Feb. 17, 1953 L. J. BUDD 2,628,715

PALLETIZED SHIPPING STRUCTURE

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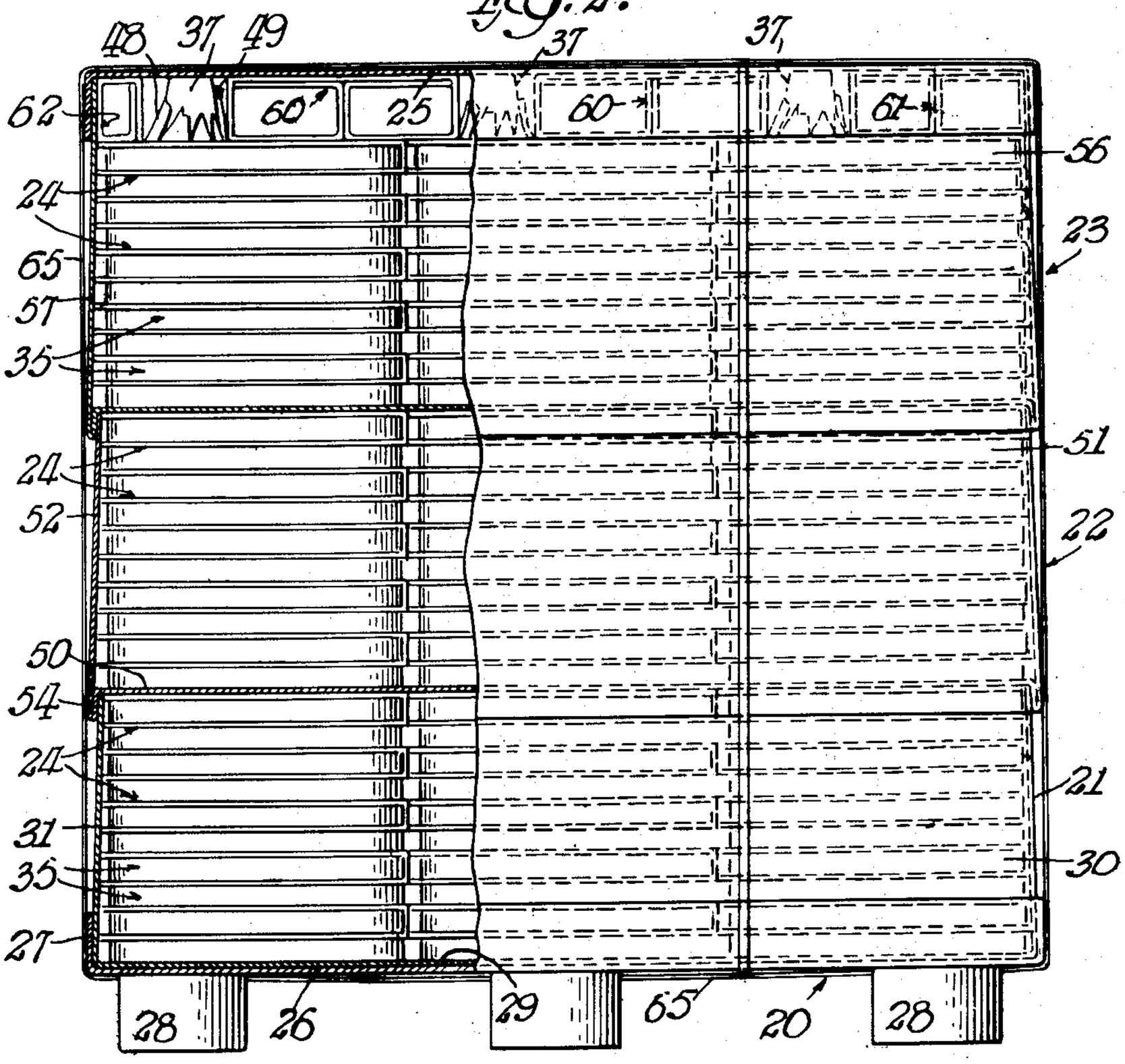
FIG. 2.



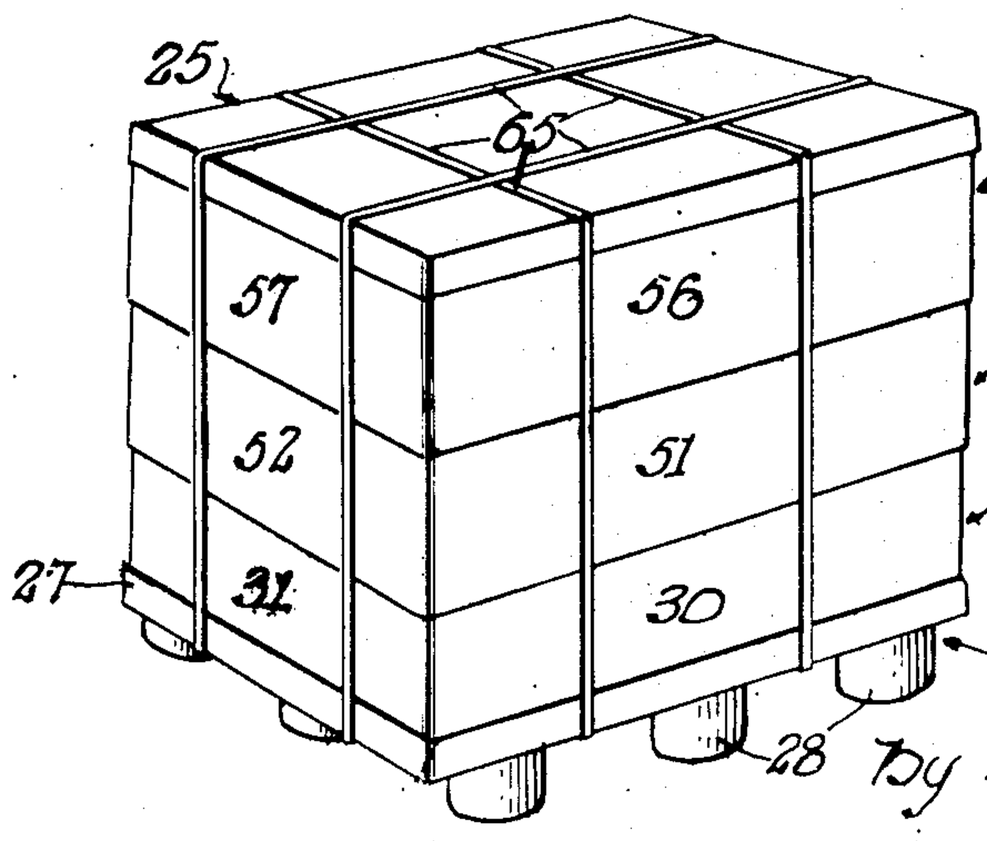


FIG. 1.

