March 31, 1959 W. B. CRANE 2,879,886

CONTAINER FOR TOMATOES AND THE LIKE

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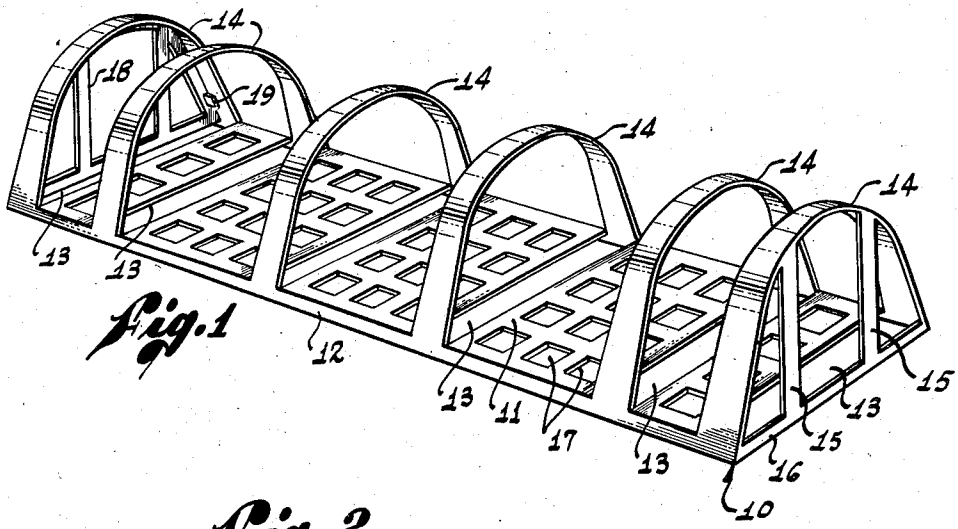


Fig. 1

Fig. 2

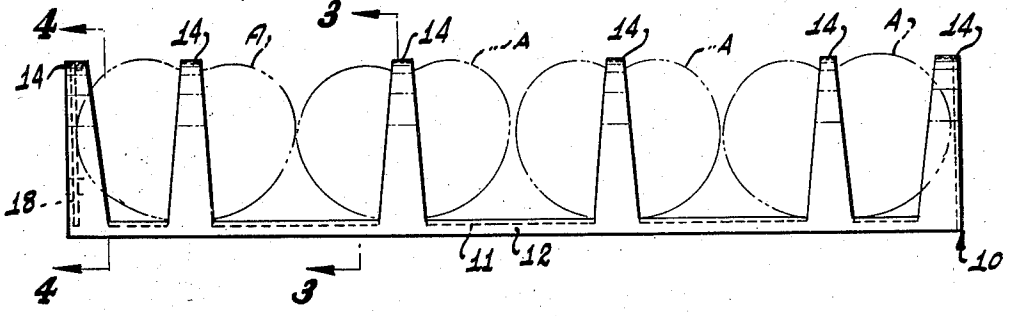


Fig. 3

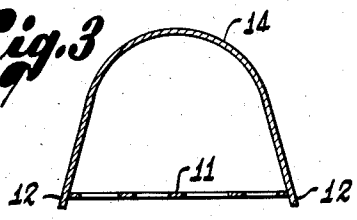
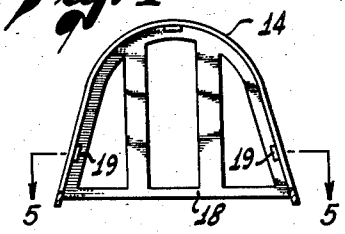


Fig. 4



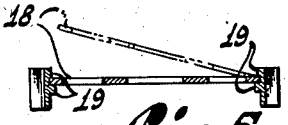
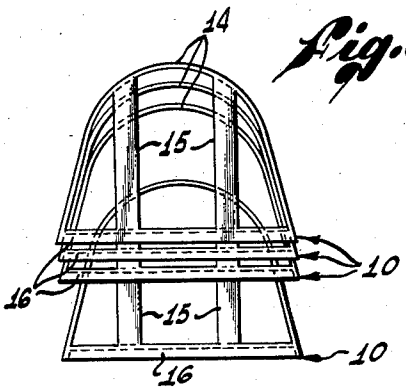


