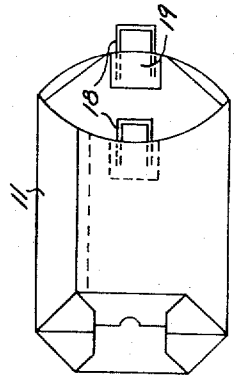


FIG. 13.

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Original Filed July 27, 1935 2 Sheets-Sheet 2

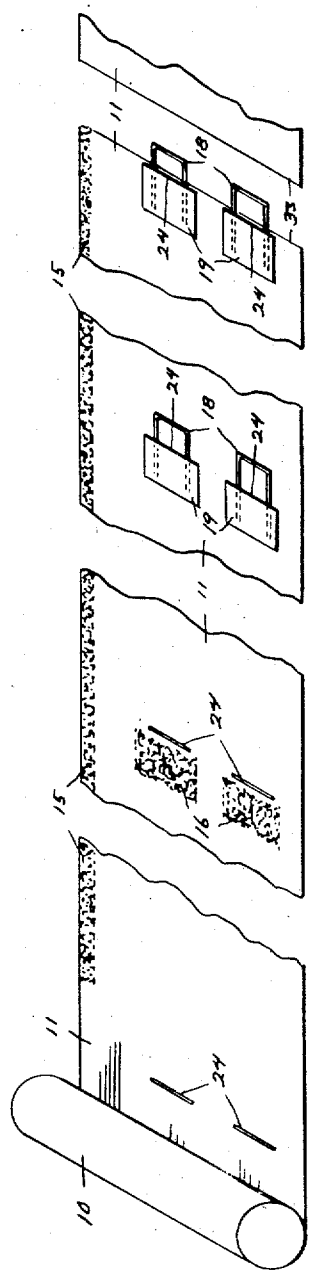


Fig 4

Fig 5

Fig 7

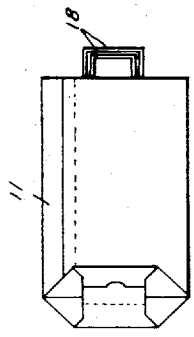


Fig 8

Fig 9

Fig 10

Fig 11

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21,228

SHOPPING BAG

Harford K. Steen, Newburgh, N. Y.

Original No. 2,076,680, dated April 13, 1937, Serial No. 33,553, July 27, 1935. Application for reissue April 10, 1939, Serial No. 267,177

6 Claims. (Cl. 229—54)

This invention relates to shopping bags made of paper or other suitable material and to the method employed in their manufacture, and constitutes an improvement over that described and claimed in United States Patent No. 1,799,072 which was issued to me on March 31, 1931, for a Method of manufacturing shopping bags.

In the above referred to patent, the cord handles were secured to the inside of the bag by an adhesive and a reinforcing strip that extended the entire length of the bag web, from which the tube and bag were formed, and to provide for the extension or projection of the proper portion of the handles to form a grip beyond the upper or open end of the finished bag, the end of the bag was cut or slotted down for a portion of the length of the handle and was then folded over along a crease which was formed in the making so that this fold could be either pasted to the inside of the bag or left loose to form a flap which could be folded to partly close the bag.

But it has been found that this method of manufacture not only consumes time and uses a greater amount of both the bag stock and the reinforcing material than is necessary, but does not provide such a pleasing appearance or as serviceable a bag as one where the handle projects from an even single thickness of bag material.

To facilitate the bundling or packing of the folded bags in bales for shipment and to prevent the stacked handles from building up in thickness thus taking too much room in the bale, and to give a closer formation aiding greatly in the manufacture, especially when a bottomer is used as the stacks of bags in the machine do not have to be replenished so often, I have nested the handles.

Also by the nesting of the handles, parts of the machine through or over which the attached handles have to pass, do not have to be relieved so much thus eliminating the possibility to creep and the machine will thus operate to better advantage.

While I have shown and described these handles as being attached to the bag by gummed patches, it is to be understood that they may be attached by other suitable means, such as staples or tied through holes formed in the web.