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PALLETIZED SHIPPING STRUCTURE

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Fig. 3.

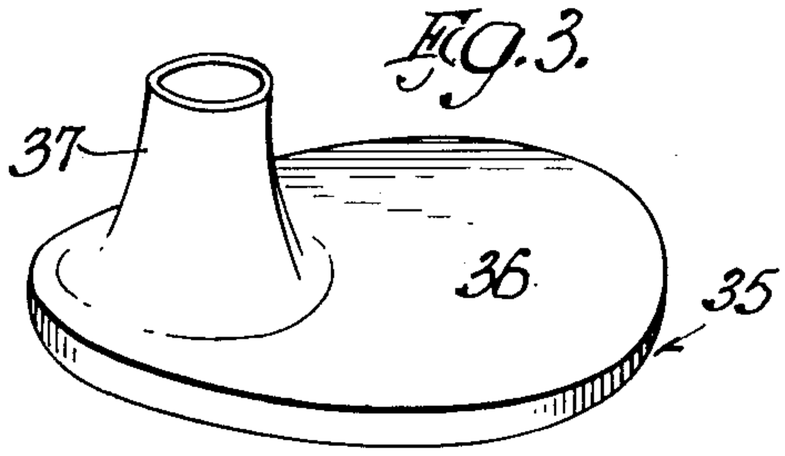


Fig. 5.

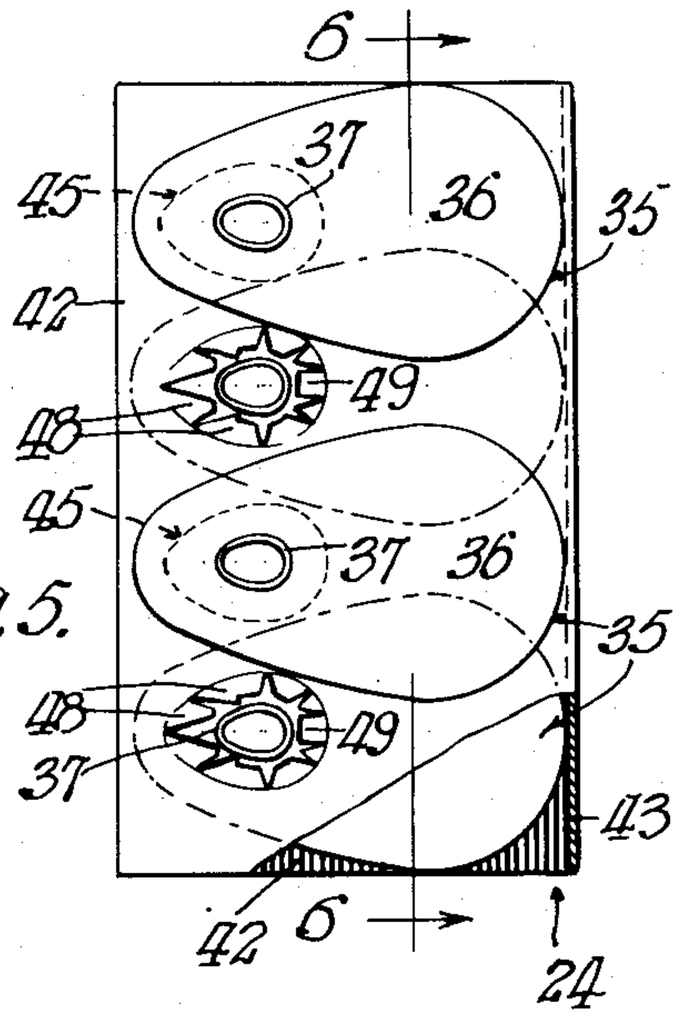


Fig. 4.

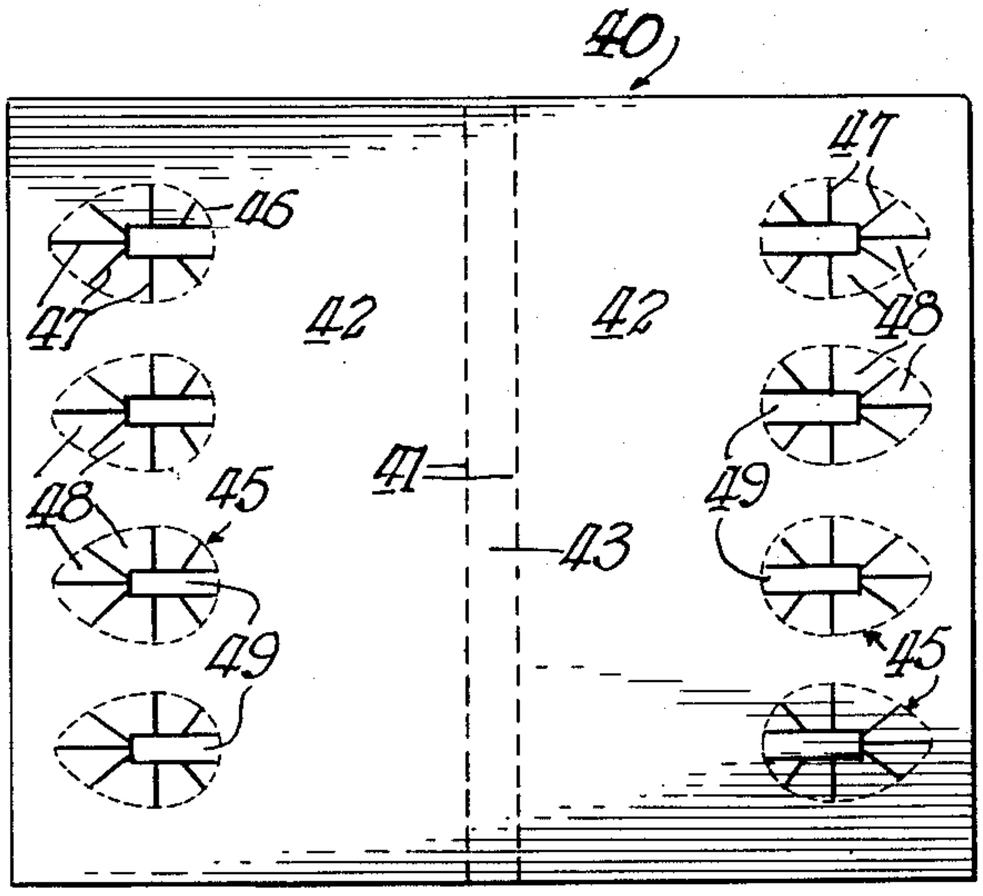


Fig. 6.