Fig. 5

Fig. 6



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CONTAINER FOR TOMATOES AND THE LIKE

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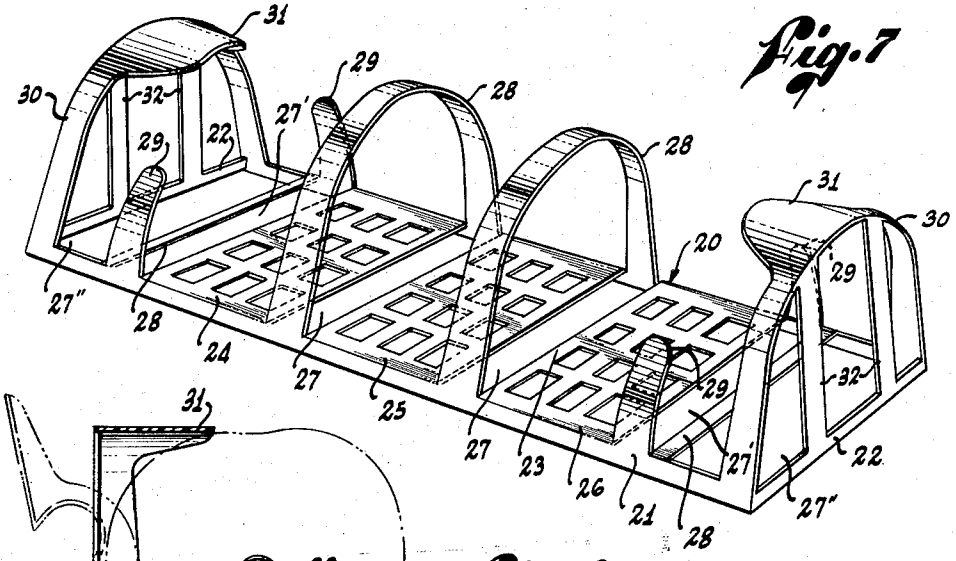


