

June 16, 1936.

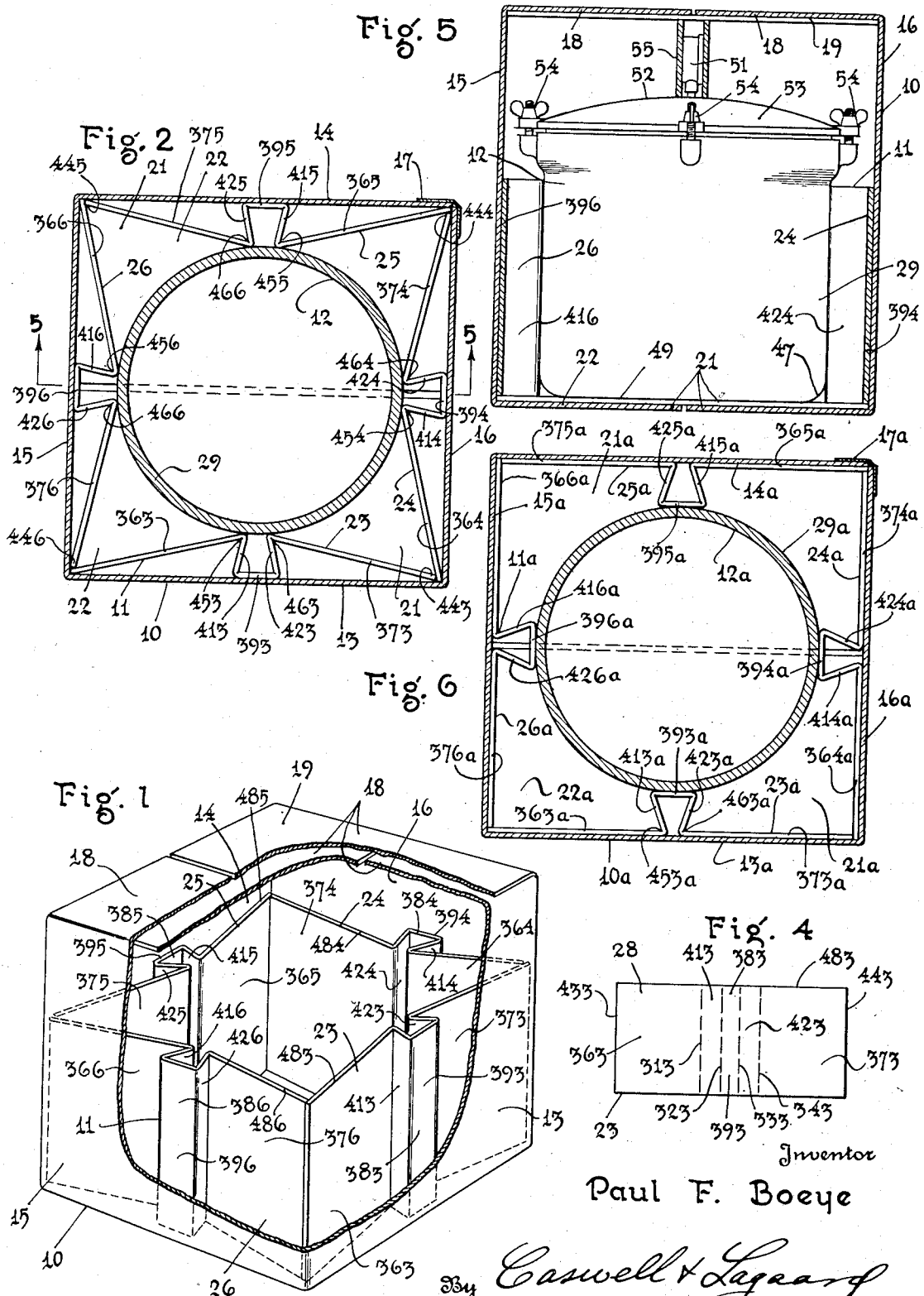
P. F. BOEYE

2,044,048

CONTAINER

Filed Sept. 1, 1934

2 Sheets-Sheet 1



June 16, 1936.