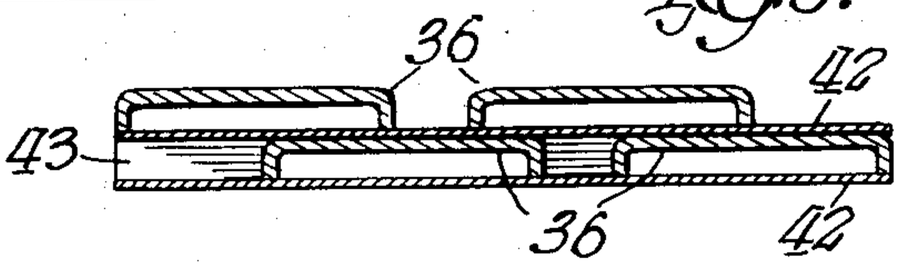
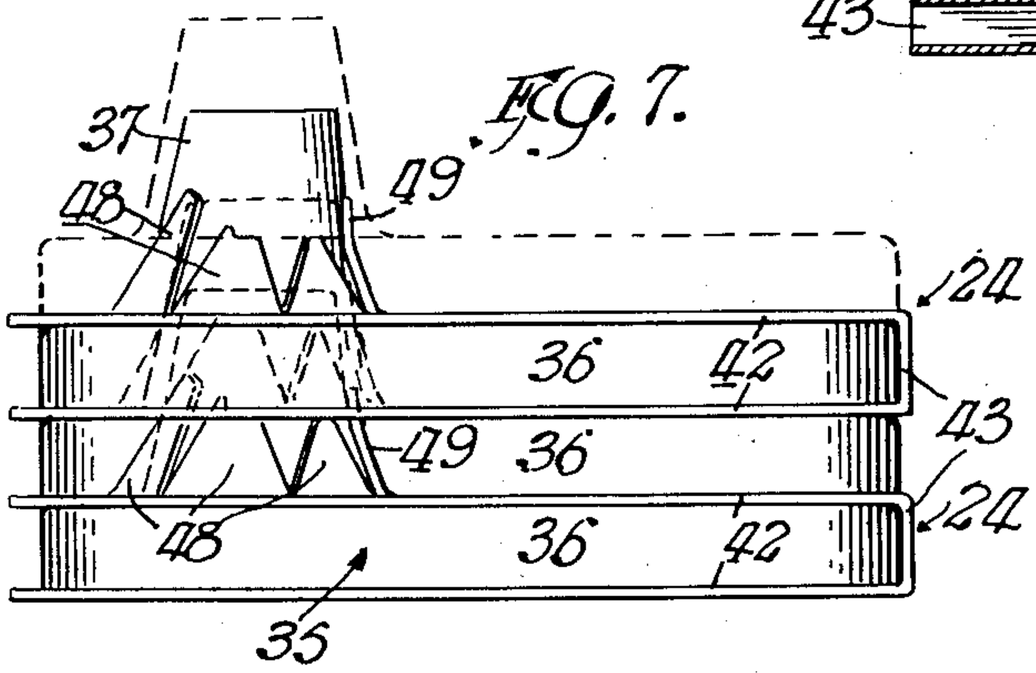


Fig. 7.



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PALLETIZED SHIPPING STRUCTURE

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FIG. 8.

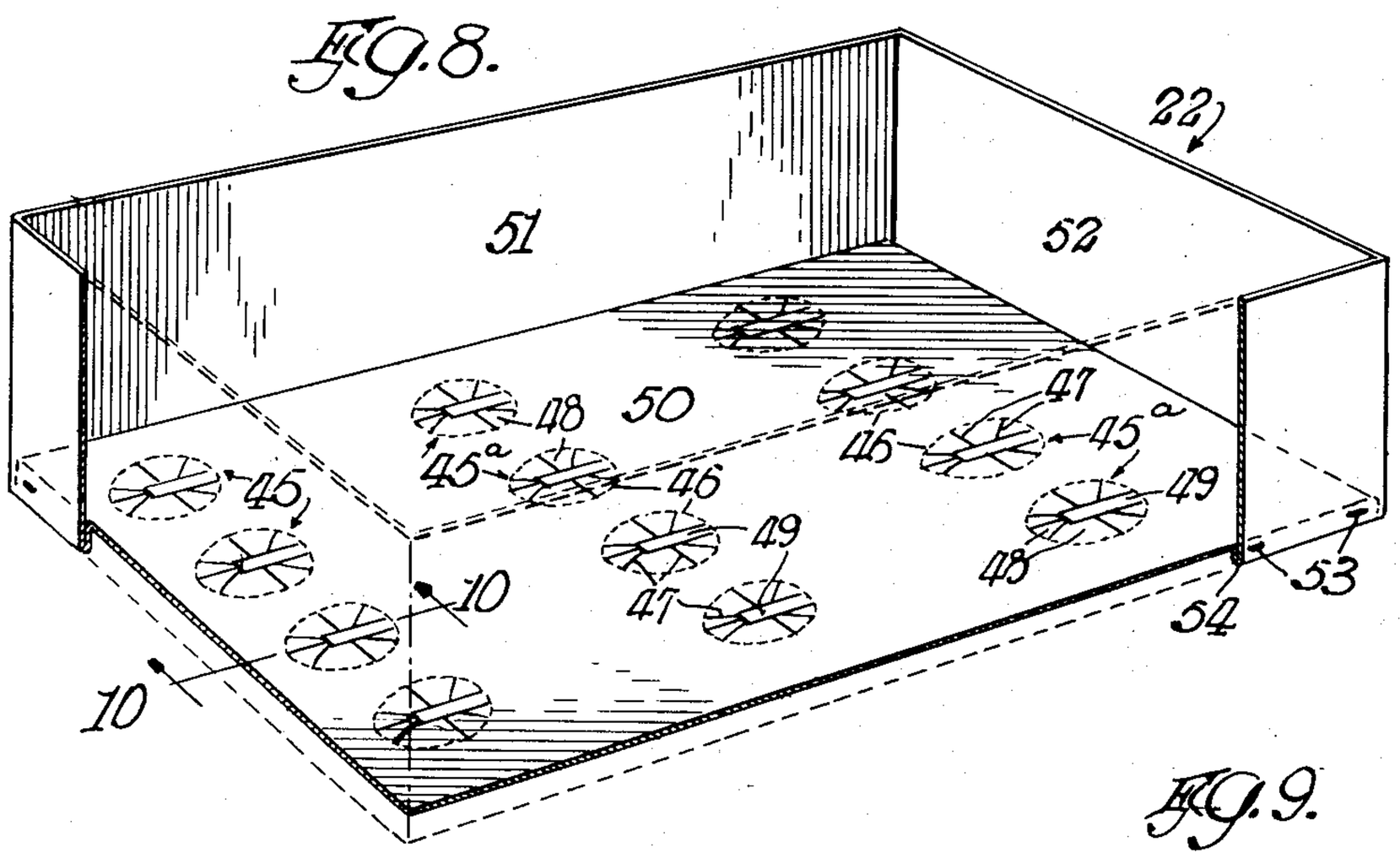


FIG. 9.

