

[54] COVER FOR RETAIL PRODUCE BASKETS

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[58] Field of Search 220/60 R, 306; 217/3 BC, 217/3 CV, 40, 56, 3 FC, 124; 229/43, 6 A, 2.5; 99/171 R, 171 TC, 171 C

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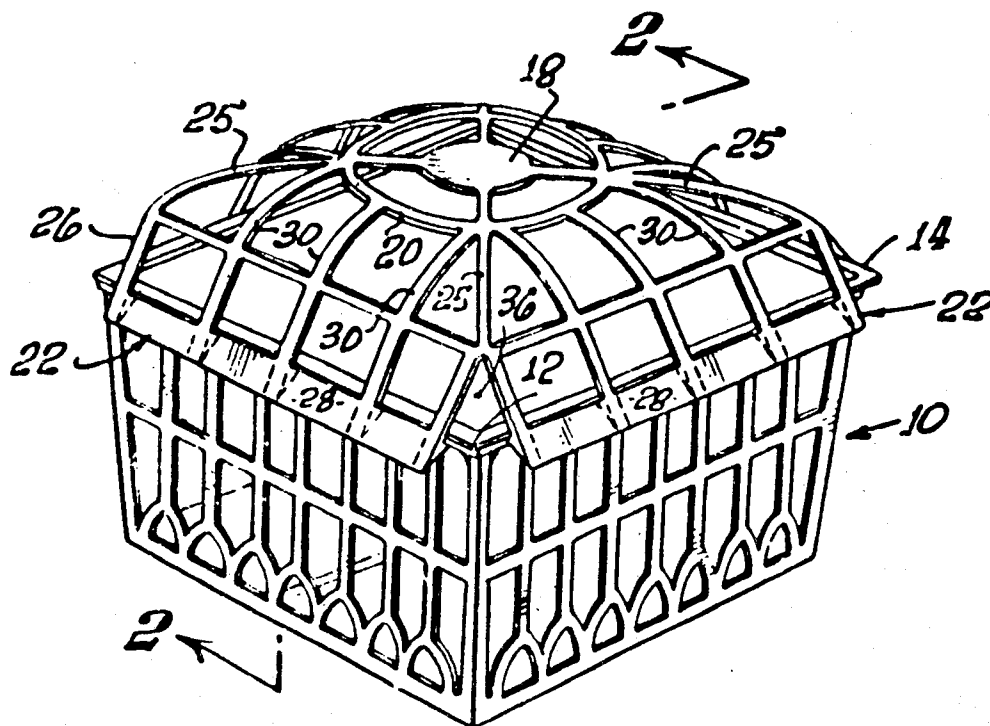
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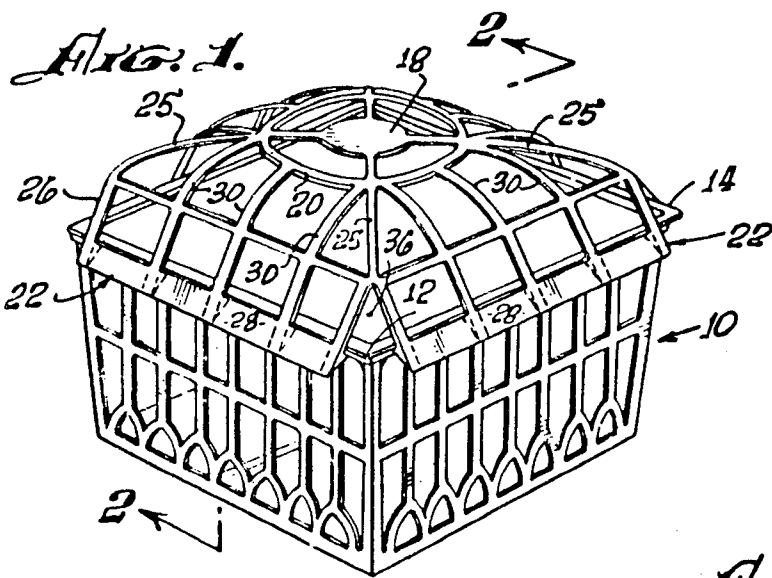
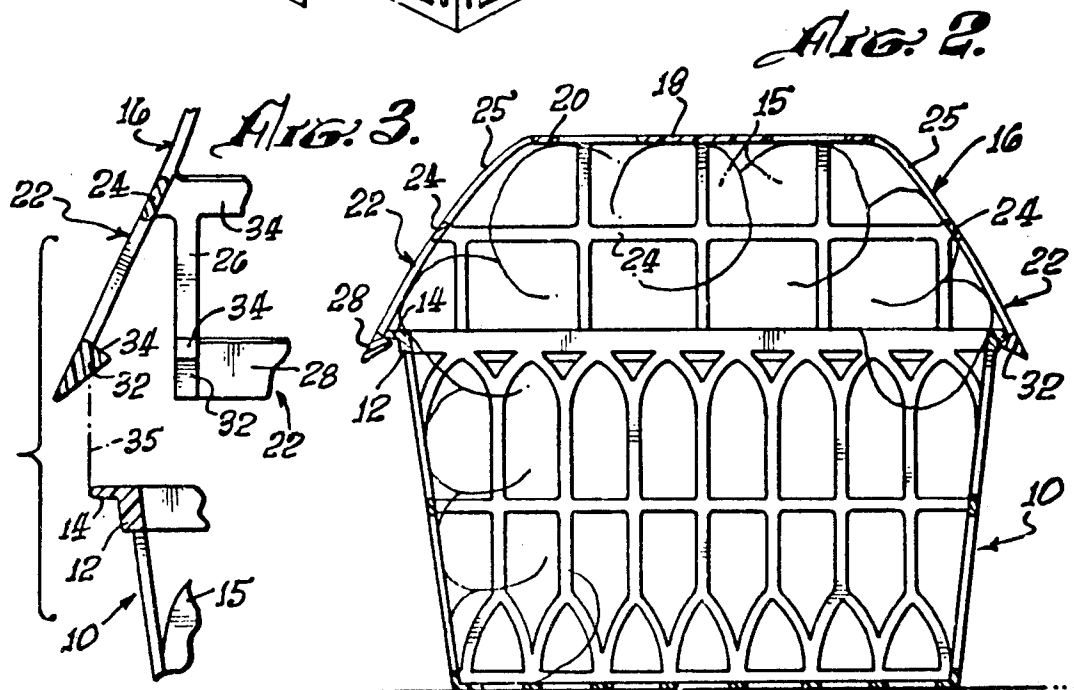
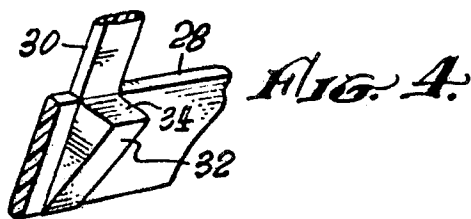