Fig. 7

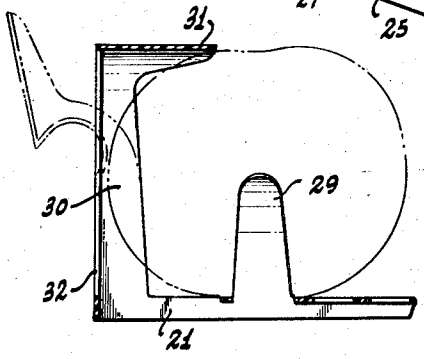


Fig. 8

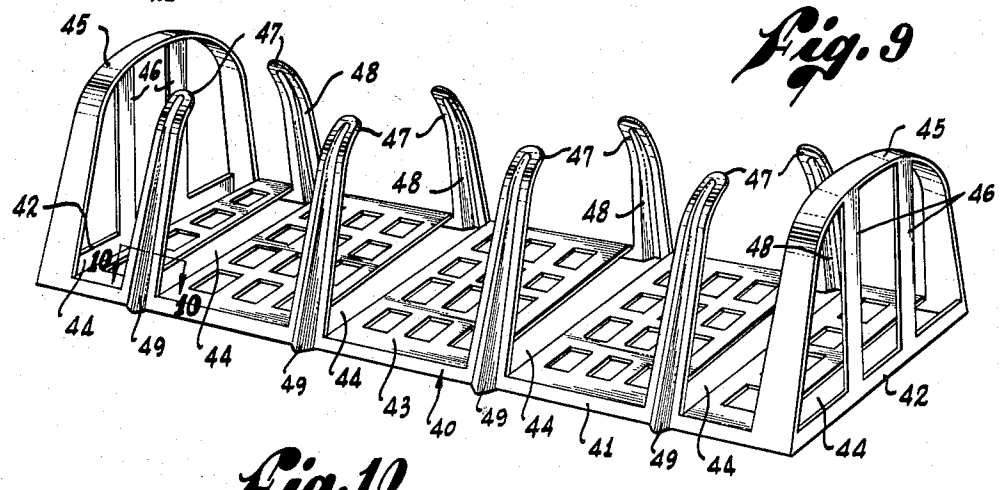


Fig. 9

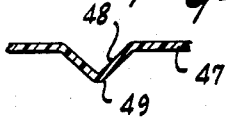


Fig. 10

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2,879,886

CONTAINER FOR TOMATOES AND THE LIKE

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Application December 20, 1955, Serial No. 554,278

12 Claims. (Cl. 206—72)

This invention relates generally to article carriers and particularly to a container for packaging tomatoes and the like.

The present application is a continuation-in-part of my copending application Serial No. 505,321, filed May 2, 1955, and entitled Container for Tomatoes and the Like, now abandoned.

Heretofore it has been common practice to package tomatoes or like articles of food in open faced cardboard cartons which are enveloped in a transparent wrapping, such as cellophane, or provided with a window, so as to present the contents of the containers to the view of the purchaser. Generally the articles are packaged four to a carton.

Such existing cartons or containers are excessively costly to manufacture and fill, and the packaging machinery required for filling the containers is complex and expensive. Moreover, the transparent wrapping forms substantially an airtight envelope about the tomatoes, whereas it is desirable that air be circulated freely over the articles so as to aid in the preservation of the latter.

Another disadvantage of the existing packages or containers is that in those instances where the articles are to be packaged at the point of sale, the cardboard cartons must be stored in a flat, unfolded condition so as to conserve space. Packaging of the articles necessitates, therefore, the folding of the cardboard forms to their carton shape, the placing of the articles in the cartons, and the application of the cellophane wrapping about the cartons. It will be apparent that such an operation is tedious and time consuming.

An object of this invention is to provide a container for tomatoes or like articles of food which is relatively simple and inexpensive to fabricate and fill.

Another object of the invention is the provision of a container of the character described which permits the free circulation of air over the container contents.

Still another object is the provision of a container of the character described which may be conveniently stacked in a minimum of space and which may be easily and quickly filled at a point of sale.

A further object of the invention is the provision of a container of the character described which permits substantially the entire surface of the packaged articles to be viewed.

Still a further object is the provision of a container of the character described which is preferably, though not necessarily, fabricated of a molded plastic material and whose shape is such as to permit the use of molds of relatively simple shape.

A more complete understanding of the invention and a fuller appreciation of its features and advantages may be had by a reading of the following detailed description of the invention wherein reference is had to the annexed drawings, in which:

Fig. 1 is a perspective view of one form of the container of this invention;

Fig. 2 is a side elevation of the container of Fig. 1 with articles of food, such as tomatoes, shown filling the container;

Fig. 3 is a section taken substantially along line 3—3 of Fig. 2;

Fig. 4 is a section taken substantially along line 4—4 of Fig. 2;

Fig. 5 is a section taken substantially along line 5—5 of Fig. 4;

Fig. 6 is a view illustrating the manner of stacking a plurality of the present containers in their empty condition;

Fig. 7 is a perspective view of a modified form of container;

Fig. 8 is an enlarged sectional detail of one end of the container of Fig. 7 illustrating the manner in which the upstanding ends of the container are flexed to load or remove articles from the container;

Fig. 9 is a perspective view of a still further modified form of container; and

Fig. 10 is an enlarged section taken along line 10—10 of Fig. 9.

The container illustrated in Figs. 1–6, which may be used to package tomatoes, apples, oranges or other similarly shaped articles of food, and which may advantageously be made as a molded plastic article, or of cardboard or any other suitable material, comprises a base **10** which is rectangular in shape and generally channel form in cross section providing a web portion **11** and side flanges **12**. These side flanges are sloping, as shown, to facilitate removal of the container from a mold, when employed, and also to permit more compact stacking of a plurality of such containers.