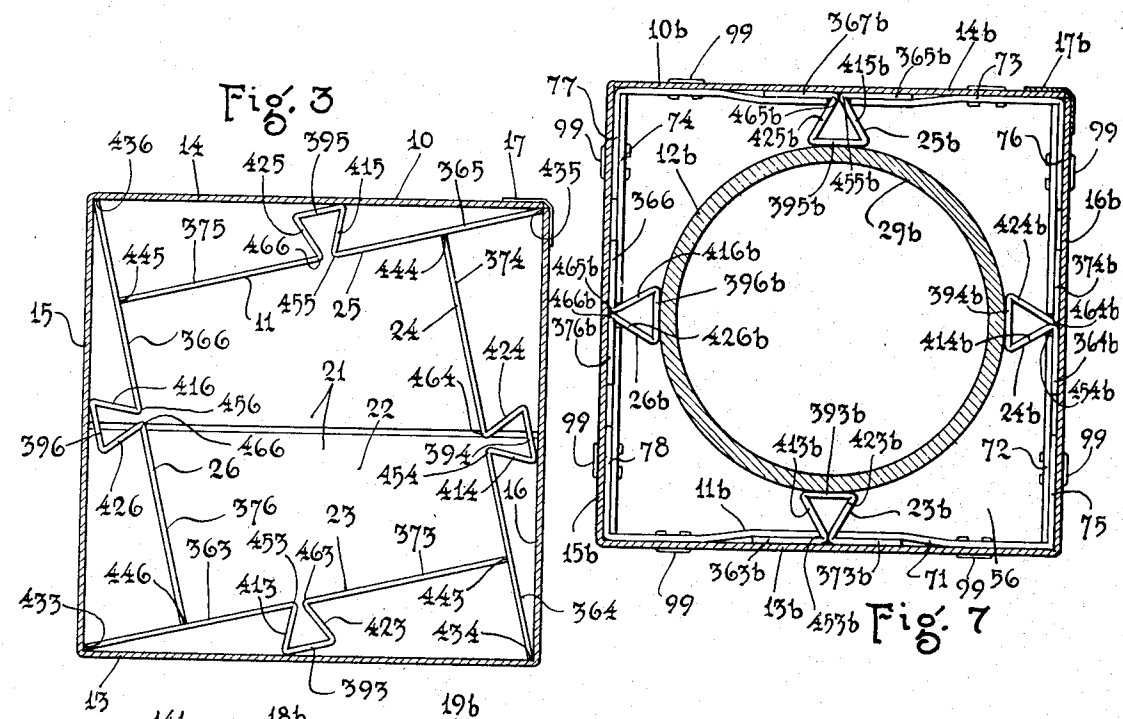
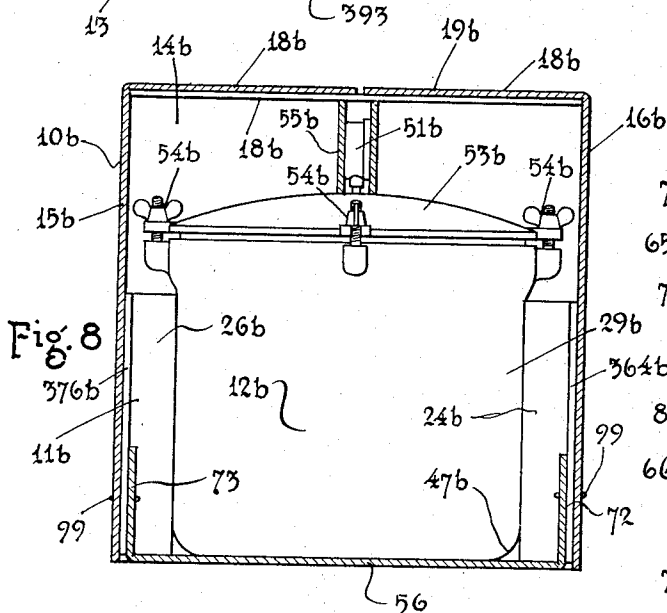
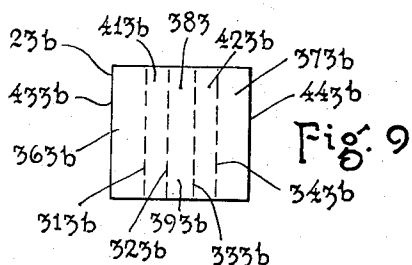
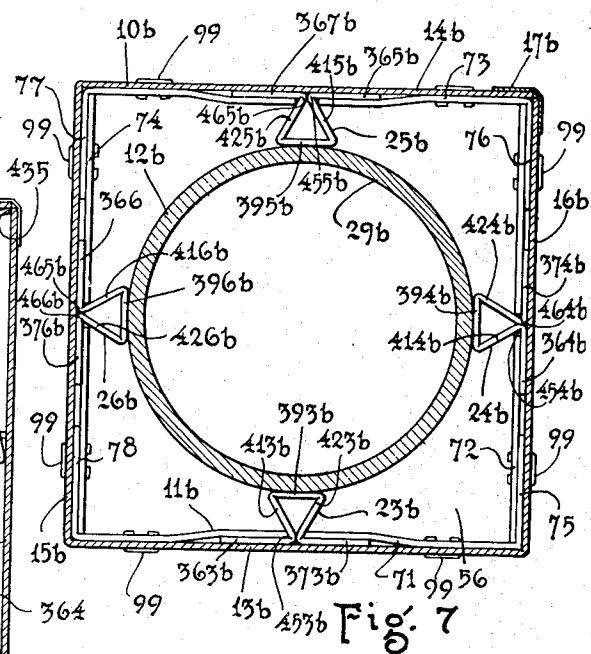
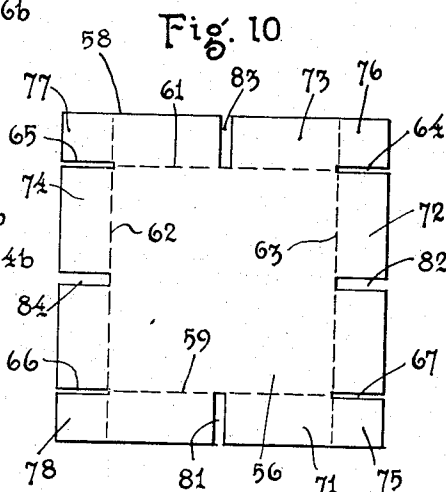
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CONTAINER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,044,048

