United States Patent

[11] 3,550,842

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[54] **SLIT WRAPPER FOR PRODUCE**
4 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** **229/87**
[51] **Int. Cl.** **B65d 65/00**
[50] **Field of Search** 229/87F; 206/46F, 45.33

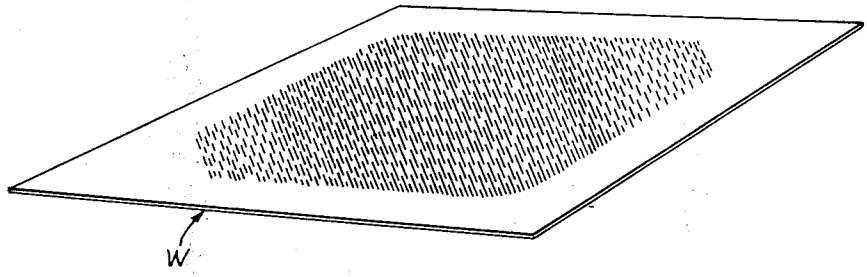
[56] **References Cited**

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3,040,968	6/1962	Long et al.	229/87(F)
3,069,067	12/1962	Crane	229/87(F)
3,109,579	11/1963	Crane	229/87(F)

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ABSTRACT: A wrapper for produce, particularly heads of lettuce and the like, comprising a diamond-shaped sheet of thin, flexible plastic material, such as polyethylene, having a novel pattern of slits which open up, when wrapped about the article of produce, to permit entry of air and moisture and to enable the initially flat sheet to form into an improved, larger "pouch" which is better adapted to conform to the produce.



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SHEET 1 OF 2

Fig. 1

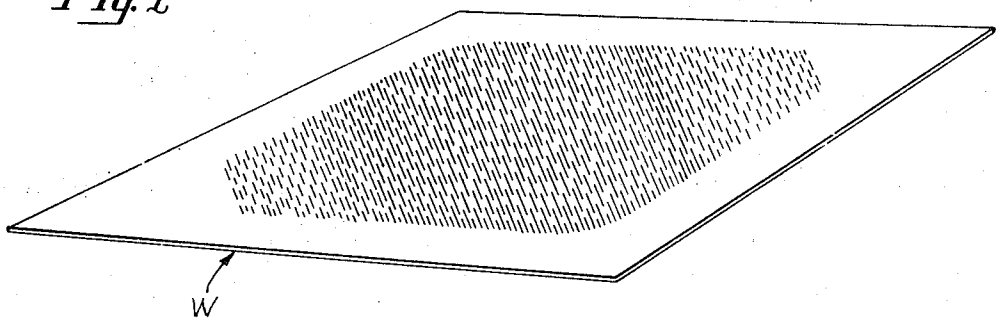
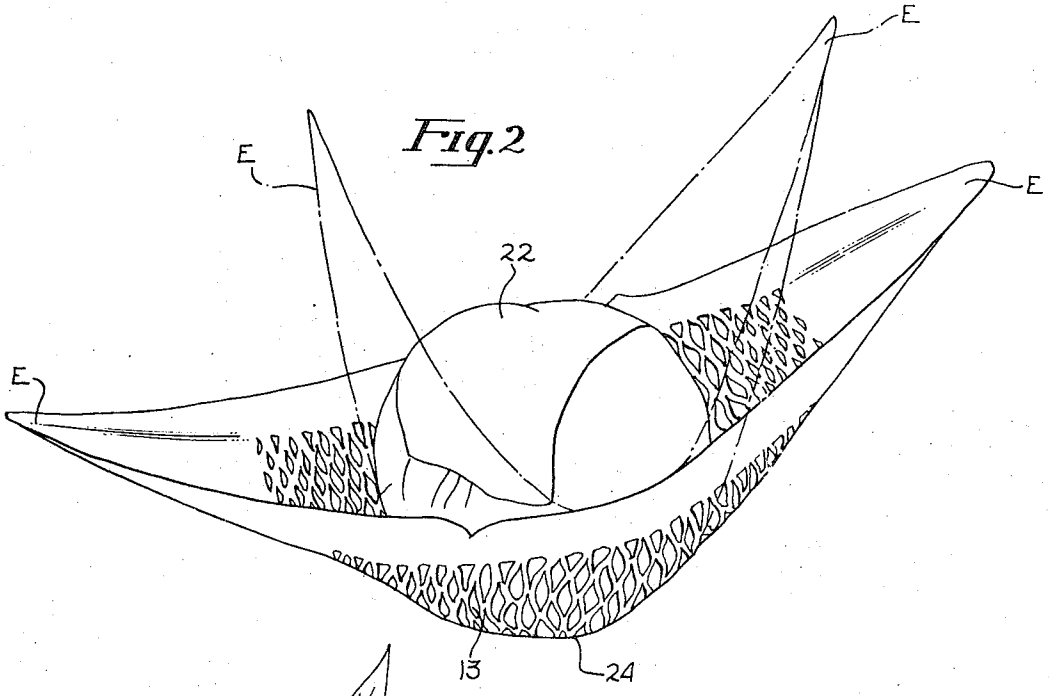