Web portion **11** is formed with a plurality of spaced, laterally extending, rectangular openings **13** overlying each of which is a loop **14** of generally semi-circular shape when viewed from the end of the container. These loops are formed by straps or ribs which have their lower ends integrally joined to opposite sides of the base and which are joined at their upper ends at the crowns of the loops. The opposed legs or ribs of the loops are, adjacent their juncture with side flanges **12**, of a width substantially equal to or less than the width of the openings **13**, the legs becoming progressively narrower toward the crowns of the loops.

As shown more clearly in Fig. 2, the intermediate ones of the loops **14** are, in those containers for packaging tomatoes A, spaced a distance substantially equal to the maximum dimension of one of the tomatoes, taken longitudinally of the base, and overlie the approximate centers of the tomatoes, while the loops at the ends of the base and the intermediate loops immediately adjacent thereto are spaced a distance substantially equal to one-half of said maximum dimension.

Where generally spherical articles, such as apples or oranges are packaged, the loops are spaced to overlie the articles at their approximate centers and the above described loop spacings would be, respectively, substantially equal to the diameter and radius of the fruit. The diameter of the loops, of course, is sufficient to allow the articles A to pass thereunder.

The space under the right hand end one of the loops **14** is bridged by a plurality of strips **15** united at one end with said end loop and merging at the other end with an end flange **16** of the base **10**. Web portion **11**, between openings **13**, is of latticed construction, as shown, so as to provide a plurality of generally square openings **17** through the web portion.

The container shown in Figs. 1–6 may be filled in either of two ways. When packaging tomatoes or other generally non-spherical articles, the preferred practice is to insert the first, second, and third tomato, counting from

the right in Fig. 2, into the package by passing them between adjacent loops and positioning them in the package in the manner indicated in the drawing. The fourth tomato is inserted through the left hand end of the package and serves to lock all of the tomatoes in position after which an end closure 18 is pressed into the opening defined by the base and left hand loop 14. This closure may be retained in place by locking means 19 (Fig. 5) between the closure and left hand loop. This method of filling the container is preferred, in the case of tomatoes, or other generally non-spherical articles in order that such articles may be properly positioned therein, as shown in Fig. 2, which proper positioning might not result if the articles were rolled into the container from one end.

Generally spherical articles, such as apples and oranges, on the other hand, may be inserted into the container by merely rolling them through the open left hand end thereof.

The loop arrangement and spacing and overall container size will, of course, vary with the size and number of articles packaged. Moreover, in some instances the material employed in the fabrication of the container may be relatively rigid while in other instances, as where articles having irregular surface features are to be packaged, it may be desirable that relatively flexible material be employed so that the loops may conform to the shape of the particular article which they overlie.

It will be seen that substantially the entire surfaces of the packaged articles A may be viewed by the purchaser and the container is completely open so as to permit the free circulation of air over the articles. Also, as shown in Fig. 6, several containers may be conveniently stacked in a minimum of space by passing the loops 14 of one container through the openings 13 of the adjacent container.

The modified container of Figs. 7 and 8 is generally similar to the container of Fig. 1 and comprises a base 20, of generally channel-shaped cross section, including upwardly and inwardly sloping side and end flanges 21 and 22 respectively and a web portion 23. This web portion 23 includes three spaced, latticed sections 24, 25, and 26, defining therebetween transverse, rectangular openings 27, and a pair of transverse ribs 28 spaced from the two outer latticed sections 24 and 26 so as to define two additional rectangular openings 27′ and spaced from the end flanges 22 so as to define a pair of transverse openings 27″ of somewhat greater width than the openings 27 and 27′.

Overlying the two central openings 27 are a pair of loops 28 the opposite legs or ribs of which become progressively narrower toward the crowns of the loops. The lower ends of the legs merge with the side flanges 21 and have a base width substantially equal to or less than the width of the respective openings 27. Extending upwardly from the side flanges 21, at opposite ends of each of the openings 27′, and having a base width substantially equal to or less than the width of the openings 27′, are upstanding arcuate ribs or fingers 29 which decrease in width toward their tips and which are inwardly curved so that the tips overlie the ends of the openings 27′. The tips of each pair of ribs terminate in laterally spaced relation, as shown.