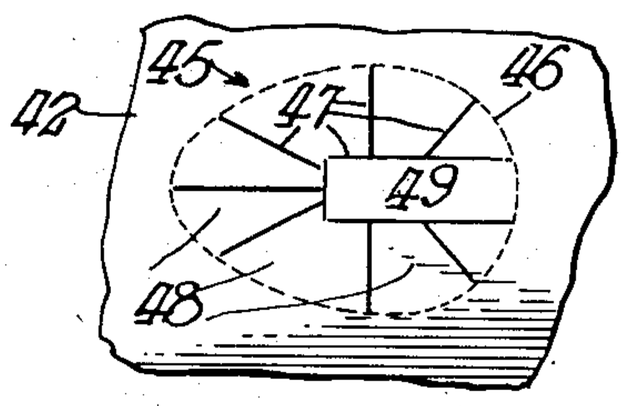


FIG. 10.

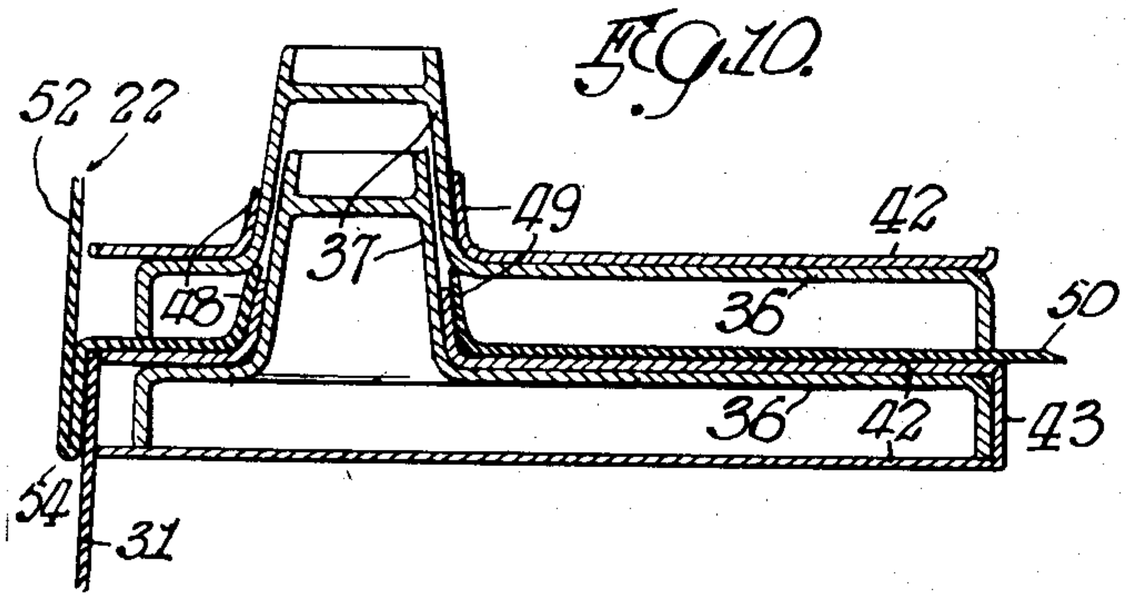
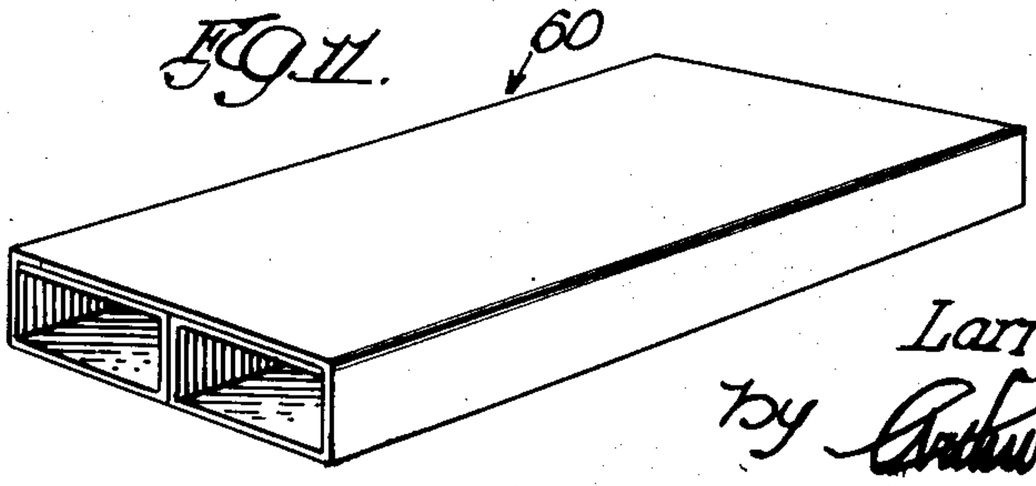


FIG. 11.



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UNITED STATES PATENT OFFICE

2,628,715

PALLETIZED SHIPPING STRUCTURE

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Application August 3, 1949, Serial No. 103,410

10 Claims. (Cl. 206—65)

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This invention relates to improvements in palletized shipping structures and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The packing for shipment of certain industrial items, from their point of origin to the point of assembly with other correlated items, presents difficulties which are increased when such items are of an irregular shape or contour and which have a surface finish that enhances the appearance thereof. As an example of such an item of irregular shape and having a special surface finish, the base member of certain motor driven domestic mixers is mentioned. Such a base member includes a relatively wide base portion and an upstanding body or column of considerable height.

Bases of this kind must reach the point of assembly free of scratches or other blemishes in the surface finish thereof, which would cause their rejection. Therefore, such items must be packed and handled with care, and heretofore have often been wrapped or boxed individually. This, of course, requires much labor and material and increases the cost thereof which, in turn, is reflected in the selling price of the article of which the item forms a part.

One of the objects of the present invention is to provide a unitary palletized structure for the shipment of a number of items of the same kind and wherein such items are so disposed in the structure and relatively to each other that they cannot shift laterally to contact or engage one another, thus avoiding danger of chipping or otherwise marring or damaging the same.

Another object of the invention is to provide a structure of this kind, wherein portions of the articles in certain of the packed trays thereof may project upwardly above the top thereof and into the tray above to nest within similar portions of the articles at the bottom of the tray above and in a manner preventing contact between the nested portions.

