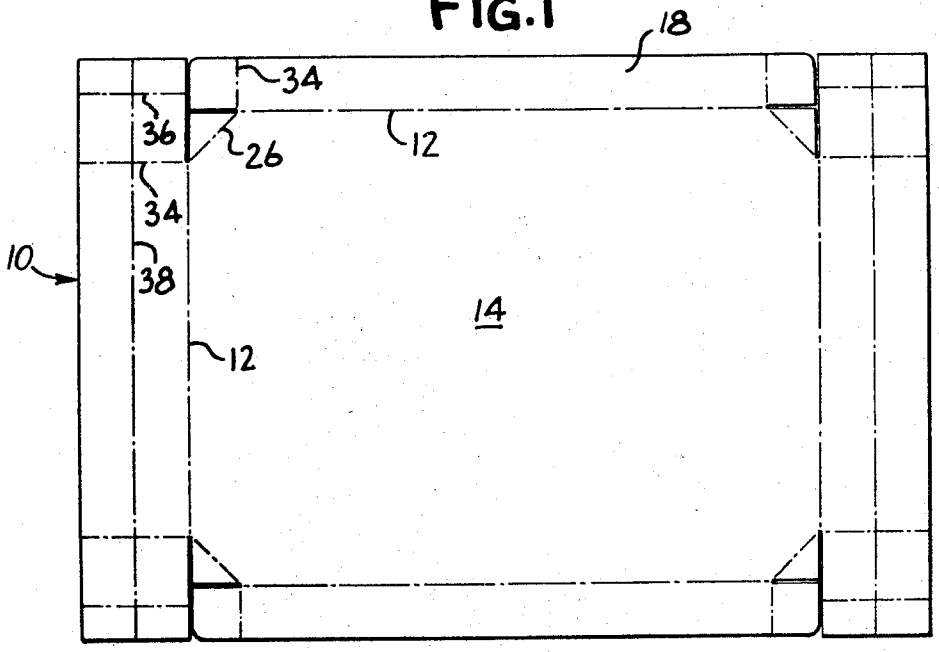
Oct. 28, 1969 C. J. VIATER 3,474,901

OCTAGONAL PALLETS, BLANKS AND METHODS FOR FORMING SAME AND A CONTAINER PACKAGE UTILIZING THE PALLET

Filed Oct. 16, 1967 3 Sheets-Sheet 1

FIG. 1



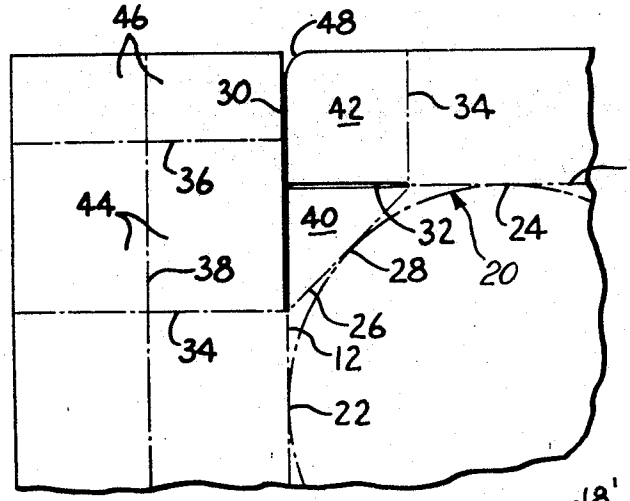


FIG. 2

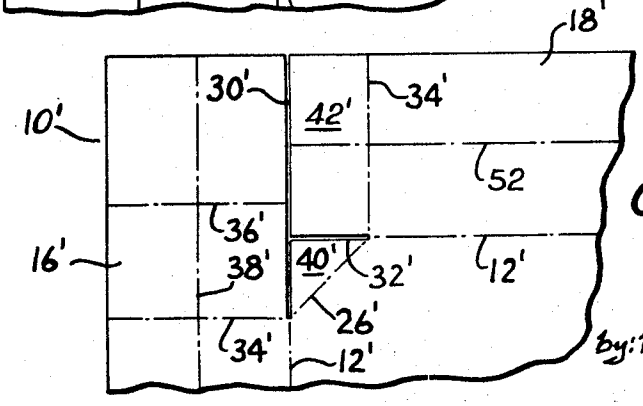


FIG. 9