A pair of end loops 30 overlie the end openings 27″, the opposite legs or ribs of which end loops merge, at their lower ends, with the side flanges 21 at the ends thereof and are joined at their upper ends to form the crowns of the loops, the crowns being provided with arcuate lips 31. These lips 31 extend toward the opposite ends of the base in overlying relationship to the end openings 27″ and terminate somewhat short of a plane passing through the adjacent edge of the ribs 28 normal to the base, as shown most clearly in Fig. 8. The spaces between each of the end loops 30 and the end flanges 22 are bridged by strips or ribs 32 which, as shown in Fig. 8, slope slightly inwardly in an upward direction.

As in the previous container, the spacing between the loops 28 and between the latter loops and the fingers 29 is substantially equal to the maximum dimension of the tomato or other article to be packaged, taken longitudinally of the container, while the spacing between the fingers 29 and the end loops 30 is approximately one-half of said dimension.

In loading the container, a tomato or other article is disposed under each of the loops 28, as in the container of Fig. 1, by passing such articles between the loops 28 or between the loops 28 and the fingers 29. Additional articles are then positioned at each end of the container by flexing the end loops 30, as illustrated in phantom lines in Fig. 8, and spreading the fingers 29 sufficiently to enable the articles to be dropped into place between the fingers. Upon release of the end loops, the latter will, owing to their resiliency, return to positions wherein the lips 31 overlie the end articles and retain the latter in position in the container while the fingers 29 will prevent lateral movement of the articles.

The end ribs 32 converge slightly upwardly, as viewed in Fig. 8 of the drawing, so that several containers may be stacked in a fashion similar to that illustrated in Fig. 6, the enlarged end openings 27″ in the base allowing the passage of the lips 31 on one container through the base of the next so as to accommodate such stacking.

The modified container of Figs. 9 and 10 is generally similar to the first two described forms of the present container and comprises a rectangular base 40 having sloping side and end flanges 41 and 42, respectively, and a latticed web 43 formed with a series of transversely elongated openings 44. Overlying the end ones of the openings 44 are a pair of loops 45. The space between the loops 45 and the end flanges 42 are bridged by upwardly and inwardly sloping ribs 46.

Rising from the side flanges 41 at opposite ends of the intermediate ones of the openings 44 are upstanding inwardly sloping fingers 47 which narrow toward their tips and which tips are inwardly curved to overlie the ends of openings 44.

These fingers 47 are, as shown most clearly in Fig. 10, formed to provide generally V-shaped troughs 48 on their inner surfaces and V-shaped ribs 49 on their outer surfaces. These ribs and troughs are contained at their lower ends through the side flanges 41, as illustrated and become progressvely narrower toward the tips of the fingers. The end ribs 46 of the container slope inwardly in the same manner as in the previously described container so as to permit stacking of a plurality of containers with the loops 45 and fingers 47 of one container passing through the openings 44 of the next and with the ribs 49 on the fingers of one container fitting in the grooves 48 of the fingers on the next container.

Loading of the container of Fig. 9, which is made of suitable flexible material, is accomplished by laterally spreading the fingers 47 to accommodate the passage of tomatoes or other articles therebetween, after which the fingers are released and return, because of their resiliency, to their normal positions wherein their tips partially overlie the articles to retain the latter in the container. The ribs 49 on the fingers 47 lend sufficient rigidity to the latter to enable them to retain the packaged articles in the container under normal handling conditions.

The present container is preferably fabricated as a molded plastic article in which case the slope of the base side flanges and the narrowing of the loops and fingers toward their crowns, in addition to facilitating stacking of several containers, provide the draft necessary to ready removal of the articles from the molds. It will be obvious to those skilled in the art, however, that the present container may be made other than by molding processes and from other than plastic material, as for example, from various forms of cardboard or paper material.