Also it is an object of the invention to provide in a structure of this kind, a novel combined article container and separator member wherein a number of the packed articles may be disposed between the sheets of each member and another number of such articles may be disposed between adjacent members in a stack in a tray and this in such a manner that the articles cannot become skewed in the tray and cannot come into contact with each other, thus eliminating danger of nicking, scratching or otherwise marring the surface finish of the articles.

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The above mentioned advantages of the invention, along with others, as well as the several advantages thereof, will more fully appear as the specification proceeds.

In the drawings:

Fig. 1 is a perspective view of a palletized shipping structure embodying the preferred form of the invention.

Fig. 2 is a view in side elevation of the structure on a scale enlarged over that of Fig. 1, with portions of the side thereof broken away better to show the tiered or stacked arrangement of the articles therein.

Fig. 3 is a perspective view of one of a number of counterpart articles packed in structures shown in Figs. 1 and 2.

Fig. 4 is a view of one of a number of blanks employed in the structure, foldable upon itself to provide a combined article container and separator.

Fig. 5 is a plan view of the blank shown in Fig. 4 when folded upon itself to function as a container for a plurality of the articles and as a separator and whereby the articles contained therein are separated, at least in part, from the articles above and below.

Fig. 6 is a detail sectional view of parts shown in Fig. 5 as taken on the line 6—6 thereof.

Fig. 7 is a detail view in elevation of a plurality of combined article containers and separators and more particularly shows their relative arrangement in the structure, in connection with a number of the articles.

Fig. 8 is a perspective view of one of a plurality of trays or containers employed in the structure with parts of a side wall and end wall broken away for illustrative purposes, the scale of said figure being substantially the same as that of Fig. 4.

Fig. 9 is a fragmentary view in plan showing one of a number of areas in each combined article container and separator and in the bottom of certain of the trays employed in the structure, on a scale enlarged over that of Fig. 4 and particularly shows the manner in which said area is die cut to provide bendable fingers therein and which will be more fully referred to later.

Fig. 10 is a detail vertical sectional view through a portion of the tray appearing in Fig. 8 as taken on the line 10—10 and on a scale enlarged thereover, and particularly shows the relative positions of parts of the articles above and below the tray bottom and which will be more fully referred to later.

Fig. 11 is a perspective view of a paperboard

filler or space occupying member for disposition between the bases of the items at the top of the structure and the cover thereof for flush engagement by parts of said cover for the support of the same.

The present invention is more especially concerned with palletized shipping structures for a number of counterpart articles, each including a base with an upstanding body toward one end thereof.

In general the structure comprises a pallet including a platform with laterally spaced supports on the bottom thereof, a number of open top article or item packed trays, with the first tray engaged on the platform of the pallet and with the others, arranged in stacked relation thereon.

The second and third trays each have a depending bottom flange that embraces the top margin of the tray below. With this arrangement the packed trays cannot shift relatively. The open top of the uppermost tray is preferably closed by a suitable cover.

The bottom of the second tray, as well as the bottom of the third tray are die cut in certain predetermined areas to provide therein, groups of inwardly directed parts which may be bent upwardly as fingers. These areas however are not necessary in the bottom of the first tray and in the illustrated construction have not been provided.

In connection with each tray, there is employed a plurality of combined article container and separator members each formed of paperboard material to provide upper and lower spaced apart sheets. These members are each as long as the associated tray is wide and each is of such width that a number of them, laid side by side, approximate the length of the tray with which they are used.

The sheets of each member are die cut in certain areas to provide the same kind of fingers, that are present in the bottom of the second and third trays, and these areas are so disposed in said sheets as to register with each other as well as to register with the like areas, before mentioned, in the bottom of the tray with which the respective members are used.

The trays each have a shape and area that correspond to the shape and area of the platform of the pallet within the flanges thereof and which flanges are later turned upwardly to prevent a lateral shifting of the first or bottommost tray.

In making up the palletized structure, the first tray is placed with its bottom engaged flatwise upon the platform of the pallet within the flanges thereof and then filled to the top, with the articles in place between the sheets of each combined container and separator member and between the opposed sheets of adjacent members, the members being disposed in side by side, vertically disposed stacks. When the tray is thus packed, the top surface of the bases of the articles or items in the upper layer or tier is substantially flush with the top edges of the sides and the ends of the first tray and the bodies or necks of said articles project above said edges.

The second tray is then placed upon the open top of the first one, with its bottom engaged on the top edges of the first tray and with its bottom marginal flange surrounding the top margins of the sides and the ends of the first tray. When so disposed upon said first tray, the die cut areas of the bottom of the second tray, register with the upstanding necks or bodies of the articles in

the top layer or tier of articles in the first tray. By imposing hand pressure upon the bottom of the second tray, the top ends of said necks or bodies before mentioned, push the fingers in the areas of the bottom of the second tray upwardly to extend up through said bottom of the second tray. In this operation, said fingers arrange themselves upon portions of said necks or bodies to protect them against direct engagement with the necks or bodies of the articles in the first layer in said second tray and which nest with said portions of the necks of the articles in the top layer of the first tray.

The second tray is then packed with articles in connection with combined containers and separator members in the manner of packing the first tray. When the second tray is thus packed, the necks or bodies of the articles in the first tier project above the top edges of the sides and the ends of the second tray just as in the case of the first tray.

The top tray (third tray in the illustration) is of a depth greater than that of the second tray by an amount approximating the height of the neck or body of an article. This third tray is placed upon the second tray in the same way as the latter is placed upon the first tray. When the bottom of the third or top tray is hand pressed downwardly, the necks of the articles in the top tier of the second tray will be projected up through the die cut areas of the bottom of the third tray, as before mentioned in connection with the second tray.

The packing of the third tray is then carried out in connection with the combined article container and separator members as before and, when fully packed, the top ends of the necks or bodies of the articles in the top layer or tier thereof, are disposed substantially flush with the top edge of the sides and the ends of said third tray. Thus there is a space at the top of the third tray between said edges of the sides and ends thereof and the top of the bases of the articles in that layer.

There is then placed upon said bases of said articles, a number of tubular fillers made of suitably scored and folded paper board, and these fillers take up said space so that their top surfaces are flush with the top edges of the sides and the ends of said third or top tray.

A flanged cover may then be placed upon the open top of said third tray to close the same and the major area thereof rests on the fillers. Thereafter a plurality of suitable tensioned members such as metallic strapping or banding are applied to the thus far assembled structure to surround the same, longitudinally as well as transversely, and to not only secure the cover to the top tray but to secure the stack of packed trays and the pallet together as a unitary structure.

Referring now in detail to that embodiment of the invention illustrated in the drawings, the improved palletized shipping structure includes a pallet 20, a plurality of open top trays 21, 22 and 23, vertically stacked thereon with each tray having associated therewith a plurality of article containing and separating members 24, a cover 25 for the open top of the topmost tray in the stack and some means whereby the pallet, the trays and the cover are bound together as a composite structure.