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FIG.3

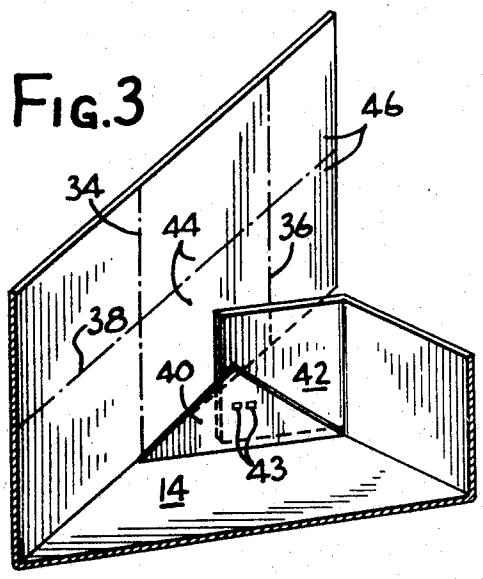


FIG.4

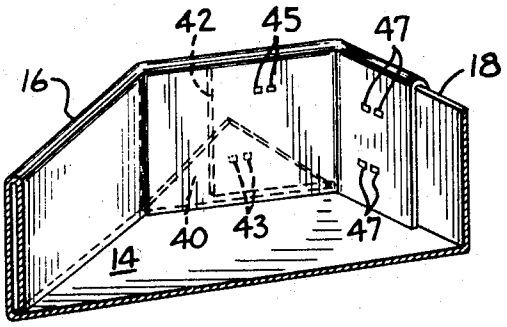


FIG.6

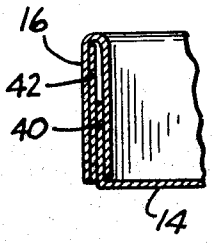


FIG.5

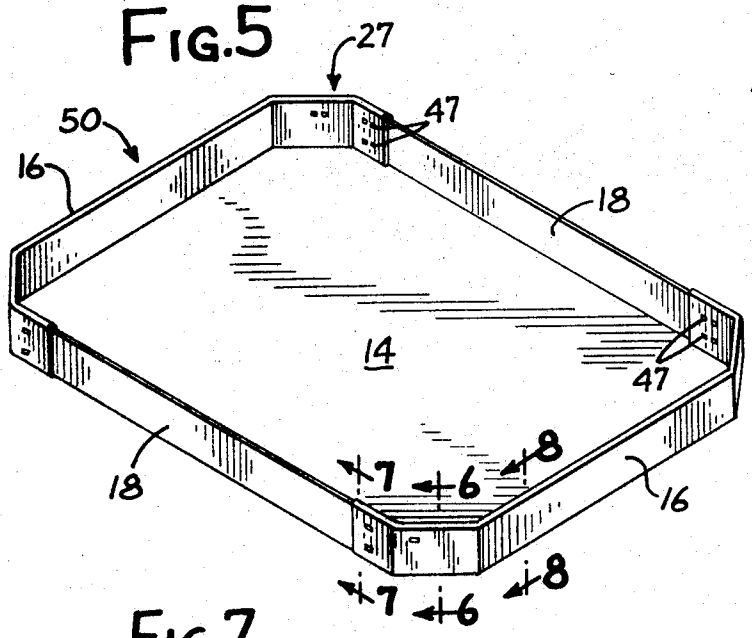


FIG.8

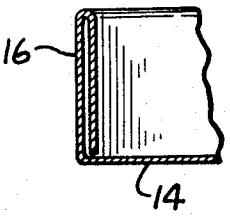
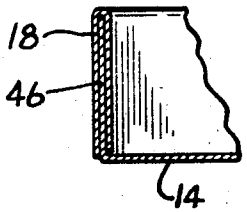