Fig. 2



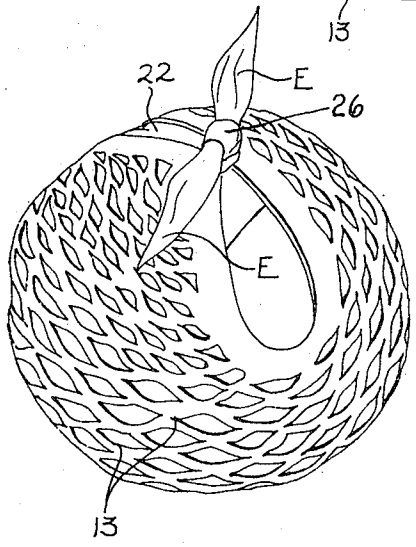


Fig. 3

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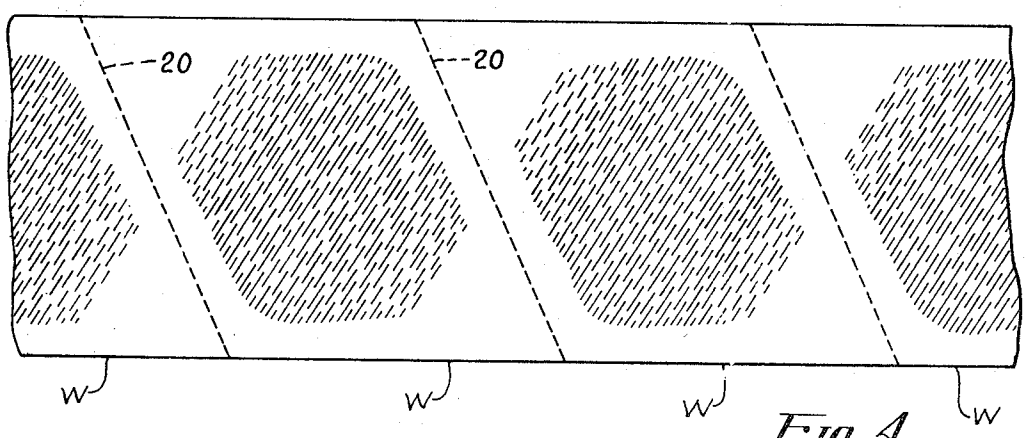