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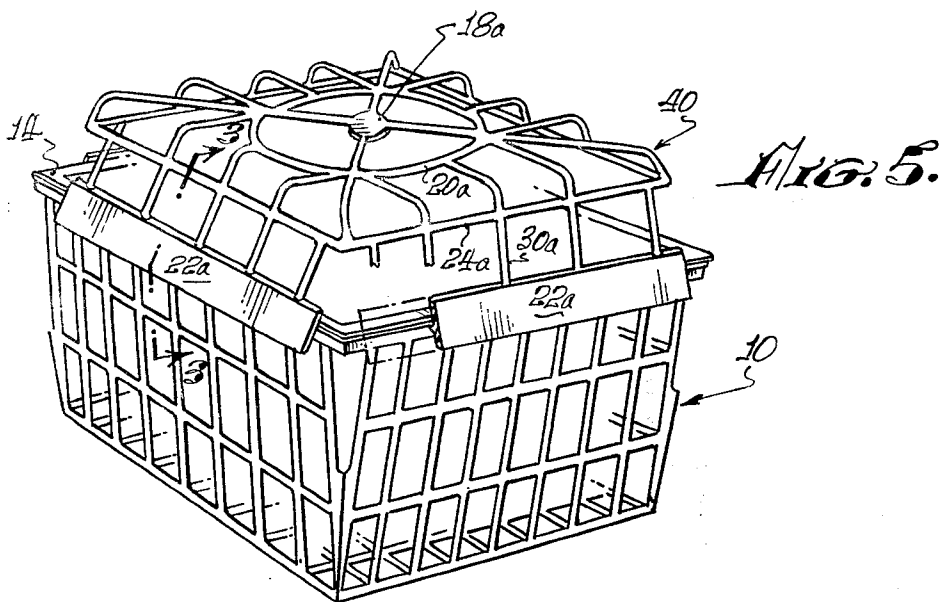
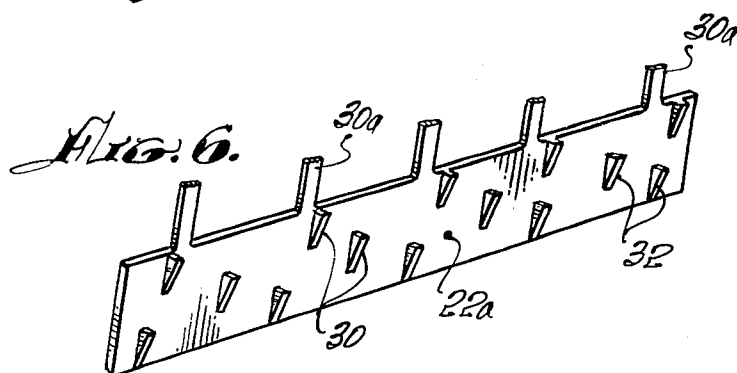
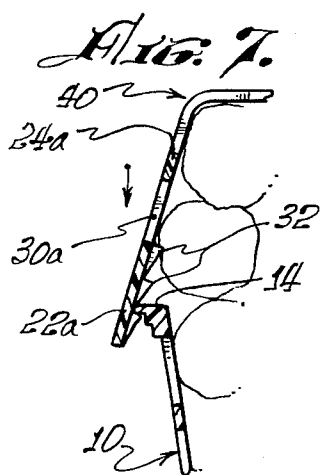
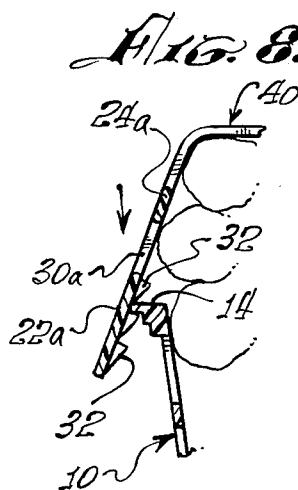
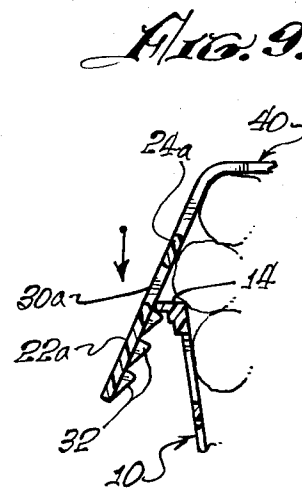
[57] ABSTRACT