FIG.7



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FIG. 10

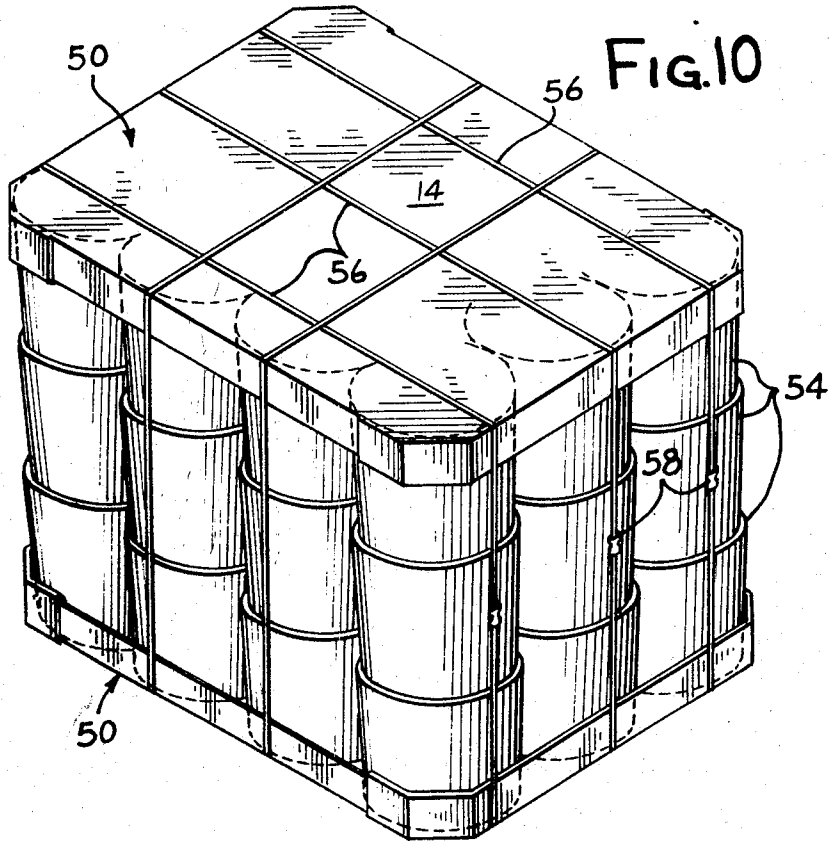
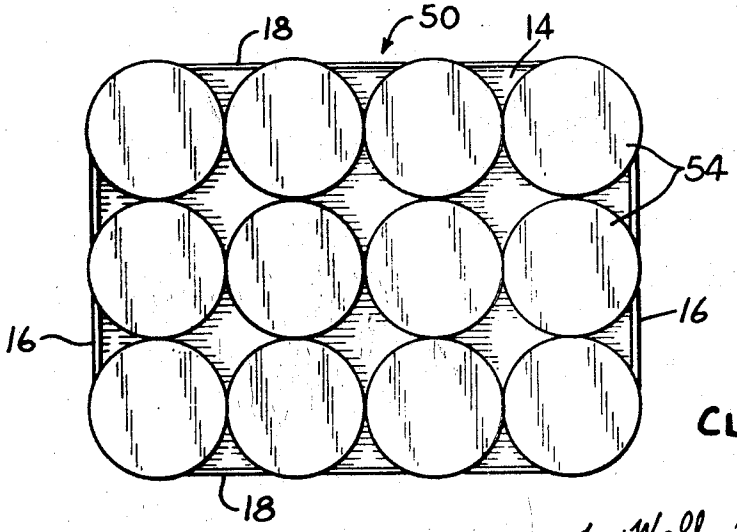


FIG. 11



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United States Patent Office 3,474,901 Patented Oct. 28, 1969

3,474,901

OCTAGONAL PALLETS, BLANKS AND METHODS FOR FORMING SAME AND A CONTAINER PACKAGE UTILIZING THE PALLET

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Filed Oct. 16, 1967, Ser. No. 675,432
Int. Cl. B65d 71/00, 5/26, 5/22
U.S. Cl. 206—65 25 Claims

ABSTRACT OF THE DISCLOSURE

An octagonal tray type pallet for unitizing a number of cylindrical, conical frustoconical articles and the like such as shipping containers comprising a base, a pair of upstanding sidewalls and endwalls, angled corner portions connecting the sidewalls and the endwalls with the endwalls being coextensive with the corner portions and a portion of the sidewalls and being folded upon themselves to position the coextensive portion of the endwalls therebetween, a method of forming the pallet, a blank used in forming the pallet and a package utilizing the pallet.

This invention relates to pallets and, more particularly, to octagonal tray type pallets for cylindrical, conical, frustoconical articles and the like such as shipping containers that are characterized by increased strength and rigidity, blanks and methods for forming the same and a container package utilizing the pallet.

Tray type pallets are used to unitize a number of shipping containers or the like to facilitate the simultaneous handling of these containers in large numbers with the minimum use of manpower or machines such as forklift trucks. The pallets also protect the containers from being marred and/or scratched during the transportation of the containers.

At present, rectangular tray type pallets are being used which are made of creased and stapled corrugated paperboard or the like. Such pallets are usually pre-formed by creasing the fold lines in the blank material. These preformed or creased blanks are then stored and are thereafter folded and fastened together in any conventional manner such as by staples to form the pallets. Many tears have occurred along these folds lines. Also, the walls of rectangular pallets lack strength and rigidity and the use of steel bands or straps to encircle the pallets and the containers causes the walls to be deformed inwardly. Subsequent handling of the containers in the resulting package often results in the edges of the steel bands cutting the pallets and exposing the contents to possible damage. Similarly, the square corners of these rectangular pallets are unsupported by steel bands or the contents and are thus especially susceptible to tearing during handling. This destroys the integrity of the sidewalls, endwalls and bottom of the pallet, thereby weakening the entire package and exposing the contents to possible damage.