Fig. 4

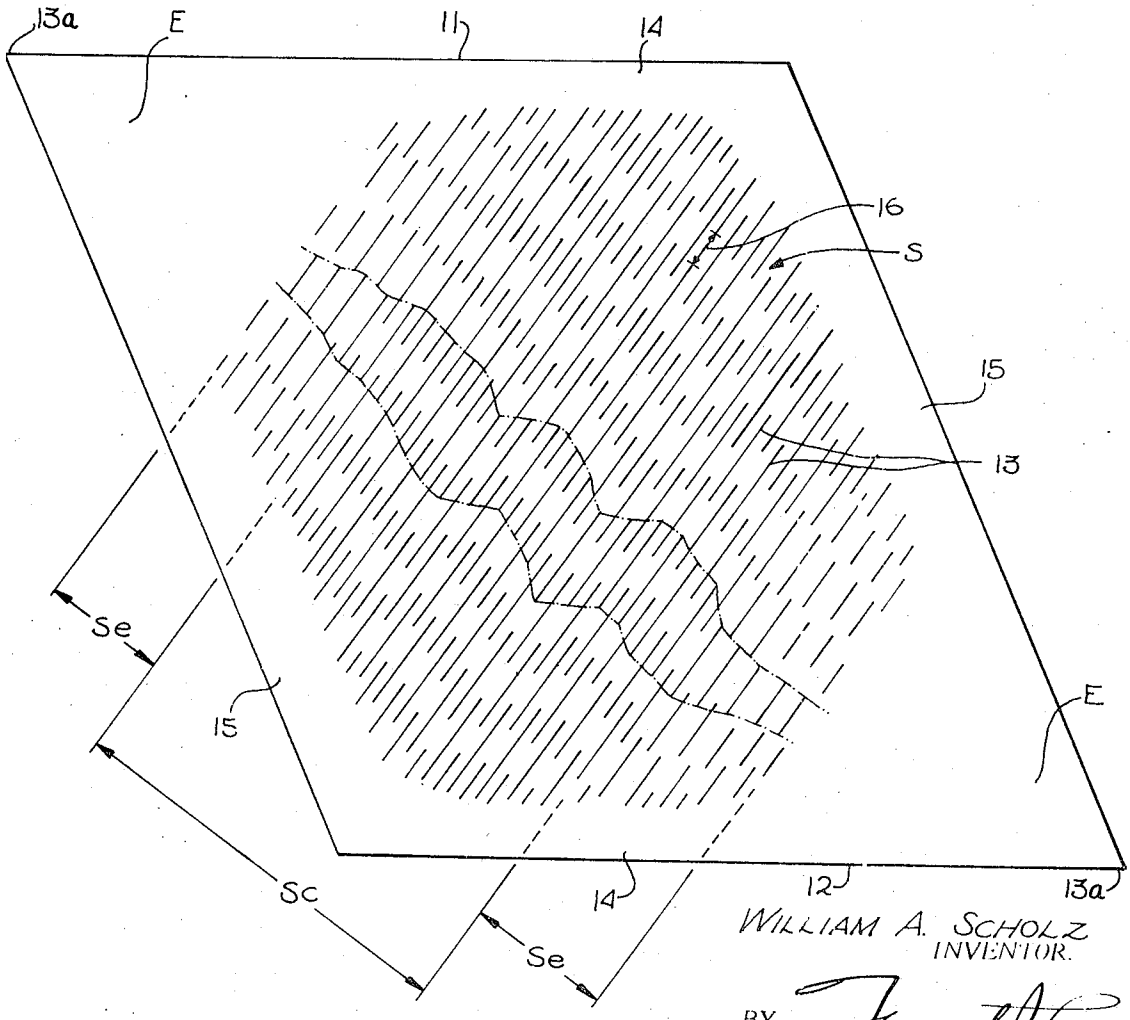


Fig. 5

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SLIT WRAPPER FOR PRODUCE

FIELD OF THE INVENTION

This invention relates generally to thin, flexible plastic wrappers for produce and the like, formed with patterns of slits which are capable of opening up for entry of air and moisture, and to permit the wrapper to conform to the article to be wrapped.

BACKGROUND OF THE INVENTION

U.S. Pat. No. 3,040,968 shows, in FIGS. 1—5, the original produce wrapper of the class under consideration. It is shown in said patent to be used in connection with a basket. It is now in wide commercial use for packaging of heads of lettuce without the basket, being simply tied about the produce in the manner represented in FIG. 3 of the patent. This article has proved so desirable and advantageous that approximately 90 percent of the lettuce now being marketed in Southern California is packaged in slit wrappers of the type shown in FIGS. 1—5 of said patent, while use of this wrapper is spreading nationally and has extended into Canada.

A purpose of the present invention is to provide an improved wrapper of this class, with joint objectives of improved conformity to the shapes of heads of lettuce, and the like, savings of material, and other advantages to be mentioned.