A cover molded of resiliently flexible plastic material is rectangular in plan configuration with four flaps on its four sides, respectively, inclining downward to overhang the rectangular rim of a conventional basket for berries and the like. The four flaps are formed with hook shoulders on their undersides near their outer edges to releasably engage the rim of the basket to releasably retain the cover on the basket. Preferably, there are three spaced rows of hook shoulders for use to position the cover selectively at three different levels relative to the basket.

4 Claims, 9 Drawing Figures







COVER FOR RETAIL PRODUCE BASKETS

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of my co-
pending application, Ser. No. 170,774, filed Aug. 11, 1971, now abandoned.

BACKGROUND OF THE INVENTION

The invention relates to a cover for a produce container such as a basket for berries, grapes, and the like and, more particularly relates to such a covered basket that can serve not only as a shipping container but also as a container for the retail display and sale of produce.

Ideally, a cover for such a container should meet certain definitely established needs, as follows.

It is of primary importance that the cover not only be of inexpensive construction but also save labor with minimum time and effort required to mount the cover on a basket. The cover should be light in weight and be capable of shipment in compact nested form to the points where produce is packed. The cover should be durable and capable of reuse without structural deterioration but, nevertheless, the cover should be yieldable to minimize the possibility of the cover crushing the contents of the basket and, of course, the inner surface of the cover should be free from cutting edges. The cover should be sanitary and easy to clean. The cover should be of open construction for free ventilation and visibility of the confined produce. The cover should engage the basket in a positive manner that would permit a merchant to turn baskets on display upside down momentarily to "fluff" their contents and the engagement of the covers with the baskets should be sufficiently effective to even permit the baskets to be lifted by the covers. The engagement of the covers with the baskets should be sufficiently effective to discourage customers from tampering with the contents of baskets on display but, nevertheless, the covers should be readily releasable by a merchant for repacking produce after overnight refrigerated storage and, of course, the covers should be easily removable by the ultimate purchasers.

I am aware that the Stoddard U.S. Pat. No. 40,436, the Woock U.S. Pat. No. 2,649,991 and the two Crane U.S. Pat. Nos. 2,839,214 and 3,067,039 all disclose produce basket covers of open construction, but these prior art covers fall far short of meeting the foregoing requirements.

The Stoddard basket cover is of relatively expensive construction, being made of wood splints that are tacked together by hand and the cover is usable only with a basket of the same expensive construction. The Stoddard cover, moreover, affords only severely limited visibility of the basket contents and, moreover, the cover is too easily separated from the basket since it relies on a simple friction fit instead of positive engagement with the basket. The wood splints are easily stained and are not sanitary for reuse.

The Woock cover is of sanitary flexible plastic construction but is usable only with a special complementary plastic basket that is molded in two pieces and must be assembled by hand. A disadvantage, moreover, is that the cover locks onto the basket in such a tenacious manner as to make it too time-consuming for a merchant to remove the cover temporarily and to make it unduly difficult for a housewife to open the basket.

The earlier Crane U.S. Pat. No. 2,839,214 also discloses a plastic cover of open construction but the

cover is integral with four sides of a basket of special construction that must be assembled in a time-consuming manner, there being 12 pairs of parts that must be interlocked by hand. The cover cannot be separated from the basket structure and access to the contents of the basket may be had only by turning the basket upside down and removing the bottom wall of the basket.

The later Crane U.S. Pat. No. 3,067,039 discloses a cover in the form of a single thin sheet of plastic that has numerous slits to permit the sheet to be stretched over the top of the basket. The cover can be used only with a basket of special construction, the basket being formed with outwardly extending prongs at its four corners to engage slits of the plastic sheet and it requires time and manipulation with both hands to apply the slitted sheet. When the thin plastic cover is used with baskets that do not have corner prongs, the plastic cover must be secured by a rubber band or by string in a time-consuming manner. Since the slitted sheet is pulled tight over the contents of the basket, it is under tension against fruit that is piled above the rim of the basket and therefore it cannot protect fragile produce from accidental impacts. While such covered basket may be suitable for relatively durable produce, it may not afford adequate protection for fragile fruit such as ripe strawberries.

SUMMARY OF THE INVENTION

An important object of the invention is to provide an economical one-piece molded plastic cover of open construction that may be quickly and conveniently engaged in a positive manner with a one-piece latticed plastic basket of the type that is presently in widespread use. The cost of such a covered basket is minimal since the basket itself is presently mass produced at a minimum cost and the new cover can also be mass produced in the same manner at a minimum cost.

Another object of the invention is to provide such a basket cover that quickly and easily engages a conventional basket in a positive manner to discourage tampering with a basket on display but nevertheless permits temporary removal of the cover by a merchant without loss of time and permits removal of the cover by the ultimate purchaser without frustration.

Still another object of the invention is to provide such a plastic cover that will fit onto baskets of different sizes within a substantial range of sizes.

A further object of the invention is to provide a sanitary reusable cover that may be nested for shipment and, when installed, protects the contents of a basket without crushing or otherwise damaging the contents of the basket.