Octagonal shaped trays have been used to package various objects such as foods but have not been used for large, bulky objects such as shipping containers and the like. Moreover, while these octagonal trays are suitable for housing smaller objects, the particular blanks that are used do not provide the requisite strength and rigidity

that is necessary for pallets used to unitize bulky objects such as shipping containers.

It is a general aim of the present invention to provide an improved octagonal tray type pallet, the blank used to form the pallet, the method for making the pallet and the resulting container package wherein the resulting pallet is characterized by increased strength and rigidity and improved protection for the contents.

A related and more specific object is the provision of an octagonal tray type pallet wherein the increased strength and rigidity are derived from the interlocking folding of the blank material used to form the pallet.

Another aspect of this invention includes providing an octagonal tray type pallet having the above-identified characteristics which can be easily manufactured from a simple blank.

A further aspect of this invention provides an octagonal tray type pallet of the above-identified type which can be tailor made to the dimensions of the shipping containers or the like that are being packaged to further increase the support and strength that is realized, particularly with respect to the corners of the pallet.

Other objects and advantages of the invention will become apparent as the following description proceeds, taken in conjunction with the accompanying drawings in which:

FIGURE 1 is a plan view showing a blank that has been scored and slit in accordance with the novel method of this invention and which can be used to form the octagonal tray type pallet;

FIG. 2 is a fragmentary plan view illustrating one corner of the blank of FIGURE 1 and demonstrating how the length and positioning of the various slits and folds are determined;

FIG. 3 is a fragmentary detail view showing one corner of the blank of FIGURE 1 in a partially folded condition;

FIG. 4 is a fragmentary detail view illustrating one corner of the octagonal pallet formed from the blank of FIGURE 1 which has been folded in accordance with this invention;

FIG. 5 is a perspective view of the octagonal tray type pallet formed from the blank of FIGURE 1;

FIG. 6 is a cross sectional view taken substantially along line 6—6 of FIGURE 5 and demonstrates the reinforced corner of the pallet;

FIG. 7 is a cross sectional view taken substantially along line 7—7 of FIGURE 5 and shows the interlocking folding of the sidewalls and the endwalls;

FIG. 8 is a cross sectional view taken substantially along the line 8—8 of FIGURE 5 and illustrates the double thickness of the endwalls of the pallet;

FIG. 9 is a fragmentary plan view depicting one corner of a blank that can be used to form an alternative embodiment in which both the sidewalls and endwalls have a double thickness;

FIG. 10 is a perspective view of a package in which a pair of octagonal tray type pallets have been used to unitize a plurality of shipping containers, and

FIG. 11 is a plan view of the package depicted in FIGURE 10 with the top pallet removed and illustrating the position of the containers in the package of FIGURE 10.

While the invention is susceptible of various modifications and alternative forms, specific embodiments thereof have been shown by way of example in the drawings and

will herein be described in detail. It should be understood, however, that it is not intended to limit the invention to the particular forms disclosed, but, on the contrary, the intention is to cover all modifications, equivalents and alternatives falling within the spirit and scope of the invention as expressed in the appended claims. Thus, while the exemplary embodiment is directed to an octagonal tray type pallet made of a corrugated paperboard material, it should be appreciated that any other material can be used and may be preferred for particular objects with which the pallet is to be used. Similarly, the steps involved in the slitting, scoring and folding of the blank, as will hereinafter be described, can be carried out in many different orders and some or all may be simultaneously carried out. The invention does not reside in carrying out any particular sequence and all sequences involving the basic steps should be considered to be within the subject invention.

In prior octagonal trays a blank was scored, slit and cut in an elaborate pattern. Many designs resulted in scrap because the cutting steps involved removal of portions of the blank. Moreover, any reinforcing of the tray to the extent that it existed was derived from small flaps or wings which were located adjacent the corners and were folded upon themselves to be positioned at the corners. The corner portions were then folded over to hold the folded wings or flaps in position. There was thus little or no overlapping of the sides to provide strength and rigidity.

In contrast, the novel octagonal tray type pallet of this invention can be made from a rectangular blank that has been slit and scored with a relatively simple pattern of five sets of score lines and two sets of slits at each corner. Because of the positioning of these slits and score lines, it is possible that most or all of these operations can be performed substantially simultaneously by existing equipment. Two sets of the score lines provide an octagonal base having dimensions that will provide maximum support for the articles with which the pallet is to be used. The other three sets and the slits allow the thus formed blank to be folded in an interlocking manner to provide maximum strength and rigidity to the walls and corners of the pallet.