Preferably, the pallet is of the kind which includes a rectangular platform 26 made of paperboard stock and which is provided along its four

margins with flange extensions 27 foldable into an upright condition along scored lines by which said flange extensions are joined to the platform. On the underside of this platform are rows of laterally spaced supports 28 thereby providing between said rows in two directions passageways for the entry of the arms (not shown) of a lift truck. Preferably said supports are in the form of relatively short rigid pieces of paper tubing secured to the platform in any suitable manner.

The trays 21, 22 and 23 are made of suitable paperboard stock, each having a plane area approximately the same as the platform 26 of the pallet. The tray 21 which is hereinafter referred to as the "first" tray of the stack has a bottom 29 that rests flatly upon the platform 26, within its flanges 27, and sides and ends 30 and 31 respectively. Preferably the tray is formed by folding a cut and scored blank (not shown) into tray form, the sides and ends being secured in any suitable manner. As illustrated, the bottom 21 of said tray has no die cut areas therein such as are embodied in trays 22 and 23. Tray 22 will be referred to later as the "second" and tray 23 as the "third or top tray."

Within the first tray is located a plurality of vertical stacks of the combined container and separator members 24 for the packing of a number of counterpart articles 35 and one of which appears in perspective in Fig. 3. The specific article shown in Fig. 3 is the base of a motor driven, domestic mixing apparatus and it includes a flat, substantially egg shaped base portion 36 and an upstanding hollow integral body or neck 37 on the smaller end of the base portion. Such a base has a surface finish generally of high luster and usually an enameled coating, which if scratched, nicked or otherwise marred, would cause its rejection at the point of its assembly with other parts to produce a mixing apparatus usually referred to as a "mixer."

Irregularly shaped articles are difficult to pack because of their shape. In some instances, it has been the practice to individually wrap or box each article separately to protect the surface finish thereof against damage and this, of course adds to the cost of the finished mixer.

Each member 24 is designed to correlate with both the trays and the articles and it is made from a blank 40 shown in Fig. 4. Each blank, which is made of a rectangular piece of paperboard, is as wide as the trays 21, 22 and 23 with which it is used and is of a length approximating twice the length of the article plus the thickness or depth of the base portion thereof. Said blank is provided with a pair of laterally spaced score lines 41, spaced apart a distance approximating the depth of said base portion and these lines divide the blank into relatively wide end panels 32—32 separated by a strip-like narrow central panel 43. When the end panels 42—42 are folded along the lines 41 into superposed parallel relation, they are spaced apart a distance that corresponds to the width of the central panel.

In each wide panel 42 of the blank is a row of spaced apart areas 45, one of which is illustrated on a larger scale in Fig. 9. This area approximates an egg in shape (corresponding to the general shape of part of the article to be packed in the tray) and its outline is defined by a scored line 46. Each area is slit through on patterned lines 47 to define a plurality of portions 48 and a portion 49 respectively, the latter extending centrally and longitudinally of the area and being the largest of said portions. All of said portions 48—49 are bendable upwardly along the line 43 to form upstanding fingers, as best appears in Fig. 7.

The second tray 22, which best appears in perspective in Fig. 8, includes a bottom 50 and upright sides and ends 51—52. The bottom portions of said sides and ends are folded upon themselves and then suitably stapled at 53 to form double thickness flanges 54 that extend below the bottom 50 of the tray. These flanges are so correlated with respect to the upper margin of the sides and ends of the first tray as to fit therearound and embrace the same, as best appears in Figs. 2 and 10 respectively.

In the bottom 50 of this tray, so as to register with the areas 45 of three of the combined container and separators, when arranged side by side, are similar areas 45*a* which are counterparts of the areas 45 shown on enlarged scale in Fig. 9. The parts of the areas 45*a* bear the same numerals as those in the areas 45. The sides and ends of this tray equal in height the stack of articles and combined container and separators therein so that when this tray is packed the top sheet of the top members 24 therein is flush with the top edges of the sides and ends of the tray, as appears in Fig. 2.

The third tray includes a bottom 55 and upright sides and ends 56 and 57 respectively and is provided with flanges 58 similar to the flanges 54 of the second tray. Also in the bottom 55 of said third tray are areas similar to and arranged on the same pattern as the areas 45*a* in the bottom of the second tray. This third tray is substantially a counterpart with respect to the second tray with the exception that the sides and ends 56—57 have a greater depth by an amount approximating the height of the neck or body 37 of the articles packed in order that the same number of articles may be packed therein.

When this third or top tray is packed with the articles 35 and members 24, the top edges of the neck or body of all the articles in the top tier are flush with the top edges of the sides and ends of the tray. This disposes the top sheet of the top members 24 in the tray, below the plane of the top edges of the sides and ends of the tray, so that a space is thus present which is occupied by fillers 60, the top surfaces of which are flush with the top edges of the sides and ends of the tray.

One of these fillers 60 appears in Fig. 11 and it is made of a suitably cut and scored blank foldable into a rectangular hollow tubular structure. There are two of such fillers employed in each structure along with the third narrower one 61 and a fourth and still narrower one 62, as best appears in Fig. 2.

When the cover 25 is placed upon the third (top) tray it rests flatly upon the top edges of the sides and ends of the tray, as well as upon the top edges of the article necks or bodies 37 and upon the top surfaces of the fillers 60, 61 and 62 with its flange surrounding the top margins of the sides and ends of the tray.

In building up a complete shipping structure, the bottom tray 21 is disposed upon the platform 26 of the pallet 20 within the upturned flanges 27 thereof. A pair of articles 35 are disposed in laterally spaced relation upon the bottom of the tray in positions corresponding to alternate areas 45 of the members 24. The lower sheet of a member 24 is then applied and is hand pressed downwardly so that the necks 37 of the articles, which line up with two of such areas 45

in the lower sheet, push up through said areas in one member and bend the parts **48** and **49** thereof into upstanding fingers disposed about said neck. Another pair of articles **35** is disposed upon the first sheet, but offset laterally from the first mentioned pair, so that the necks thereof register with the intermediate areas **45** of said sheet. This offset arrangement of the articles in adjacent tiers in a stack appears best in Fig. 5.

The top sheet of the first member is then folded down upon the articles of the second tier and in hand pressing the same downwardly, the necks of said articles push up through the areas **45** of the top sheet of said member.

A third pair of articles are disposed upon the top sheet of the first member **24** in line with the articles in the first tier and this procedure is repeated until one stack of articles **35** and members **24** is completed. At this time, the top sheet of the top member **24** is flush with the top edges of the sides and ends of the first tray and the necks or bodies **37** of the articles in the top tier project above said edges. Other stacks of members **24** with articles **35** between the sheets thereof are thus built up in the same way to fill or load this tray. When the first tray is thus packed, the articles are securely held against shifting and against engagement with one another, with the necks of the articles in one tier nesting in the necks of the articles in the tier above but prevented from engagement therewith by the fingers formed by the parts **48—49** of the area, as appears in Fig. 10.