A conventional plastic berry basket of open construction for which the new cover is designed has a rectangular rim with a continuous outward rim flange that forms a downwardly facing rim shoulder. The cover is also of rectangular plan configuration and is made of resiliently flexible plastic material with four integral flaps on its four sides respectively, each of which flaps has hook shoulders formed on its underside near its outer edge for releasable hook engagement with the rim of the berry basket. The four flaps are biased to turn outward and are dimensioned to overhang the four sides of the rim of the basket to cause the rim to flex the flaps outward in response to downwardly forcing the cover onto the basket until the hook should

ders pass over and under the rim flange. Thus forcing the cover downward onto the basket causes the rim of the basket to cam the four resilient flaps outward with consequent storing of energy in the flaps. When the cover is subsequently released from the downward pressure, energy stored in the flaps is released by the flaps swinging inwardly and downwardly with consequent upward camming of the released cover until the hook shoulders of the flaps engage the rim of the basket to releasably retain the cover on the basket.

Special additional objects of a second and preferred embodiment of the invention are: to make the cover capable of use with an even wider range of sizes of baskets; to increase the probability that the cover will make effective engagement with a basket when the cover is initially telescoped over the rim of the basket; to give the cover the capability of engaging the basket at a tilted position of the cover to conform to the contents of the basket when the contents are piled higher on one side of the basket than on the opposite side; to give the user the choice of three different levels of the engaged cover relative to the rim of the basket; and to make it possible for the cover to be lowered by a simple downward manual push from one level of engagement with the basket to a lower level of engagement when such an adjustment is desirable at any time after the cover is installed.

The features and advantages of the invention may be understood from the following detailed description and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWING

In the drawing, which is to be regarded as merely illustrative:

FIG. 1 is a perspective view of a first embodiment of the invention showing the cover mounted on a conventional plastic berry basket;

FIG. 2 is a transverse section taken as indicated by the line 2—2 of FIG. 1 showing how the flaps make hook engagement with the rim flange of the basket;

FIG. 3 is a fragmentary sectional view showing the spatial relationship between a flap and the rim of the berry basket when the cover is poised above the berry basket in preparation for mounting the cover on the berry basket;

FIG. 4 is a fragmentary perspective view showing the preferred configuration of a hook element on the underside of a flap;

FIG. 5 is a perspective view similar to FIG. 1 illustrating a second and preferred embodiment of the invention;

FIG. 6 is a perspective view of the inner face of a flap of the second embodiment of the cover showing three staggered rows of hook elements for engagement selectively with the rim of a basket; and

FIGS. 7, 8 and 9 are fragmentary sectional views of a cover in hook engagement with the rim of a basket at three different levels of the cover relative to the basket to conform to stacks of produce at three different heights in the basket.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The drawing, which illustrates the presently preferred embodiment of the invention, shows a conventional molded plastic berry basket, generally designated 10, of conventional construction which is now in

wide use. The berry basket 10 is square in plan and has a continuous rim 12 of square configuration in plan, the rim having an outwardly extending continuous flange 14 that forms a downwardly facing shoulder. The basket 10 is illustrated as containing a quantity of strawberries 15 which usually form a heap extending well above the level of the basket rim 12.

A cover, generally designated 16, for the basket is molded in one piece of resiliently flexible plastic and is of open construction formed by a plurality of lattice members. The cover is formed with a central disc 18 to be used for price stickers and includes a lattice member 20 in the form of a ring that is concentric to the disc.

The cover 16 comprises a central dome portion of square configuration in plan and four rectangular flaps 22 are integral with the four sides, respectively, of the dome-shaped portion. The base of the dome-shaped portion is square in plan and is defined by four continuous lattice members 24 that are integral with the four flaps 22 respectively. The dome portion includes four radial lattice members which connect the ring 20 with the disc 18 and which extend to the four corners of the base that is formed by the four lattice members 24.

Each of the four flaps 22 is of a rectangular configuration that is defined by the corresponding lattice member 24, two lattice side members 26 and a relatively wide outer edge member 28.