Turning now to the drawings, FIGURES 1 through 4 illustrate an exemplary method of making an octagonal tray type pallet in accordance with this invention which is characterized by increased strength and rigidity. To form a base of suitable dimensions a blank made of any suitable container material such as corrugated paperboard is creased in any conventional manner to form score lines. The term "score lines" is used throughout to define the lines resulting from creasing the blank in any known manner to form lines about which the blank can be folded. To this end a blank **10** is scored with a first set of score lines **12** to form a base **14**. The base **14** as can best be seen from FIGURES 10 and 11 should have dimensions that are substantially equal to a multiple of the outside dimensions of the articles with which the particular pallet is to be used. The base **14** should also be placed on the blank **10** in such a manner that opposed portions **16** which form the endwalls of the pallet have a width that is greater than that of opposed portions **18** that form the sidewalls of the pallet. In the preferred embodiment illustrated, the width of the endwall portions is approximately twice that of the sidewalls so that the endwalls can be folded upon themselves to provide a double thickness of material with a depth in the pallet substantially equal to that of the sidewalls.

The rectangular base **14** can be converted into the desired octagonal shape by creasing the blank adjacent each corner to form a second set of score lines. Maximum support is provided by placing the line in such a manner that the corner article will contact the line along a tangent line that is substantially equidistant from the lines of contact between the article and the endwall and sidewall. Thus, as seen in FIGURE 2, the corner article, generally indicated by the arrow **20**, is tangent to the endwall and sidewall at **22** and **24** respectively. Maximum support is provided by a second set of score lines **26** arranged so that the tangent lines **22**, **24** are located substantially equidistant from the line of contact between the article **20** and the corner of the pallet. This is accomplished by forming each score line **26** so that the corner wall **27** (FIG. 5) that it defines will be tangent to the cornermost article **20** at a line **28** that is in the plane extending from the corner of the base **14** to the geometric center of the illustrated cylindrical article **20**.

While the depicted method applies to cylindrical articles, similar methods can be used to provide support for corner articles that have conical shapes, frustoconical shapes or the like and irrespective of whether such articles are solid or hollow. The score lines should be formed so that the corner articles provide support for the resulting corner portions. Similarly, the base should be made as small as possible to minimize the opportunity for the articles to shift position within the pallet.

The following description illustrates the slitting and scoring of basically one corner of the blank. It should be appreciated that similar operations are carried out on each corner.

To separate the sidewall and endwall portions of the blank so that interlocking folding can be carried out, two sets of slits are formed. To this end a first slit **30** is formed by cutting the blank **10** along the score line **12** which separates the endwall portion **16** from the base **14**. The slit **30** extends from a point adjacent the corner which coincides with the point of intersection of score lines **12** and **26** to the edge of the blank. The second slit **32** is similarly along the score line **12** which separates the sidewall portion **18** from the base **14** and extends from the point of intersection of score lines **12** and **26** to the corner of the base **14**. These slits thus free the ends of the sidewalls and endwalls so the corners can be reinforced and the integrity of the sidewalls, endwalls and bottom enhanced by interlocking folding.

To reinforce the corners of the base adjacent the score lines **26** a third set of score lines is formed so that parts of the sidewall and endwall can be folded to supply the reinforcement. A third set of score lines **34** is thus formed perpendicular to the first score lines **12**. Each of the score lines **34** extends from the edge of the blank **10** to the point of intersection between score lines **12** and **26**. The portions between the score lines **34** and the edge of the blank can be folded along the lines to provide a multiple thickness at the corners.

A fourth score line is provided to separate the portion of the endwall that is coextensive with the corner and that which overlaps onto the sidewall. To this end a fourth score line **36** is scored parallel to the score line **34** located on the endwall and is spatially disposed towards the edge of the blank a distance substantially equal to the length of the score line **26**. The portion between the fourth score line and the edge of the blank thus serves as the endwall portion that is coextensive with the sidewall to rigidify the sidewall.

The sidewall portions formed with a fifth score line to provide a suitable method of both increasing the endwall and corner strength and also holding the various folded portions together in an interlocking fashion. A fifth score line **38** is accordingly creased on the endwall parallel to the score line **12** and positioned therefrom a distance approximately equal to the length of the score line **34** located on the sidewall portion **18**.