For this purpose I have added to my above mentioned patent the idea of locating the attached handles to the web in such positions that when the bags are folded, the handles will be nested one within the other so that they will lie side by side and only occupy the thickness of one single handle in the stacking of the bags, thus saving over 40 per cent. of the storage and shipping space required for the same number of bags that were made in the old manner.

Another object of the invention is to provide a bag in which the cord handles are secured to the interior thereof by an adhesive applied to predetermined local surfaces on the web and adapted to receive patches which have received the handles and which are both secured to the web by the adhesive or other suitable means, to form a firm and strong junction.

Another object of the invention is to provide a bag in which the cord handles extend beyond the open end of the bag without having to have the end of the bag folded over or formed with a flap.

Another object of the invention is to provide a bag in which the cord handles are so located and attached that when the bag is folded, the handles will nest one within the other to present a single thickness of handle and prevent building up when baled.

With these and other objects in view, my invention consists in certain novel construction and combination of parts as will hereinafter be fully described in the following description and illustrated in the accompanying drawings which form a part hereof and in which like figures of reference refer to corresponding parts in all of the views, and it is understood that slight changes may be made without departing from the spirit of the invention.

In the drawings:

Figure 1 is a diagrammatic view showing the steps of my process.

Figure 2 is a detail view of the pasting, slitting and creasing roller.

Figure 3 is a detail view of the patch moistening or pasting roller.

Figure 4 shows the web after the slits have been made and the seaming paste applied.

Figure 5 shows the web after the paste or adhesive has been applied adjacent to the slits for holding the patches and handles.

Figure 6 shows the web after the patches and handles have been secured in place.

Figure 7 shows the web with the extending handles after the bag portion or length is cut from the stock, but without having been tubed. In practice the tubing is done before the bag length is severed from the web.

Figure 8 shows the finished folded bag.

Figure 9 shows a finished bag with a flap.

Figure 10 shows the stock roll of patch making strip with its two rows of adhesive.

Figure 11 shows a patch having been cut off and the formed handle placed thereon ready for application to the web.

Figure 12 shows the handle and paste attaching means.

Figure 13 is a view of the bag showing the end open.

In carrying out my invention the mechanism required for the various steps and operations may be constructed in a single machine, or as a part of a bag making machine of the usual type, or the bags may be taken from my apparatus when in the form of a tube and bottomed and folded in another machine if desired, and in the description and illustrations of this present invention I have embodied my invention in a bag making machine without the bottoming and folding means.

Referring to the drawings:

I have taken the usual bag making machine and incorporated therein the required mechanism for making and attaching the handles and severing the bag tube from the web at the proper location to provide a bag length.

The usual stock roll **10** of suitable bag making material, such as paper or other fabric, is indicated and from this is drawn the web from which the bag is formed, and this web **11** during its travel through the machine is indicated by the broken lines.

From the stock roll **10** the web travels past the seam pasting rolls **12** where paste is applied to one edge **15** to later on hold the web in the form of a tube, and the web next travels past the knife **16** where the two aligned slits **24**, which locate the position of the handles **18** are made, and if it is desired to form the bag with a flap **17**, a crease **26** is now placed in the web by the creaser **25**, and from either the slitting knives **16** or the creaser **25** the web is carried past the adhesive pads **13** which transfer adhesive from the pot **14** to predetermined local surfaces **16** on the web adjacent to the slits **24** for the reception of the handles **18** and patches **19**.

While this is taking place, a pair of cord handles **18** and their attaching patches **19** are being prepared as follows: A piece of cord **23** is drawn from the stock roll **27**; cut off and formed into the D-shaped handles **18**. From a roll **21** of strip stock, either plain or gummed, a strip is fed and from this are cut the patches **19** by the knife bearing roll **20**, and these patches are carried past the pads **28** on the roller **32**, which applies either moisture or gum to the patches in two parallel strips **29** on their surface.

The transfer roller **30** that carries these patches **19** and transfers them to the web **11**, is provided with the pins **31** which perforate the patches **19** and carry them along as well as the formed handles **18** upon the patches in the moist gum and in contact with the pins **31**.