A feature of the invention is that each of the four flaps 22 incorporates four parallel lattice members 30 which function, in effect, as four leaf springs to contribute resiliency to the flap. Each of the leaf springs 30 extends from the ring 20 to the outer edge member 28 of the flap and is integral with the corresponding lattice member 24 at the base of the dome portion of the cover.

Preferably, all four flaps, but at least two opposite flaps, are adapted for overhanging hook engagement with the rim flange 14 of the basket 10 and this concept may be carried out in various ways in various practices of the invention.

In the construction shown, the outer edge members 28 of all four flaps 22 are each formed with a plurality of relatively narrow hook elements 32, there being one such hook element at the outer end of each of the leaf springs 30 and at the outer end of each of the two side members 26 of the flap. As best shown in FIGS. 3 and 4, each of the hook elements 32 is an enlargement of triangular configuration that provides an upwardly facing hook shoulder 34.

Each of the flaps 22 is biased to seek an outwardly swung position best shown in FIG. 3 so that if the cover is poised above an open basket and is centered relative to the basket, each of the flaps 22 overhangs a corresponding straight side of the rim 12 of the box 10 in the manner shown in FIG. 3. If the poised cover is forced downwardly, the rim flange 14 makes contact with the under face of each of the hook elements 32 as indicated by the broken line 35 in FIG. 3. Consequently, the continued downward movement of the cover causes the four sides of the rim flange 14 to cam the four flaps 22 outward and then the hook shoulders 34 of the hook elements snap over the rim flange 14 and continue to move downward beyond the rim flange. The outward camming of the flaps 22 resiliently flexes the flaps and thereby stores energy in the flaps.

Releasing the downwardly depressed cover from downward force permits reverse cam action, the flexed

flaps 22 pressing against the rim flange 14 of the basket to cam the released cover upward until the hook shoulders 34 of the hook elements 32 make positive engagement with the rim flange 14. In the preferred practice of the invention the unrestrained or biased positions of the flaps 22 illustrated in FIG. 3 are such that the flaps are still stressed in flexure after they engage the rim flange 14. Thus, in FIG. 3 it is apparent that if the flap hooks over the rim flange 14 the flap will be slightly flexed outward from its unrestrained position.

The manner in which the cover serves its purpose may be readily understood from the foregoing description. To install the cover on a basket 10, it is merely necessary to center the cover over the basket, force the cover downward onto the rim 14 of the basket, and then release the cover to permit the cover to make hook engagement with the rim of the basket automatically.

A further feature of the invention is that each of the four flaps 22 has independent freedom for flexure so that each flap may be flexed outward without resistance from the adjacent flaps. Thus, as may be seen in FIG. 1, at the four corners of the cover there is a V-shaped recess 36 at the juncture of the two corresponding flaps which keeps the two flaps from structurally interfering with each other. Since the four flaps 22 are independently flexible, it is a simple matter to flex an engaged flap outward out of hook engagement with the rim flange 14 of the basket. This fact permits a merchant to open a basket quickly and conveniently for repacking and also makes it a simple matter for the purchaser to remove the cover from the basket.

The fact that the four flaps are independently flexible makes the cover readily adapted to fit berry boxes of different sizes. Thus, the cover will effectively engage square boxes ranging in size from 3½ inches square to 5 inches square and the cover will also fit rectangular boxes, for example boxes 3½ inches by 5 inches.

In FIGS. 5-9 illustrating the second and now preferred embodiment of the invention, the cover which is generally designated by number 40 is mostly of the same construction as the first described cover, as indicated by the use of corresponding numerals to designate corresponding parts. The essential difference as shown in FIG. 6 is that the inner face of each of the four flaps 22a of the cover 40 is provided with three staggered rows of hook elements 32 instead of a single row of hook elements.

It is readily apparent that the cover 40 may be used with a wider range of sizes of baskets than the first described cover 16. The three rows of hook elements also increase the probability that the cover will make effective engagement with a basket on the first try.