Also, a part of the prior art is a diamond-shaped, thin plastic sheet formed with a pattern of slits which run parallel with the long diagonal of the FIG. These slits enable the sheet to be stretched laterally to fit it to the top of a square basked. See U.S. Pat. No. 3,109,579. The slits of this article run in the wrong direction to give the effects sought by the present invention.

BRIEF SUMMARY OF THE INVENTION

According to the invention, the sheet is made generally diamond-shaped, or in the form of a parallelogram, and the rows of slits are oriented to be generally perpendicular to, or transversely of, the longer diagonal of the diamond. The length of the slits is greatest in the central area, and tapers off toward the ends, i.e., toward the acute angle "points" of the sheet. The spaces between slits preferably are made longer toward these points. Accordingly, a bag formed by bringing the two acute angle points together, or across one another, about such an article as a head of lettuce becomes more baggy or pouchy, in the central area than at the ends, owing to the wider openings made possible by the longer slits. The wrapper in this unique form is of material advantage over that of the original patent in that it automatically shapes itself better to a head of lettuce, or the like. A wrapper of lesser square inches of stock may be used for a head of lettuce of a given size when compared with the previously known wrapper.

DESCRIPTION OF THE DRAWINGS

Reference is now directed to the drawing showing one illustrative embodiment of the invention, and wherein:

FIG. 1 is a perspective view of a wrap, illustrative primarily of the initial position thereof at the beginning of the wrapping of a head of lettuce, the details of the slit arrangements not being shown excepting in a conventionalized way in this FIG.;

FIG. 2 is a perspective view of the wrap showing, in full lines, and in phantom lines, further successive stages in the wrapping of a head of lettuce with the wrapper of the present invention;

FIG. 3 shows the wrap completely about a head of lettuce;

FIG. 4 is a plan view showing a number of the wrappers in accordance with the invention joined initially edge to edge by line of perforations and illustrating a convenient way in which the invention may be marketed to the public; and

FIG. 5 is a plan view of a wrapper in accordance with the invention, showing a typical pattern of slits as provided by the invention.

DESCRIPTION OF A PREFERRED EMBODIMENT

The produce wrapper W of the invention comprises a generally diamond-shaped sheet or film of thin, highly pliable material, such as transparent polyethylene plastic. The wrapper is, as stated, generally diamond-shaped, or in the shape of a parallelogram, with nearly or approximately equal sides, and has a central slit area S. Preferably, for best proportioning, I make the upper and lower edges **11** and **12** equal to the perpendicular distance between these edges, and for packaging of good, average-sized heads of lettuce, this distance may advantageously be approximately 11". For smaller heads, the dimension may be reduced to 10½".The 11½ dimension sheet contains 132 square inches of stock, in comparison to 165 square inches formerly in the square design for an equal sized head of lettuce. At the same time, the new shape, of reduced area of material, does a better job in ways which will be pointed out hereinafter.

The central area S is formed with parallel rows of slits **13**, these rows being transversely spaced by a distance preferably of substantially three-sixteenth inch, and being oriented substantially perpendicular to the long diagonal of the parallelogram.

The end areas E adjacent the points **13***a* of the parallelogram, i.e., the "tails," are utilized primarily as "ties," and are hence preferably unslit for strength. Actually, the dimension of the slit area S measured parallel to the long diagonal of the sheet is preferably substantially one-half the length of said diagonal, leaving an unslit length of tie or tail E at each end equal to about one-quarter the length of the long diagonal.

The slit area S is otherwise formed with solid border areas **14** and **15** of proportions as illustrated in FIG. **5**.