CONTAINER

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Application September 1, 1934, Serial No. 742,437

4 Claims. (Cl. 229—14)

My invention relates to containers and particularly to a container having a packing structure therein for holding an article within the container spaced from the walls thereof.

Another object of the invention resides in constructing the packing structure from sheet material such as paper board or similar material and in bending the same to form the desired construction.

A still further object of the invention resides in constructing the packing structure with four spacers disposed along the walls of the container and holding an article therein spaced from said walls.

A feature of the invention resides in constructing each of the spacers with flanges and with a rib connecting said flanges, said spacers having parts engaging the walls of the container and other parts engaging the article disposed within the container.

Another object of the invention resides in constructing the ribs with bases parallel with the walls of the container and with struts connecting the flanges of the spacers with the bases thereof.

A feature of the invention resides in constructing said ribs and flanges from a sheet of material folded along parallel lines to form the various parts of the spacer.

A still further object of the invention resides in arranging the flanges to engage the corners of the container to hold the rib in proper form.

An object of the invention resides in arranging one of said flanges in one corner of the container and in arranging the other flange in a manner to engage the first named flange of the adjacent spacer to prevent the packing structure from collapsing prior to the insertion of the article within the container.

Another object of the invention resides in providing as a modification, a structure in which the flanges of the spacers are disposed adjacent the walls of the container and the ribs extending inwardly therefrom, with the bases of the ribs in engagement with the article within the container.

An object of the invention resides in providing as another modification of the invention a construction in which the flanges do not engage the corners of the container and in which a bottom structure is used having flanges bent upwardly therefrom and formed with slots for the reception of the struts of the rib for holding the said struts from spreading and for depriving the spacers from movement along the walls of the container.