FIGS. 7-9 illustrate the special advantage that the cover 40 may be mounted on a basket at three different levels of the cover relative to the basket. This capability is needed because the height of stacks of produce in baskets vary substantially. In FIG. 7 where the produce is stacked relatively high the lowermost hook elements of the three rows of hook elements engage the rim flange 14 of the basket. In FIG. 8, the produce is piled somewhat higher and the middle row of hook elements engage the rim flange. In FIG. 9 the uppermost row of hook elements engage the rim flange to permit the cover to fit over a relatively high pile of produce.

To install the cover 40, the cover is pressed gently downward onto the basket until the cover makes

contact with the top of the pile of produce. One of the three rows of hook elements will make engagement with the rim flange 14 to retain the cover releasably at the optimum level of the cover relative to the basket.

The cover 40 has further utility in that at any time after the cover is installed on a basket, the cover may be lowered if the produce in the basket lowers in height. Thus assume that a cover is initially installed as indicated in FIG. 7 and that in the course of handling the basket to store the produce in a cooler overnight, the produce in the basket settles in height. In that event only gentle downward pressure on the cover is required to quickly and conveniently lower the cover to the level shown in FIG. 8 or to the level shown in FIG. 9 in accord with the reduced height of the contents of the basket.

With the cover at the level shown in FIG. 7 and with the produce piled to the relatively low height shown in FIG. 9, the resulting gap between the cover and the top of the fruit would be conspicuous and would give a prospective purchaser the impression that the amount of produce in the basket is scant and deficient. On the other hand with the cover at the level shown in FIG. 9 the quantity of the produce would not ordinarily be questioned.

It is also to be borne in mind that when baskets of produce are being handled and transported prior to sale to the ultimate consumer a cover that fits reasonably snugly against the produce will minimize damage to the produce caused by movement of the baskets.

It may be further readily understood that one side of the cover may engage the rim of a basket at the level shown in FIG. 7 while the opposite side of the cover engages the rim of the same basket at the level shown in FIG. 9. This capability makes it possible for the cover to conform to produce that is piled higher on one side of the basket than on the opposite side of the basket. Otherwise, the quantity of produce might appear to be deficient and the produce would have room to shift with possible damage to the produce during shipment and handling.

My description in specific detail of the selected embodiments of the invention will suggest various changes, substitutions, and other departures from my disclosure within the spirit and scope of the appended claims.

I claim:

1. A closure for a rectangular produce basket that has a rectangular rim formed with a downwardly facing rim shoulder, comprising:

a cover of rectangular plan configuration made of resiliently flexible plastic material and having four integral flaps on its four sides to engage the four sides of said rim, respectively,

each of said flaps having two opposite side edges, the flaps being disconnected at their side edges to permit each of the flaps to be flexed independently of the other flaps, the four pairs of confronting side edges of the flaps defining four triangular recesses in the cover at the four corners of the cover;

upwardly facing hook elements formed on the inner sides of the four flaps near the outer edges thereof and extending inward from the flaps to engage said rim flange from the outer side thereof to releasably retain the cover on the basket.

2. A combination as set forth in claim 1,

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in which said flaps when unrestrained are inclined downwardly and outwardly,

the area in plan of the cover where the flaps join the cover being less than the area in plan defined by the rim of the basket to permit the cover to be initially positioned with the downwardly and outwardly extending flaps overhanging the rim of the basket to cause the rim to flex the flaps outward in response to downward forcing of the initially positioned cover onto the basket until the hook elements pass over and under said rim flange with consequent storing of energy in the flexed flaps, whereby subsequently releasing the cover from the downward force permits the stored energy to swing the flaps inward with consequent upward camming of the released cover until the hook elements of the

flaps engage said rim shoulder to releasably retain the cover on the basket.

3. A cover as set forth in claim 2, in which the flaps are formed with hook elements at different levels for selective engagement with said rim flange to maintain the cover at selected levels relative to the basket.

4. A combination as set forth in claim 2 in which the hook elements are integral enlargements on the inner sides of the flaps at their outer edges;

and in which said enlargements are of generally triangular configuration with the enlargements forming upwardly facing hook shoulders to engage the basket rim from the outer side thereof and with the enlargements tapering from the hook shoulders downward to the outer edges of the flaps.

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