As the traveling web **11** reaches the proper station in the machine the transfer roller **30** places the gummed patches **19** and the handles **18** upon the previously gummed local surfaces **16** on the web, which is then carried through the press rollers **22** that press the patches **19** and handles **18** upon the web **11** to form a firm and strong union.

From the handle pressing roller **22**, the web **11** is carried to the usual tube forming device **34** which brings together the edges of the web **11** which are retained by the paste seam **15**.

After the bag tube has been formed, it is severed from the web **11** by the action of the cut-off knife roll **26** which makes a transverse cut **33** in aligned relation with the slits **24** if the bag is to be made without a flap **17**.

But should it be desired to form the bag with the flap **17**, then when the original slits **24** are made, additional slits are made at right angles thereto in line with the body of the handles **18**, or these longitudinal slits may be made without the transverse slits; the web **11** creases at the proper location to form the flap **17**, the crease **26** acting as a guide in folding the flap **17**.

The bag tube is now taken to the bottoming device where the bottom is formed, and the bags are then folded and baled.

The paste or adhesive rolls, **12**, **13**, and **20** are of the usual type having raised pads **13***a* and **28**, respectively, for transferring the paste from the pot to the web **11**, and are provided with the cut-out portions **35**.

The machine for making the handled shopping bag is described in somewhat greater detail and is claimed in my Patent No. 2,060,450 issued November 10, 1936, whereas the method is more fully described and is claimed in my Patent No. 2,060,451 of November 10, 1936.

To provide for the folded bag not building up in thickness in the bale due to the handles **18** stacking one upon the other, I have formed the two handles of slightly different dimensions, and have located them both upon the patches and upon the web, so that they will lie one within the other or nested, so that they take up but a single thickness of cord when the bag is folded upon itself. In the embodiment shown, the handles are formed from stock cord of suitable material, either of single or multiple ribbon, twisted or braided and with or without a reinforcing wire. As will be evident, the twisted or braided material has sufficient rigidity to assume and maintain the form of handle shown in Figure 8, for example, thereby insuring that the individual bags when stacked do not present more than a single thickness of cord material.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. As an article of manufacture, a shopping bag comprising a body portion, a pair of patches of suitable reinforcing material secured to the inner surface of said body portion adjacent the open end thereof, handles of different width interposed between the patches and the inner surface of the body portion with their gripping portions projecting from the open end of the bag, and nesting one within the other when the bag is folded.

2. As an article of manufacture, a shopping bag comprising a body portion having an open end and a closed end and adapted to be folded when not in use, patches of reinforcing material secured to the inner surface of said bag body adjacent to the open end, handles of different width interposed between said patches and the bag and secured thereto with their grip portions extending from the open end of the bag and adapted to nest with each other to form a single thickness of handle when the bag is in a folded state.

3. As an article of manufacture, a handled shopping bag comprising a body having an open end and a closed end and adapted to be folded flat forming two sides, patches secured to said

sides adjacent the open end, handles formed with grips and different width body portions, said body portions of the handles interposed between the patches and the bag and secured to both with the grip portions extending from the open end of the bag, and nesting one within the other when the bag is folded.

4. As an article of manufacture, a shopping bag comprising a bag body having an open end and a closed end, said open end formed with transverse slits and aligned creases, handles of different width secured to said bag body and nesting one within the other adjacent to said slits and said creases and extending from the open end of the bag body when the bag is folded, that portion of the bag body between the slits and crease and open end comprising a flap.

5. As an article of manufacture, a shopping bag having handles disposed on opposite sides of the bag together with means for securing same thereto, said handles having their gripping portions projecting from the open end of the bag, one of said handles being slightly smaller and entirely disposed and nested within the other when the bag is folded flat, whereby when folded flat and stacked the folded bag presents a single handle thickness.

6. As an article of manufactuse, a shopping bag having cord handles disposed on opposite sides of the bag together with means for securing same thereto, said handles having their gripping portions projecting from the open end of the bag, one of said handles being slightly smaller and entirely disposed and nested within the other when the bag is folded flat, whereby when folded flat and stacked the folded bag presents a single handle thickness.

HARFORD K. STEEN.