

- [54] **NESTABLE NET PRODUCE BAG AND CARRIER THEREFOR**
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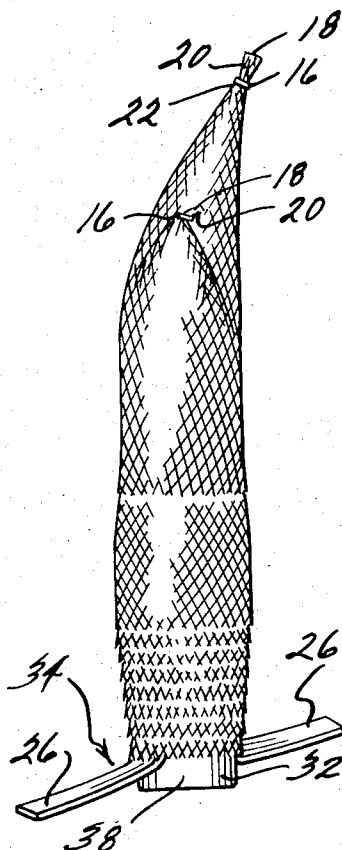
[57] **ABSTRACT**

This invention relates to an improved net bag of the type in which produce is packaged, particularly bunches of grapes and the like, characterized by a novel closure at one end, the structure and location of which results in a snag-proof tail that allows the bags to be nested and removed one at a time. The invention also encompasses the carrier for the nested bags which comprises an elongate bendable strap preferably of one-piece construction and folded over intermediate its ends to define a collar adapted to fit up inside the nest and hold the bags open when slipped down axially over an upright mandrel to produce a dispenser.