FIGURES 3 and 4 demonstrate the method of folding to form the pallet. The endwall portions **16** and the sidewall portions **18** are folded along the lines **12** to bring them into a position substantially perpendicular to the base. First fold areas **40** formed between the corner of the base and the score lines **26** are turned upwardly. Second fold areas **42** located on the sidewall between slit **30** and score line **34** are then folded into substantially face-to-face contact with the fold areas **40**. To hold these fold

areas in position while additional folding is being carried out any conventional fastening means such as staples **43** may be used. The third fold areas **44** on the endwalls are brought into face-to-face contact with the fold areas **42** and can be similarly held in position by staples **45**. Fourth fold areas **46** forming the overlapping portions of the endwalls that are coextensive with the side walls are then folded about lines **36** until they come in face-to-face contact with the sidewalls **18**. The final folding step is caried out by folding the endwall inwardly and downwardly along lines **38** to fold the endwall upon itself. If desired, staples **47** may be used for the same reasons as hereinbefore described. To facilitate the folding a portion of one of the fold areas adjacent the edge of the blank can be removed. As seen in FIGURE 2, the fold area **42** has been rounded at **48**.

FIGURES 5 through 8 depicts an octagonal tray type pallet formed by the method illustrated in FIGURES 1 through 4. The pallet **50** comprises the base **14** with a pair of upstanding endwalls **16** and sidewalls **18**, the angled corner portions **27** connecting the walls. At the corners the folded endwalls **16** hold the fold areas **40** and **42** snugly therebetween to provide reinforced corners with four thicknesses of material. Moreover, the interlocking of the fold area **40** with the endwalls and sidewalls increases the rigidity of the bottom or base **14** of the pallet. Rigidity of the sidewalls **18** is provided by the coextensive portions or fold areas **46** of the endwalls which are folded upon themselves to position the sidewalls therebetween. Increased strength to the endwalls is provided by the double thickness.

Forming only the endwalls with a double thickness provides a pallet with strength and rigidity characteristics that are more than ample for most applications. However, in some instances it may be desirable to employ a pallet having even greater strength and rigidity. In accordance with another aspect of this invention, a pallet can be formed that includes a double thickness for the sidewalls as well as the endwalls, yet still retains the interlocking folding relationship between the endwalls, sidewalls and bottom or base. To this end, FIGURE 9 illustrates one corner of a blank that can be used to form the pallet with all the walls having a double thickness. The same numbers for the various elements have been used but have been distinguished with primes. The blank **10'** is thus provided with the same five sets of score lines (i.e., **12'**, **26'**, **34'**, **36'** and **38'**) and two sets of slits (i.e., **30'** and **32'**) as the original embodiment. The portions of the blank defining the endwalls **16'** and the sidewalls **18'** are, however, positioned on the blank **10'** so that both can be folded over to form double thickness endwalls and sidewalls of the desired height. The score lines **52** on the sidewalls **18'** have been added to provide lines about which the sidewalls can be folded to provide double thicknesses. The score lines **52** should thus be parallel to score lines **12'** and spaced therefrom a distance substantially equal to the desired sidewall height. To form a pallet, the blank **10'** can be folded in substantially the same manner as the first described embodiment. The additional folding step occasioned by the score lines **52** may be carried out so that the double thickness is formed and is then positioned against the fold areas **40'**. Alternatively, the sidewalls **18'** can be positioned against the fold areas **40'** and the folding of the side walls can then take place. In this instance, the fold areas **40'** will be sandwiched between the double thickness of the fold areas **42'**.

To unitize a number of articles they are positioned in two oppositely facing pallets. Any conventional method such as steel strapping can be used to encircle the pallets and hold the articles snugly therebetween. As seen in FIGURES 10 and 11, a series of shipping containers **54** are positioned in one pallet **50** while another is placed atop the containers. Steel strapping **56** encircles the containers and holds the pallets and containers together. The steel strapping **56** can itself be held in its tightened position by any of the conventional methods such as, for example, the buckles **58**. As evident from the tapered construction of the illustrated containers **54**, the two pallets used can be of different sizes.

Thus, this invention provides a method of easily fabricating an octagonal tray type pallet from a blank material. No complex system of creasing or slitting is required and the method is accordingly readily adaptable to high speed manufacturing operations. Moreover, the resulting pallet has increased strength and rigidity characteristics due to the overlapping and interlocking folding between the endwalls, sidewalls and the corner portions. A pair of the tray type pallets can be used to unitize a number of shipping containers or the like to provide a shipping package that is capable of preventing the containers from being scratched or marred during transportation and is not easily subject to damage due to, for example, the sideways slipping of the steel strapping which holds the pallets tightly against the containers. The dimensions of the pallets can be tailor made with respect to a particular shipping container so that the top and bottom portions of each of the corner shipping containers contacts and is tangent to the corner along a line that is intermediate to the lines at which the container contacts the end and sidewall portions. This insures maximum support for the containers and minimizes the possibility that the containers could move within the pallet or that the corner portions could be undesirably deformed.