From the foregoing description it will be apparent that there has been disclosed a container for tomatoes or other

like articles of food which is fully capable of attaining the objects and advantages heretofore set forth.

While certain preferred forms of the invention have been described and illustrated it is not intended that the invention should be restricted to such forms but only by the spirit and scope of the following claims.

I claim:

1. A container for packaging articles of food such as tomatoes or the like, comprising: a rectangular base, a plurality of straps integrally joined at their ends to opposite sides of the base and forming a plurality of loops overlying and spaced longitudinally of the base, there being one loop at each end of the base, said loops and base defining openings of a size to permit the passage of said articles therethrough, the spacing between adjacent intermediate loops being substantially equal to a given dimension of one of the articles to be packaged and the spacing between the end loops and their adjacent intermediate loops being substantially equal to one-half of said dimension whereby said intermediate loops are positioned so that each will overlie one of the packaged articles, said base being formed with a plurality of holes therethrough to permit the free circulation of air through the container and with a transverse slot alined with each of said loops, said slots having dimensions such that a plurality of said containers may be stacked with the loops of one container projecting through the slots in the adjacent container, integral strips bridging the opening defined by the base and an end one of said loops whereby to prevent the passage of said articles through said latter opening, and a removable closure for sealing the opening defined by the base and the other end one of said loops.

2. A container for packaging articles of food such as tomatoes and the like comprising: a rectangular base, a pair of straps integrally joined at their lower ends to opposite sides of the base at the ends of the latter and forming a pair of loops bridging the ends of the base, pairs of transversely alined fingers integrally joined at their lower ends to the sides of the base in inwardly spaced relation to said loops, the tips of said fingers being curved to overlie the base, at least an additional pair of straps integrally joined at their lower ends to opposite sides of the base intermediate said fingers and in spaced relation to the latter and to each other and forming loops bridging intermediate portions of the base, said loops and base defining openings of a size to permit the passage of said articles therethrough, and the fingers in each pair of fingers accommodating the positioning of an article therebetween, the spacings between said intermediate loops and said intermediate loops and said fingers being substantially equal to one-half of the dimension of one of said articles taken longitudinally of the base when the articles are packaged in the container whereby said fingers are adapted to retain packaged articles therebetween and said intermediate loops are each positioned to overlie one of the packaged articles, the end loops and said fingers being spaced a distance substantially equal to one-half of said dimension, means at least partially closing the openings defined by the base and end loops, and said end loops being formed with longitudinally inwardly extending lips at their crowns for overlying the packaged articles retained between the adjacent pair of fingers, said container being made of a flexible material.

3. The subject matter of claim 2 wherein said base is formed with openings underlying the loops and the fingers, said openings having a width longitudinally of the base at least equal to the maximum dimension of their corresponding loops and fingers taken longitudinally of the base.

4. A container for packaging articles of food such as tomatoes and the like comprising: a rectangular base, a pair of straps integrally joined at their lower ends to opposite sides of the base at the ends of the latter and forming a pair of loops bridging the ends of the base, a plurality of upstanding fingers integrally joined at their lower ends to opposite sides of the base in transversely alined pairs, the tips of said fingers being inwardly curved to overlie the base and being spaced from the latter a distance to accommodate the positioning of one of said articles between each pair of fingers with said tips overlying the articles, said pairs of fingers being spaced longitudinally of the base a distance substantially equal to the dimension of one of said articles taken longitudinally of the base when the article is packaged in the container said loops and the adjacent pairs of fingers being spaced a distance substantially equal to one-half of said dimension, means at least partially closing the openings defined by the base and said loops, and said container being made of a flexible material.

5. The subject matter of claim 4 wherein said fingers are formed to provide strengthening ribs on their outer surfaces extending lengthwise of the fingers and corresponding channels on their inner surfaces, said base being formed with openings underlying the fingers and loops, said openings having a width longitudinally of the base at least equal to the maximum dimension of their respective loops and fingers taken longitudinally of the base.