The second tray **22** is now placed in position upon the first tray and at this time the necks of the articles in the top tier of the first tray register with certain of the areas **45***a* in the bottom **50** of the second tray. Downward hand pressure is then imposed upon the bottom of the second tray and this forces the necks **37** of the articles in the top tier of the first tray to push up through said areas **45***a* in the bottom of the second tray and the parts **48** and **49** of said areas then form fingers that arrange themselves around said necks. This hand pressure is imposed to the extent necessary to position the margins of the bottom thereof, upon the top edges of the sides and ends of the first tray, with the flanges **54** of said second tray in embracing relation with respect to the top margins of the sides and ends of the first tray, as appears in Fig. 2.

The second tray **22** is then packed with articles **35** and members **24** in the manner set forth in connection with the first tray. When the second tray is thus packed the top sheets of the members **24** in the top tier are flush with the top edges of the sides and ends of the second tray and the necks **37** of the articles **35** in said top tier project above said edges.

The third tray **23** is then placed upon the top of the second tray and hand pressure on the bottom of the third tray will fit it thereon, as before described, with the necks of the articles in the top tier of the second tray projecting up through the associated areas in the bottom of the third tray. The stacks of articles **35** and members **24** are then built up in the third tray and when so built up the top edges of the necks **37** of the articles in the top tier are flush with the top and bottom edges of the sides and ends of the top tray. The top sheets of the members **24** in the top tier are now disposed below said edges and the fillers **60**, **60**, **61** and **62** are then

disposed upon said top sheets to fill up the space between said sheets and the top edges of said sides and ends of the top tray.

The cover **25** is then applied to the open top of the top tray to close the same, after which tension bands **65** are applied, to pass under the platform of the pallet in two directions, up about the sides and ends of the trays **21**, **22** and **23**, and across the cover **25** in two directions. These bands hold the assembled parts together as a unitary structure such as appears in Fig. 1. The bands may be brought to the proper tension by the use of a conventional banding tool and the overlapped ends then sealed.

A structure, of this kind, is solid and strong and may be handled with the usual lift trucks and will not be damaged thereby or when stacked one upon the other in storage. When the structure reaches the place where the articles contained therein are required for use, the bands **65** are cut, the cover **25** is removed and ready access is had for unpacking the articles in the top tray. When this tray is empty it is removed from the second tray to expose the articles therein for unpacking and when the second tray is empty its removal exposes the first tray for unpacking.

If more than three trays are desired in the structure, more trays which are counterparts of the second tray, are used.

In the illustrated structure, the bottom, intermediate and top trays are not exactly alike. If desired, however, one form of tray such as **22** may be used throughout. If such a tray were used for the bottom tray, the bottom **50** would be spaced slightly above the member **26** of the pallet but the part **54** could be disposed within the flange **27** of the pallet.

Of course, while the tray bottom would have areas **45***a* (like **45**) therein they simply would not be used in the case of the first or lowermost tray.

Also, if but one form of tray were used throughout, and the height were the same, then obviously, with respect to the packing of the article illustrated, fewer would be accommodated in the top tray because of the necessity of inserting members such as **60**, **60**, **61** and **62**.

While in describing the invention I have referred in detail to the parts involved as well as to the packing and assembly of the trays, the same is to be considered only in the illustrative sense and, therefore, I do not wish to be limited thereto except as may be specifically set forth in the appended claims.

I claim as my invention:

1. In a package structure for a plurality of counterpart articles each having a flat base with an upstanding hollow body thereon, said structure embodying therein an open top tray including a bottom and sides and ends, a plurality of separator sheets arranged horizontally in said tray, with spaces between them, each sheet having a row of similarly spaced openings therein, each defined by fingers attached to the sheet, the openings in the row in each sheet registering with the openings in the sheets above and below, a set of laterally spaced articles having their bases disposed in each space between adjacent sheets, with the articles in alternate spaces arranged vertically in line with each other and with the articles in the intermediate spaces arranged vertically in line with each other but offset laterally to a position between the bases of the articles in said alternate spaces, the bodies of the articles in each space extending up

through certain of the openings in the sheet above with the fingers of said openings turned upwardly and engaged with said bodies and separating the same from the bodies of the articles in the space above and in which they nestingly engage.

2. In a package structure for a plurality of counterpart articles each having a flat base with an upstanding hollow body thereon, said structure embodying therein an open top tray including a bottom and sides and ends, a plurality of separator sheets arranged horizontally in said tray, with spaces between them, each sheet having a row of similarly spaced openings therein, each defined by bendable fingers cut from and integral with the sheet, the openings in the rows in each sheet registering with the openings in the sheets above and below, a set of laterally spaced articles having their bases disposed in each space between adjacent sheets with the articles in alternate spaces arranged vertically in line with each other and with the articles in the intermediate spaces arranged vertically in line with each other but offset laterally to a position between the bases of the articles in said alternate spaces, the bodies of the articles in each space extending up through certain of the openings in the sheet above with the fingers of said openings turned upwardly and engaged with the bodies of said bases and separating them from the bodies of the articles in the space above and in which they nestingly engage.

3. In a package structure for a plurality of counterpart articles, each having a flat base with an upstanding hollow body thereon, said structure embodying therein an open top tray including a bottom and sides and ends, a plurality of separator members, each comprising a pair of sheet members joined together along one edge and arranged horizontally in said tray and with spaces between the sheets of each separator member and between adjacent separator members, the sheets of each separator member having a row of similar spaced openings therein, each defined by fingers attached to the respective sheets of each member, the openings in the rows of each sheet registering with the openings in the sheet above and below, a set of laterally spaced articles having their bases disposed in each space between adjacent sheets, with the articles in the spaces between the sheets of each separator member arranged vertically in line with each other and with the articles in the spaces between adjacent members arranged vertically in line with each other but offset laterally to a position between the bases of the articles between the sheets of each separator member, the bodies of the articles in each space extending up through certain of the openings in the sheet above with the fingers of said openings turned upwardly and engaged with said bodies and separating the same from the bodies of the articles in the space above and in which they nestingly engage.

4. In a package of counterpart articles, each including a flat base and an upstanding hollow body thereon, a plurality of separator members, each comprising a plurality of separator sheets joined together for folding into superposed relation with spaces therebetween, each sheet having a row of similar spaced openings therein, each defined by fingers attached to the sheet, the rows of openings in the respective sheets registering with the openings in the sheets above and below, a set of laterally spaced articles having their bases disposed in each space between adjacent sheets, with the articles in alternate spaces arranged vertically in line with each other and with the articles in the intermediate spaces arranged vertically in line with each other but offset laterally to a position between the bases of the articles in the alternate spaces, the bodies of the articles in each space extending up through certain of the openings in the sheet above with the fingers of said openings turned upwardly and engaged with said bodies and separating them from the bodies of the articles in the space above and in which they nestingly engage.