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3 Claims, 7 Drawing Figures



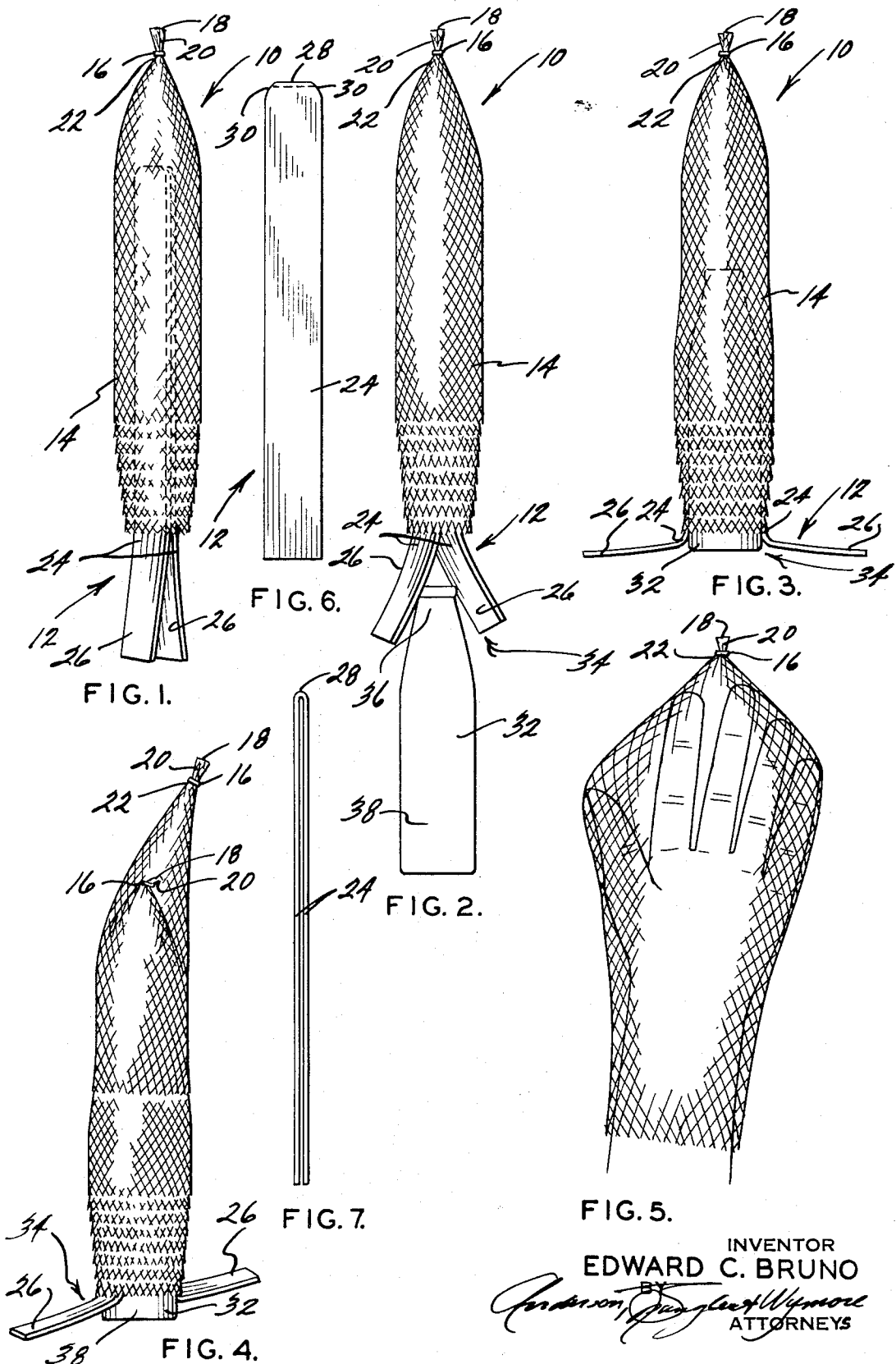


FIG. 5.

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NESTABLE NET PRODUCE BAG AND CARRIER THEREFOR

It has been the accepted practice for many years to package bunches of fruit, specifically grapes, in net bags which consist of a length of net tubing gathered together at one end and heat-sealed to form a fused tip by melting the plastic strands that criss-cross to define the netting. Unfortunately, the fused tip of these prior art net bags is rough, irregular and difficult to control as to shape. Thus, when several of the bags are nested one inside the other and an attempt is made to separate the innermost one from the nest, the tip of the bag second from the top will, more often than not, snag in the outer one so that both come off the stack together. In fact, it is not uncommon to pick up more than two at a time.

Up to the present time there has been no satisfactory solution to this problem and the produce packer is faced with the laborious and time-consuming prospect of either untangling the nested bags so as to not rip or tear the netting while trying to separate them or, alternatively, dispensing with the nesting altogether in favor of picking them up one at a time from a random stack of individual bags. Obviously, neither of these procedures is efficient although the prospect of being able to nest the bags has considerable merit from both the shipment and handling standpoints.

It has now been found in accordance with the teaching of the instant invention that in order to be able to nest the bags without snagging, the fused tip must be eliminated in favor of a snag-proof wire clip crimped onto a gathered end of a length of tubular netting so as to leave a short tail projecting therebeyond. The clip is crimped on in such a manner that its free ends overlap or are returned so as to leave no projecting portions capable of becoming snagged. More important, however, is the fact that the tail left projecting beyond the clip acts as a spacer that helps to hold the netting of the overlying bag out of contact with the clip at the base thereof. The tail serves the additional, but nonetheless important, function of a fingerhold which is readily grasped between the thumb and forefinger to facilitate removal of the bags one-at-a-time from the nested stack thereof.

Having solved the snagging problem, consideration could then be given to a carrier for use in dispensing the bags one-at-a-time from the nested stack and this resulted in an elongate strip of bendable material folded roughly in half to define a pair of flaps lying in face-to-face relation which would fit up inside the nested stack and leave the free ends thereof projecting out through the open end. A carrier having this configuration would stay flat for shipment and storage, yet, slip down over an upstanding mandrel and cooperate therewith to define a dispenser adapted to hold the stack upright and in open position while the bags are drawn one-at-a-time off the top. The free ends of the flaps receive the tapered upper end of the mandrel therebetween and guide it up inside the stack while shielding it from the netting so it will not catch or snag therein.