6. A container for packaging articles of food such as tomatoes and the like comprising an elongated base, a plurality of upstanding members joined to opposite sides of and curving over the base in spaced relation thereto, said members being spaced longitudinally of the base to overlie articles packaged in the container, said base being formed with openings each underlying one of said members and having a dimension taken longitudinally of the base at least equal to the dimension of the corresponding member taken longitudinally of the base whereby several containers may be stacked with the members on one container extending through the openings in the next container.

7. A container for packaging articles of food such as tomatoes and the like comprising an elongated base, a plurality of upstanding ribs joined at their lower ends to and curving over the base, said ribs being arranged in transversely aligned pairs spaced longitudinally of the base, the spacing between the pairs of end ribs proximate to the ends of the base and the pairs of ribs adjacent to said end ribs being substantially one-half of the spacing between the remaining adjacent pairs of ribs, said end ribs and at least one intermediate pair of ribs being joined at their upper ends to form loops bridging the base, there being at pair of ribs between each of the end loops at the ends of the base and the intermediate loop, the upper end of said latter ribs terminating in laterally spaced relation to form transversely aligned fingers, said end loops having longitudinally inwardly extending lips at their crowns and comprising flexible material, and closure means bridging the openings in said end loops.

8. A container for packaging articles of food such as tomatoes and the like comprising an elongated base, a plurality of upstanding ribs joined at their lower ends to and curving over the base, said ribs being arranged in transversely aligned pairs spaced longitudinally of the base, the spacing between the pairs of end ribs proximate to the ends of the base and the pairs of ribs adjacent to said end ribs being substantially one-half of the spacing between the remaining adjacent pairs of ribs, said end ribs being joined at their upper ends to form a pair of end loops bridging the ends of the base, the remaining pairs of ribs having their upper ends terminating in laterally spaced relation and forming pairs of aligned fingers, said fingers comprising flexible material, and closure means bridging the opening in the end loops.

9. The subject matter of claim 8 wherein said fingers are formed to provide strengthening ribs on their outer surfaces and correspondingly shaped troughs on their inner surfaces extending lengthwise of the fingers, said base being formed with openings underlying the fingers and loops and having dimensions taken longitudinally of the

base at least equal to the maximum dimensions of their corresponding ribs whereby one container is adapted to be stacked on top of another container.

10. A container for packaging articles of food such as tomatoes and the like comprising an elongated base, a plurality of upstanding ribs joined to the base and curving transversely thereover for overlying articles packaged in the container, said ribs being substantially equally spaced longitudinally of the base whereby generally spherical articles of food having a diameter substantially equal to the longitudinal spacing between said ribs may be so packaged in the container that each rib overlies the center of one of the packaged articles and adjacent packaged articles abut one another substantially midway between their respective ribs, upstanding closure means on the ends of the base for preventing accidental separation of packaged articles from the container at the ends of the latter, said closure means being spaced from the ribs adjacent thereto a distance substantially equal to one-half of said first mentioned spacing whereby longitudinally outer ones of said generally spherical articles when the latter are packaged in the container will abut said closure means and the package articles will be retained in proper packaged positions below their respective ribs, said ribs comprising at least one pair of transversely aligned, flexible fingers at opposite sides of said base, said fingers being adapted to be spread to permit placing of an article in the package.

11. A container for packaging a plurality of generally identical articles of food such as tomatoes and the like, comprising: an elongate base, a pair of upstanding end closures at opposite ends of said base for retaining articles in the container against endwise movement from the latter, at least two pairs of upstanding ribs between said end closures joined at their lower ends to opposite sides of said base, the upper ends of said ribs curving over said base to overlie articles in the container, the ribs of each pair being aligned transversely of said base and the pairs of ribs being spaced lengthwise of said base from one another and from said end closures, the spacing between the end closures and the adjacent pair of ribs being approximately equal and approximately one-half of the spacing between the pairs of ribs.

12. The subject matter of claim 11 wherein each aligned pair of ribs are joined at their upper ends to form loops, at least one of said end closures comprising a separate element removable from said base, and means for releasably securing said removable end closure to said base.

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