Other objects of the invention reside in the

novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings:

Fig. 1 is a perspective view of a container illustrating an embodiment of my invention with parts of the container cut away to show the construction of the packing structure therein.

Fig. 2 is a plan sectional view of the structure shown in Fig. 1 with an article in the container.

Fig. 3 is a plan sectional view of a container embodying my invention showing the parts arranged prior to the insertion of the article into the container.

Fig. 4 is a developed view of the blank used in the formation of one of the spacers of the invention, said view being drawn to a reduced scale.

Fig. 5 is an elevational sectional view taken on line 5—5 of Fig. 2.

Fig. 6 is a view similar to Fig. 2 of a modification of the invention.

Figs. 7 and 8 are views similar to Figs. 2 and 5 of still another form of the invention.

Fig. 9 is a developed view of the blank from which the spacers used in the container shown in Figs. 7 and 8 are constructed.

Fig. 10 is a developed view of the blank from which the bottom structure used in connection with the spacers shown in Figs. 7 and 8 is constructed.

In the packing of cylindrical objects within rectangular containers and particularly where the object has protruding parts, considerable damage is done to the article in the handling and shipment of the container if the protruding parts come in contact with the walls of the container. The present invention provides an exceedingly simple and practical construction by means of which an ordinary container may be employed and an article packed therein and held in spaced relation to the walls of the container in a manner to protect the same and to prevent injury thereto.

In Figs. 1 to 5 inclusive, I have shown one form of my invention. This form of the invention embodies a container 10 in which is disposed a packing structure 11 by means of which an article such as indicated at 12 may be held within the container 10 in proper spaced relation with respect thereto. These various parts will now be described in detail.

Although my invention may be used to pack any desired object, the same is particularly adaptable for the packing of a cylindrical article such as shown in Figs. 2 and 5. The par-

ticular article illustrated happens to be a pressure cooker which consists of a cylindrical body 29 formed with a curved lower edge 47. The upper portion of this body is open and may be closed through a cover 53 provided with an arcuate upper surface 52. A gauge 51 is attached to the cover 53 near the center thereof. By means of a number of clamp screws 54, cover 53 is held attached to the body 29. The clamp screws 54 project outwardly beyond the body 29 of the container.

The container 10 may be constructed of wood, paper or metal. In this application for patent the container is shown as constructed of paper and is formed to provide sides 13 and 14 and ends 15 and 16. The end 16 and the side 14 are connected together through a ribbon 17 which is glued to the same. Issuing outwardly from the upper ends of the walls 13, 14, 15 and 16 are flaps 18 which when folded into overlying relation provide a closure 19 for the top of the container. Similar flaps 21 issuing from the bottom of the walls 13, 14, 15 and 16 and foldable into overlying position are adapted to be glued together to form a bottom 22 for the container.

The packing structure 11 consists of four spacers 23, 24, 25 and 26 which are identical in construction. For this reason only the spacer 23 will be described in detail. This spacer is constructed from paper board formed from a blank 28 such as illustrated in Fig. 4. This blank is of a height less than the height of the article 12 below the clamp screws 54 so as to clear the same and is of a length somewhat greater than the length or width of the walls 13, 14, 15 and 16 of the container. This blank is scored near the central portion thereof along four parallel score lines 313, 323, 333 and 343. When the blank 28 is folded along the score lines in the manner shown in Fig. 1 two flanges 363 and 373 are formed which are connected together through an outwardly extending rib 383. The rib 383 is formed with a base 393 parallel with the wall 13 of the container when the spacer is installed within the same and is further constructed with two struts 413 and 423 which project outwardly from the flanges 363 and 373 and which serve to connect the base 393 to the said flanges. The length of the blank 28 is such that when the extreme edges 433 and 443 of the blank 28 engage the corners of the container the said spacer assumes the form shown in Fig. 1, in which the base 393 of rib 383 rests against the wall 13 and so that the two corners 453 and 463 formed between the flanges 363 and 373 and the struts 413 and 423 are spaced from one another.