I claim as my invention:

1. An octagonal tray type pallet for cylindrical, conical frustoconical articles and the like, said pallet being made from a blank and comprising a base, a pair of upstanding sidewalls and endwalls, angled corner portions connecting said endwalls and sidewalls, said endwalls being coextensive with the adjacent angled corner portions and at least a portion of said sidewalls, said endwalls being folded upon themselves to form a double thickness and to position the coextensive portion of said sidewalls therebetween.

2. The octagonal tray type pallet of claim **1** wherein said blank is made from corrugated paperboard.

3. The octagonal tray type pallet of claim **1** wherein said sidewalls are coextensive with at least a portion of the adjacent angled corner portions.

4. An octagonal tray type pallet for cylindrical, conical, frustoconical articles and the like, said pallet being made from a blank and comprising a base, a pair of upstanding sidewalls and endwalls, angled corner portions connecting said endwalls and sidewalls, said endwalls being coextensive with the adjacent angled corner portions and at least a portion of said sidewalls, said endwalls being folded upon themselves to form a double thickness and to position the coextensive portion of said sidewalls therebetween, said sidewalls being coextensive with at least a portion of the adjacent angled corner portions, said angled corner portions having upstanding triangular shaped members positioned between the double thickness of the folded endwalls.

5. The octagonal tray type pallet of claim **4** wherein said angled corner portions are so positioned with respect to the sidewalls and endwalls of the plurality of articles that will be unitized by the pallet that the corner articles will be tangent to an angled corner portion along at least a point that is substantially intermediate the points at which the corner articles will be tangent to the endwall and the sidewall.

6. The octagonal tray type pallet of claim **4** wherein fastening means hold the coextensive portion of said endwalls against said sidewalls.

7. The octagonal tray type pallet of claim **6** wherein said fastening means are staples.

8. The octagonal pallet of claim **1** wherein said sidewalls have been folded to provide a double thickness.

9. The octagonal pallet of claim **2** wherein said sidewalls have been folded to provide a double thickness.

10. The octagonal pallet of claim **3** wherein said sidewalls have been folded to provide a double thickness.

11. The octagonal pallet of claim 4 wherein said sidewalls have been folded to provide a double thickness.

12. The octagonal tray type pallet of claim 11 wherein said triangular shaped members are positioned adjacent said sidewalls.

13. The octagonal tray type pallet of claim 11 wherein said triangular shaped members are positioned between the double thickness of said sidewalls.

14. The octagonal tray type pallet of claim 8 wherein fastening means hold the coextensive portion of said endwalls against said sidewalls.

15. The octagonal tray type pallet of claim 14 wherein said fastening means are staples.

16. The method of forming an octagonal tray type pallet from a blank which comprises forming the blank with a first set of score lines to define a rectangular base, the base being positioned with respect to the blank so that there are formed between the score lines and the edges of the blank opposed sidewall portions and endwall portions, slitting the blank to form first slits extending from a point on the edge of the base adjacent the corner and extending to the edge of the blank to define the boundary between the sidewalls and endwalls, slitting the blank to form second slits extending from a point on the edge of the base adjacent the corner and extending to the corner to separate a portion of the sidewalls from the base, forming a second score line at each corner of the base connecting the end of the slits adjacent the corner to form a first fold area between the second score line and the corner of the base, forming third score lines perpendicular to the base and extending from the end of the slits adjacent the corner to the edge of the blank to form a second fold area on the sidewalls between the first slit and the third score lines, forming fourth score lines on the endwalls parallel to and spatially disposed towards the edge of the blank a distance substantially equal to the second score lines to form third fold areas between the third and fourth score lines and fourth fold areas between the fourth score lines and the edges of the blank, forming fifth score lines on the endwalls parallel to and spatially disposed from the edges of the base a distance substantially equal to the length of the third score lines located on the sidewalls to form fifth fold areas between the fifth score lines and the edges of the blank, folding the sidewalls and endwalls upwardly along the first set of score lines to a position substantially perpendicular to the base, folding the first fold areas along the second score lines upwardly to a position substantially perpendicular to the base, rotating the second fold areas about the third score line located on the sidewalls to position them against the first fold areas, positioning the third and fourth fold areas against the second fold areas and the sidewalls, respectively, and folding the endwalls downwardly and inwardly along the fifth score lines through about 180° to form the octagonal pallet.

17. The method of claim 16 wherein the dimensions of the endwall portions between the first set of score lines and the edge of the blank being longer than the corresponding dimension of the sidewall portions.

18. The method of claim 16 wherein the blank is made of corrugated paperboard.

19. The method of claim 16 wherein at least one of the corners defined by the intersection of the first slits and the edges of the blanks is rounded to facilitate the folding of the blank.