5. A palletized structure for the shipment of articles having a flat base with an upstanding neck thereon, said structure embodying therein a pallet including a platform and supporting means therefor, open top trays arranged as a stack upon said platform of the pallet and each including a bottom and upright sides and ends, said trays being arranged with the bottom of the lowermost one engaged directly on said platform and with the bottom of a tray above engaged upon and supported by the top edges of the sides and ends of the tray below, a plurality of article holders in each tray, each holder comprising upper and lower sheets joined together along one edge, with the sheets of each holder arranged in vertically spaced relation and with the lower sheet of one holder spaced above the upper sheet of the holder below, both sheets of each holder having rows of registering openings each defined by bendable fingers cut from the respective sheets, a set of laterally spaced articles disposed with their bases between the upper and lower sheets of each holder and with the necks thereof extending up through certain of the openings in the upper sheet of the holder, a second set of articles disposed in the spaces between said holders and offset laterally to a position between the articles in the holders above and below said space, the necks of the articles in each space extending upwardly through certain of said openings in the lower sheet of the holder above and with the fingers of said openings engaged with said necks and separating the same from the necks of the articles in the next space above and in which they nestingly engage, a cover for the open top of the topmost tray, and means for securing the covered stack of trays and said pallet together as a unitary structure.

6. A palletized structure for the shipment of articles having a flat base with an upstanding neck thereon, said structure embodying therein a pallet including a platform and supporting means therefor, open top trays arranged as a stack upon said platform of the pallet and each including a bottom and upright sides and ends, said trays being arranged with the bottom of the lowermost one engaged directly on said platform and with the bottom of a tray above engaged upon and supported by the top edges of the sides and ends of the tray below, a plurality of sheets arranged in each tray with spaces therebetween of a depth corresponding to the depth of the bases of said articles, each sheet having a row of similarly spaced openings therein, each defined by bendable fingers attached to the sheet, a set of laterally spaced articles having their bases disposed between adjacent lower and upper sheets with the articles in alternate spaces arranged vertically in line with each other and with the articles in the intermediate spaces offset laterally to a position between the bases of the articles in said alternate spaces, the necks

of the articles in each set extending upwardly through certain of said openings in the sheet above, with the fingers of said openings turned upwardly and engaged with said necks and separating the same from the necks of the articles in the space above and in which they nestingly engage, a cover for the open top of the topmost tray, and means for securing the covered stack of trays and said pallet together as a unitary structure.

7. A palletized structure for the shipment of articles having a flat base with an upstanding neck thereon, said structure embodying therein a pallet including a platform and supporting means therefor, open top trays arranged as a stack upon said platform of the pallet and each including a bottom and upright sides and ends, said trays being arranged with the bottom of the lowermost one engaged directly on said platform and with the bottom of a tray above engaged upon and supported by the top edges of the sides and ends of the tray below, a plurality of article holders in each tray, each holder comprising upper and lower sheets joined together along one edge, with the sheets of each holder arranged in vertically spaced relation and with the lower sheet of one holder spaced above the upper sheet of the holder below, both sheets of each holder having rows of registering openings each defined by bendable fingers cut from the respective sheets, a set of laterally spaced articles disposed with their bases between the upper and lower sheets of each holder and with the necks thereof extending up through certain of the openings in the upper sheet of the holder, a second set of articles disposed in the spaces between said holders and offset laterally to a position between the articles in the holders above and below said space, the necks of the articles in each space extending upwardly through certain of said openings in the lower sheet of the holder above and with the fingers of said openings engaged with said necks and separating the same from the necks of the articles in the next space above and in which they nestingly engage, a filler on each uppermost upper holder in the uppermost tray, laterally from said fingers thereof and of a height approximating the height of the necks above the articles in the uppermost space, a cover for the open top of each tray and engaged on said fillers, and means for securing the covered stack of trays and said pallet together as a unitary structure.

8. A palletized shipping container for articles having a base and a hollow embossment projecting therebeyond, comprising a pallet floor, supporting legs depending from the undersurface of said floor, a plurality of superimposed trays supported on the upper surface of said floor, and a plurality of superimposed rows of dividers extending transversely across the interior of each of said trays, said dividers each including a pair of integrally formed flaps receiving the bases of a row of aligned articles therebetween to separate the bases from those of an adjacent row of articles, said flaps and said trays being each provided with aligned apertures for receiving therethrough the embossments of said articles and circumscribed by deflectible fingers struck from said flaps and said trays respectively and projecting therebeyond to partially surround said embossments, the hollow embossments of adjacent rows of articles being partially telescoped with certain of said fingers interposed therebetween to separate the same.

9. A palletized shipping container for articles having a base and a hollow embossment projecting therebeyond, comprising a pallet floor, supporting legs depending from the undersurface of said floor, a plurality of superimposed trays supported on the upper surface of said floor, a plurality of superimposed rows of dividers extending transversely across the interior of each of said trays, a top surmounting the uppermost of said trays, and flexible binding straps securing said pallet floor, said trays, and said top into an integral shipping container, said dividers each including a pair of integrally formed flaps receiving the bases of a row of aligned articles therebetween to separate the bases from those of an adjacent row of articles, said flaps and said trays being provided with aligned apertures for receiving therethrough the embossments of said articles and circumscribed by deflectible fingers struck from said flaps and said trays respectively and projecting therebeyond to partially surround said embossments, the hollow embossments of adjacent rows of articles being partially telescoped with certain of said fingers interposed therebetween to separate the same, and said top contacting the uppermost extremity of those embossments projecting beyond the uppermost of said dividers and being urged thereagainst by said flexible binding straps to prevent vertical shifting of said articles.

10. A palletized shipping container for articles having a base and a hollow embossment projecting therebeyond, comprising a pallet floor, supporting legs depending from the undersurface of said pallet floor, a plurality of superimposed trays supported on the upper surface of said floor and each adapted to contain a plurality of vertical stacks of said articles arranged in horizontal rows, divider means within said trays including a pair of integrally formed flaps for receiving the bases of vertically alternate articles in each of said rows to separate the bases of said articles from those of an adjacent row, said flaps and said trays being provided with aligned apertures for receiving therethrough the embossments of said articles circumscribed by deflectible fingers struck from said flaps and said trays respectively and projecting therebeyond to partially surround said embossments, the hollow embossments of adjacent rows of articles being partially telescoped with certain of said fingers interposed therebetween to separate the same.

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