The spacers 24, 25 and 26 are identical with spacer 23 as previously stated and corresponding parts of said spacers have been indicated by similar reference characters, in which the last numeral has been supplanted by a numeral corresponding to the last numeral of said spacers.

In the use of the invention the four spacers 23, 24, 25 and 26 are arranged within the open container as shown in Fig. 3. It will be noted that the edges 443, 444, 445 and 446 of the various spacers are disposed in the four corners of the container. It will also be noted that the other edges 433, 434, 435 and 436 are arranged to engage the flanges 373, 374, 375 and 376 of the adjoining spacers. This causes end pressure to be applied to the respective spacers holding the same in proper position. Were the spacers disposed as shown in Fig. 2, the same on account of the resiliency of the material from which the

said spacers are constructed move inwardly into the interior of the container and prevent the insertion of the article 12 into the container and between said spacers. This would be particularly true if the spacers were all constructed integral from a single sheet of material. By constructing the spacers separate and by arranging them as shown in Fig. 3, the spacers may be held in the form shown which permits of inserting the article into the container. After the spacers have been so arranged the article is placed into the container, the rounded edge 47 of the cylindrical body 29 of the article is resting upon the upper edges 483, 484, 485 and 486 of the various spacers. By applying pressure downwardly upon the article 12, the same is forced in between the various spacers until the bottom 49 of said article rests upon the bottom 22 of the container 10. The flanges 363, 364, 365 and 366 may now be moved inwardly toward the respective walls 13, 14, 15 and 16 of the container and until the said flanges occupy the positions shown in Fig. 2. The various corners 453, 454, 455, 456, 463, 464, 465 and 466 then engage the article along the cylindrical body 29 thereof and hold the same properly spaced from the walls of the container 10. If desired, other packing means may be employed at the top of the article 12 to hold the same from the top 19 of the container 10. Where the article 12 is a pressure cooker, the same is usually provided with a gauge 51. Where such is the case a rectangular tube 55 of paper is employed which is placed over the said gauge. This tube engages the under surface of the top 19 and rests upon the upper surface 52 of the cover 53 of the cooker. By means of this construction the article is held from up and down movement within the container 10.

By means of the construction shown, an article such as a pressure cooker may be conveniently and effectively packed so as to permit of shipment without danger of injury or damage to the article. Through the use of the packing structure employed, the article is held spaced from the walls of the container so as to prevent injury to the fastening lugs and screws and to the other protruding parts of the article contained.

In Fig. 6 I have shown a modification of the invention. The various parts of the container and packing structure used in this form of the invention are identical with those disclosed in Figs. 1 and 2 with the exception that the parts have been arranged somewhat differently. In view of the fact that the parts are identical in construction, the same will not be described. However, the same reference numerals have been used to designate these parts, the said reference numerals having the suffix "a" added thereto. In this form of the invention shown in this view, the various flanges 363a, 364a, 365a, 366a, and 373a, 374a, 375a and 376a are arranged to abut against the walls 13a, 14a, 15a and 16a of the container. At the same time the bases 393a, 394a, 395a and 396a rest against the cylindrical body portion 29a of the article 12a. In all other respects the construction shown in Fig. 6 is the same as that previously described.

In Figs. 7 to 10, I have shown a modified form of the invention. In this form of the invention the container is constructed without bottom flaps. The container being otherwise the same as that shown in Figs. 1 to 5 and the article being the same as described in conjunction with the form of the invention shown in Figs. 1 to 5, these parts will not be further described and the same ref-

erence numerals will be used to designate corresponding parts. These reference numerals will, however, have the suffix "b" added thereto to distinguish them from the former reference characters.

In the form of the invention shown in Figs. 7 to 10, a separate bottom 56 is employed which is adapted to be inserted into the open lower end of the container 10b. This bottom is constructed from a blank 58 which is scored along transverse lines 59 and 61 and along longitudinal lines 62 and 63. Said blank is further sheared along lines 64, 65, 66 and 67 so that when the blank is folded along the score lines 59, 61, 62 and 63, flanges 71, 72, 73 and 74 are provided which extend upwardly from the bottom proper. In addition, corner pieces 75, 76, 77 and 78 are provided which overlie the adjoining flanges and which assist in stiffening and reinforcing the entire construction. The flanges 71, 72, 73 and 74 are constructed at the centers of the same through said flanges and up to the various score lines 59, 61, 62 and 63. These slots serve a purpose to be presently described in detail.