It is, therefore, the principal object of the present invention to provide a novel and improved net bag for bunches of fruit and the like.

A second objective of the invention forming the subject matter hereof is to provide a net bag which can be nested without snagging.

Another object of the invention herein disclosed and claimed is to provide a carrier for a nested stack of net bags which will fold flat for shipment and storage.

Still another objective of the within described invention is the provision of an expandable collar for use inside nested net bags that will cooperate with an upstanding mandrel inserted therein to hold said stack in open upright position wherein the bags can be removed therefrom one-at-a-time and thus define a convenient dispenser therefor.

Further objects of the invention are to provide a nestable net bag and carrier therefor that are simple, inexpensive, versatile, efficient, easy to use, disposable, dependable, safe and even decorative in appearance.

Other objects will be in part apparent and in part pointed out specifically hereinafter in connection with the description of the drawings that follows, and in which:

FIG. 1 is an elevational view showing a nested stack of net bags installed atop the folded carrier therefor;

FIG. 2 is an elevational view similar to FIG. 1 and to the same scale showing the free ends of the carrier that project from the open end of the stack spread apart to receive the tapered upper end of the mandrel therebetween;

FIG. 3 is an elevational view similar to FIGS. 1 and 2 except that it shows the mandrel fully inserted inside the stack with the flap ends extending horizontally in opposite directions from the base thereof;

FIG. 4 is an elevational view similar to the first three figures revealing how the nested bags are pulled one-at-a-time from the top of the stack by means of the tail;

FIG. 5 is a plan view showing how the net bag is shipped over the packer's hand preparatory to laying the produce therein and folding it inside out;

FIG. 6 is a front elevation of the carrier alone; and, FIG. 7 is a side elevation of the carrier of FIG. 6.

Referring next to the drawings for a detailed description of the present invention and, initially, to FIGS. 1-4, inclusive, for this purpose, reference numeral 10 has been chosen to represent the improved net bag in a general way while number 12 similarly designates the carrier for a nested stack 14 of the latter. The bag 10 differs from the prior art net produce bags in that instead of a heat-fused tip, one end of the length of tubular netting is gathered together and held closed by a clip 16 crimped in spaced relation to the tip 18 thereof so as to leave a short tail 20 projecting therebeyond. Clip 16 comprises nothing more than a loop-forming wire band encircling the gathered neck 22 of the tube net that is crimped tightly in place therearound so as to not leave any projecting ends in position to catch or snag in the netting of another bag placed either inside or outside thereof.

Tail 20 is a most important feature of the bag because, when several of these bags are nested as shown one inside the other, the tails act as spacers to hold the netting of the outer bag away from the clip of the one inside the latter thus providing further assurance that no snagging will occur. Furthermore, the spacing of the clip down from the tip allows the tail when thus unconfined to spread out or flare as shown and produce somewhat of an "umbrella" over said clip that shields its ends from the adjacent netting of another bag. Finally, this tail 20 provides a convenient fingerhold to be grasped between the thumb and forefinger when lifting a bag off of the nested stack as shown in FIG. 4.

The attention is briefly directed to FIGS. 6 and 7 where the carrier 12 has been most clearly shown. It comprises an elongate strip of a stiff but bendable material folded over intermediate its ends to define a pair of flaps 24 lying in face-to-face relation that possess sufficient rigidity to support the nested stack when placed inside thereof. Since the carrier is a disposable item, ordinary cardboard is an ideal material to make it from due to its low cost although some of the inexpensive plastic materials would work just as well.

The flaps are shown the same length and, while there is no particular reason for doing so, there is, likewise, no reason for doing otherwise. The significance of their length is that both flaps must be long enough to have the free end portions 26 thereof project on out beyond the open bottom end of the stack as illustrated.

The preferred structure is that shown where the single strip is folded over at 28 and then the corners rounded off as seen at 30 so that the unit will slip easily up inside the stack. Obviously, in place of a single strip folded over to define flaps, two separate strips laid in face-to-face relation could be used and still achieve a certain degree of the same result. There are, however, several disadvantages to the latter approach, the main ones being the greater difficulty the user would experience in inserting the carrier and the fact that the severed ends would spread apart when the mandrel 32 was passed therebetween in the manner that will be described in detail presently.