Examining the slits more in detail, it will be seen, particularly from FIG. **5**, that the slits **13** in alternate rows are placed approximately in transverse alignment, while the slits **13** in adjacent rows are offset in the lengthwise directions of the rows. It is only necessary that the slits of alternate rows be approximately in transverse alignment, and FIG. **5** shows a pattern illustrating considerable freedom in this regard. In other words, slits of alternate rows must be, for the most part, or for the predominant part of their lengths, in transverse alignment with the larger parts, or predominant parts, of the slits in the rows which are one row removed. The slits in the row intervening between the alternate rows are then to be substantially offset from the slits of the alternate rows, so as to provide spaces **16** between successive slits of a row which are transversely aligned with intermediate portions of slits of the next adjacent alternate rows. It will be seen that these conditions are necessary for the sheet to "open up," when stretched, substantially in the manner of so-called expanded metal.

In consonance with these conditions, rows of substantially transversely aligned slits may be traced across the slit pattern of FIG. **5**, for example, but these rows are of a meandering character, rather than straight. One such row is outlined in dot-dash lines in FIG. **5**. Moreover, according to the invention, the rows in the most central region Sc of the area S are longer than the slits in the end areas Se thereof. In the illustrative example, the slits in the central area Sc are 1½" long, and are spaced end to end by ½", while in the end areas Se, the slits become gradually shorter, while the spaces between slits grow gradually longer. This feature contributes to strength of the article towards the ends, where additional stresses and strains are produced, owing to tying, than in the baggy middle.

The wrappers may be produced in long strips, with perforate lines **20** in between to permit easy separation, as seen in FIG. **4**.

FIG. **1** shows the wrapper in perspective, just prior to wrapping a head of lettuce therein. In this view, no great effort has been made to show the pattern of slits accurately, an actual representative pattern in accordance with the invention having been shown in FIG. **5**. FIG. **2** shows a head of lettuce **22** resting on the central area of the wrapper, and showing

how, if the tails, or ties E are held, and the weight of the lettuce caused to bear down on the wrapper, the slits will open up and form a large pouch **24**. It will be understood readily that the slits in the central region of the wrapper being longest, the central area of the wrapper will "open up" greatest, the direction of stretch being of course transversely of the slits, or in other words, parallel with the long diagonal of the wrapper. To complete the wrap, the ends, "tails," or "ties" E are brought up, as represented in phantom lines in FIG. **2**, and then crossed and tied in a knot **26**, as represented in FIG. **3**.

The resulting wrap is snug and neat, and the wrapper conforms nicely to heads of different sizes, the slits opening up more or less to accommodate to differentialized or shaped heads. The long slits in the central region open up wide where large expansion is required, and the progressively shorter slits at the ends open up progressively less, as best fitted for neatness of wrap. The slits become shorter and the spaces between slits become longer toward the ends of the wrapper so that these end regions of the slit area are of maximized strength and less apt to tear owing to the strain of typing. Thinner guage material is thereby possible. The "tails" are proportionately longer and narrower than in the case of the older square wrap, and tying is facilitated. The long, central area slits, where undue strain does not occur, does not harmfully weaken the wrapper, and does afford more open area, and therefore better exposes the lettuce when sprinkled for freshness.

The invention has a highly unique advantage, in that, despite economizing on material, the wrapper forms a proportionately larger pouch, and accommodates a proportionately larger head of lettuce.

I claim:

1. A packaging wrapper comprising a thin, pliable plastic film in the shape of an oblique parallelogram and having a slit area bounded by a solid, unslit margin which extends entirely about said slit area; said slit area having generally straight and parallel rows of spaced slits extending generally transversely of the longer diagonal of the parallelogram, with slits in given rows located generally opposite the spaces between slits in adjacent rows; the slits of said rows in the regions of said slit area most remote from the shorter diagonal of the parallelogram being of shorter length than the slits of said rows in the medial region of said slit area along and on opposite sides of said shorter diagonal.

2. The subject matter of claim **1**, wherein the distances between slits of successive rows increase in length progressively from said medial region towards the ends of the longer diagonal of the parallelogram.

3. The subject matter of claim **1**, wherein the distances between slits in the rows of said regions most remote from said shorter diagonal are greater than the distances between slits in the rows of said medial region.

4. The subject matter of claim **3**, wherein said slit area includes a medial region centrally located along said longer diagonal wherein said slits are of substantially uniform length, and two end areas wherein the slits are progressively shorter and the spaces between slits in the rows become progressively longer towards the ends of the diagonal.