In conjunction with the form of the invention shown in Figs. 7 to 10, four spacers 23b, 24b, 25b and 26b are employed which are similar to the spacers 23, 24, 25 and 26 used with the form of the invention shown in Figs. 1 to 5. These spacers are somewhat shorter than the spacers previously described, but otherwise are constructed identically the same. The description of said spacers will hence not be repeated. Similar reference numerals have been used in the drawings to indicate the corresponding parts, said reference numerals differing from those previously used in the addition of the suffix "b" to the same.

In the use of the invention, the bottom 56 is inserted into the container 10b with the flanges 71, 72, 73 and 74 projecting upwardly therefrom. Spacer 23b is next placed in the container with the portions of the struts 413b and 423b contacting one another at the corners 453b and 463b. These two portions of the spacer at said corners are inserted into the slot 81 bringing the two flanges 363b and 373b between the flange 71 and the wall 13b of the container. In like manner the other spacers 24b, 25b and 26b are also inserted in place. After the parts are in proper position, the various flanges 71, 72, 73 and 74 are secured to the walls 13b, 14b, 15b and 16b through staples 99 which are applied by an ordinary stitching machine. Through the particular construction employed, the various spacers are held in proper position and in contact with the walls of the container. This permits of readily inserting the article into the container and prevents the possible movement of the spacers inwardly to obstruct such insertion.

My invention is highly advantageous in that an extremely simple and practical packing is provided for cylindrical articles and particularly for articles with protruding parts adapted to be readily injured in the event that the same engage the walls of the container in which the article is placed. My invention can be constructed at a nominal cost and can be manufactured by readily available paper box machinery. My invention functions in an extremely effective and practical manner to produce the desired re-

sults. With the parts arranged as disclosed, the article can easily be placed into the container and when once introduced therein, remains permanently in position until removed.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In combination with a rectangular container having a bottom and side and end walls connected thereto, packing means within said container comprising spacers adjacent each of the walls thereof, said spacers being constructed of sheet material folded to provide flanges at the ends of the spacers, bases intermediate the ends of the spacers disposed parallel with the walls of the container and engaging said walls, and struts connecting the flanges and bases, said flanges extending diagonally from the ends of said struts and to the corners of the container, said spacers at the junctures of the struts and flanges engaging an article within the container to hold the article spaced from the walls of the container.

2. In combination with a rectangular container having a bottom and side and end walls connected thereto, packing means within said container comprising a spacer adjacent one of said walls, said spacer having two vertically extending flanges, a base intermediate the flanges and extending parallel to said wall, and struts connecting said base and flanges, said flanges extending diagonally from the ends of said struts and to the corners of the container at the ends of said wall, said spacer at the junctures of said struts and flanges engaging an article within the container to hold the article spaced from the wall of the container adjacent which the spacer is disposed.

3. In combination with a rectangular container having a bottom and side and end walls connected thereto, packing means within said container comprising a spacer adjacent one of said walls, said spacer having two vertically extending flanges, a base intermediate the flanges and extending parallel to said wall, and struts connecting said base and flanges, said flanges extending diagonally from the ends of said struts and to the corners of the container at the ends of said wall, the ends of said flanges at the junctures of said struts therewith being spaced from one another to provide twin line engagement with a circular article disposed within said container.

4. In combination with a rectangular container having a bottom and side and ends walls connected thereto, packing means within said container comprising a spacer adjacent one of said walls, said spacer having two planiform flanges, a base intermediate the flanges and extending parallel to said wall, and struts connecting said base and flanges, said flanges extending directly from said struts to the corners of the container at the ends of said wall, said spacer at the junctures of said struts and flanges engaging an article within the container to hold the article spaced from the wall of the container adjacent which the spacer is disposed.

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