20. The method of claim 16 wherein the dimension of the sidewall portions between the first set of score lines and the edge of the blank are substantially identical to the corresponding dimension of the sidewall portions and equal to about twice the desired height of the sidewalls and endwalls.

21. The method of claim 20 wherein the fifth fold areas on the sidewalls are folded to form a double thickness with the first fold areas being positioned therebetween.

22. A blank capable of being folded to form an octagonal tray type pallet, said blank having a first set of score lines defining a rectangular base, said base being positioned with respect to said blank to form a pair of opposed sidewall and endwall portions between the edges of said base and said blank, said endwall portions having a larger width than said sidewall portions, a first set of slit lines collinear with the score lines separating said endwalls and said base and extending from points adjacent the corners of said base to the edge of said blank, a second set of slit lines collinear with the score lines separating said base from said sidewalls and extending from points adjacent the corners of said base to the first set of slit lines, a second set of score lines connecting the ends of the slits which are adjacent the corners, a third set of score lines perpendicular to two edges of said base and extending from the ends of the slits adjacent the corners to the edges of said blank, a fourth set of score lines parallel to the third lines located on said endwalls and spatially disposed therefrom a distance substantially equal to the length of said second score lines and extending between the edges of said blank and the first slits, and a fifth set of score lines parallel to and spatially disposed a distance from the edges of said base substantially equal to the length of the third score lines located on the sidewall portions.

23. A blank capable of being folded to form an octagonal tray type pallet, said blank having a first set of score lines defining a rectangular base, said base being positioned with respect to said blank to form a pair of opposed sidewall and endwall portions between the edges of said base and said blank, said sidewall portions and endwall portions having dimensions between said first set of score lines and the edge of said blank being substantially equal to about twice the desired height of said sidewalls and endwalls, a first set of slit lines collinear with the score lines separating said endwalls and said base and extending from points adjacent the corners of said base to the edge of said blank, a second set of slit lines collinear with the score lines separating said base from said sidewalls and extending from points adjacent the corners of said base to the first set of slit lines, a second set of score lines connecting the ends of the slits adjacent the corners, a third set of score lines perpendicular to two edges of said base and extending from the ends of the slits adjacent the corners to the edges of said blank, a fourth set of score lines parallel to the third score lines located on said endwalls and spatially disposed therefrom a distance substantially equal to the length of the second score lines and extending between the edges of said blank and the first slits, and a fifth set of score lines located on said endwalls and sidewalls and parallel to and spatially disposed from the edges of said base a distance substantially equal to the desired height of said sidewall and endwall portions.

24. The method of forming a blank that is capable of being folded to form an octagonal tray type pallet and comprising forming the blank with a first set of score lines to define a rectangular base, the base being positioned with respect to the blank so that there are formed between the score lines and the edges of the blank opposed sidewall portions and endwall portions, slitting the blank to form first slits extending from a point on the edge of the base adjacent the corner and extending to the edge of the blank to define the boundary between the sidewalls and endwalls, slitting the blank to form second slits extending from a point on the edge of the base adjacent the corner and extending to the first set of slit lines to separate a portion of the sidewalls from the base, forming a second score line at each corner of the base connecting the end of the slits adjacent the corner to form a first fold area between the second score line and the corner of the base, forming third score lines perpendicular to the base and extending from the end of slits adjacent the corner to the edge of the blank to form a second fold area on the sidewalls between the first slit and the third score lines, forming fourth score lines on the endwalls parallel to

and spatially disposed towards the edge of the blank a distance substantially equal to the second score line to form third fold areas between the third and fourth score lines and fourth fold areas between the fourth score lines and the edges of the blank, and forming fifth score lines on the sidewalls and endwalls parallel to and spatially disposed from the edges of the base a distance substantially equal to the desired height of the endwalls and sidewalls to form fifth fold areas between the fifth score lines and the edges of the blank.

25. A package for cylindrical, conical, frustoconical articles and the like which comprise a first octagonal tray type pallet made from a blank including a base, a pair of upstanding sidewalls and endwalls, angled corner portions connecting said endwalls and sidewalls, said endwalls being coextensive with the adjacent angled corner portions and at least a portion of said sidewalls, said endwalls being folded upon themselves to position the coextensive portion of said sidewalls therebetween, a plurality of cylindrical, conical, frustoconical articles and the like positioned in said pallet, the corner articles being in contact with the sidewall, endwall and the angled corner portion located

therebetween, a second pallet substantially identical to said first pallet positioned atop the top row of articles and strapping means for encircling said articles and pallets to hold said pallets and said articles together.

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