Returning once again to FIG. 1, it will be seen that with the carrier 12 in place within the stack of nested net bags, the resulting package is quite compact and easily stored or shipped. The carrier folds flat and the highly compressible nature of the bags makes it possible to squeeze the unit into a small neat little package without damaging any part of it.

In FIG. 2, the nested stack of bags and the carrier therefor are combined with the mandrel 32 to define a dispenser indicated in a general way by reference numeral 34. The mandrel 32, in the particular form shown, comprises nothing more than an ordinary narrow-necked glass bottle of a size which will slip easily up into the hollow interior of the stack between the flaps of the carrier. A bottle with a neck longer than that shown will work just as well, the only difference being in how far it extends up inside the stack. A tapered specially-designed mandrel anchored to a supporting surface can, of course, be substituted for the bottle but it would offer little, if any, advantage thereover.

In sliding the carrier down over the mandrel, the end portions 26 are spread apart as shown so as to pass the neck 36 of the bottle therebetween. The mandrel forces the flaps apart into spaced relation and they, in turn, expand the nested stack into a more or less cylindrical configuration correspondingly generally to the main body 38 of said mandrel. The upper end of the stack, of course, retains its tapered essentially conical configuration.

FIG. 3 reveals the dispenser set down atop a supporting surface with the flaps 26 spread out in opposite di-

rections along the surface of the latter. The tail of the outermost bag stands up like a wick in the top of the stack where the packer can take ahold of it and remove the bags one-at-a-time. No special equipment is needed, just an empty bottle and a work bench or other supporting surface for the packer to use.

FIG. 4 illustrates the manner in which the individual bags are lifted off the dispenser by the packer who merely grasps and pulls up on the tail. The stack offers minimal resistance to the removal of a bag which expands readily due to the netting and slides off over the top quite easily. Even a smooth-surfaced glass bottle used as a mandrel, on the other hand, is gripped by the stack tightly enough so as to not slide up when the individual bags are lifted therefrom. By eliminating the snagging problem, the bags slip off so easily that the bottle used as a mandrel does not even tip over. Even if it does, the bags enveloping it provide a cushion which prevents it from breaking.

Finally, in FIG. 5 it will be seen that the open bag is slipped over the packer's hand preparatory to laying a bunch of grapes or the like in the palm in the customary manner. The operation is completed by merely grasping the produce through the bag and turning the latter inside out with the other hand. In so doing, the bag will end up on the outside of the produce where it can be tied or otherwise secured. The resulting package has no holes in it, is secure and can be completed in a manner of a few seconds without any of the tangling and snagging problems usually associated with separating the bags and opening them up for use.

What is claimed is:

1. The assembly for use in combination with an upstanding mandrel to define a dispenser for net bags which comprises: an elongate strip of relatively stiff bendable material folded transversely intermediate its ends to define a pair of flaps in face-to-face relation to one another adapted to fit up inside a net bag and spread apart to hold same open upon insertion of a mandrel therebetween; and, a plurality of net bags telescoped over the folded edge of the strip to form a nested stack thereof with the ends of the strip extending outwardly of the open ends of the bags each of said bags including a gathered portion spaced from one end defining a neck leaving a tail projecting therebeyond, the tail of each inner bag in the stack acting as a spacer adapted to hold the netting of the bag on the outside thereof away from its neck.

2. The assembly as set forth in claim 1 which includes: a split ring clip crimped around the neck of each bag to form a closure at one end, said clip having the free ends thereof buried in the netting at the neck so as to eliminate any snaggable projections.

3. The assembly as set forth in claim 1 which includes: an upstanding tapered mandrel of a length adapted to extend substantially to the top of the innermost bag in the nested stack of net bags, and said mandrel being positioned between the flaps of the folded strip positioned inside said stack to spread the latter apart and open the nested stack encasing same.

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