Aug. 2, 1960 R. H. JOHNSON 2,947,414

SHIPPING CONTAINER WITH SIDE CLOSURE

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Fig. 1

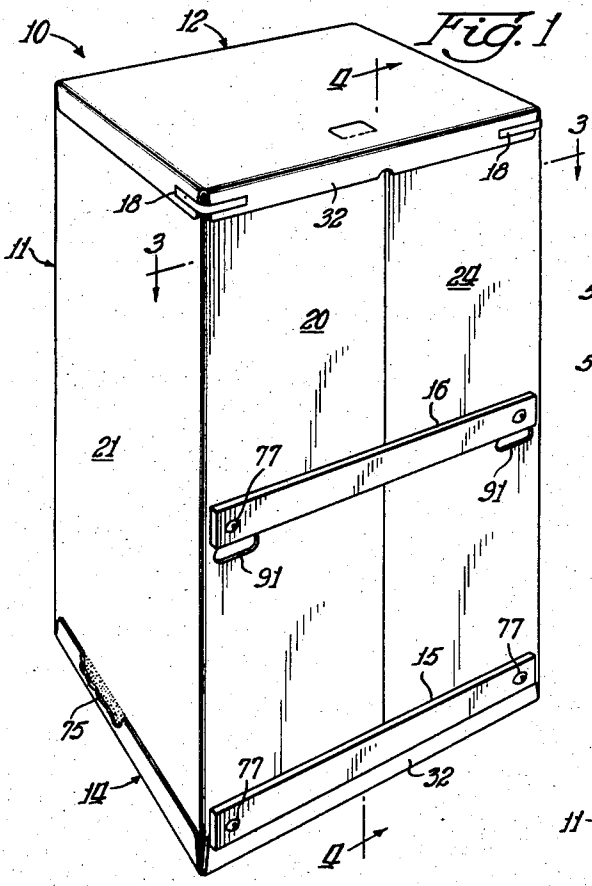


Fig. 7

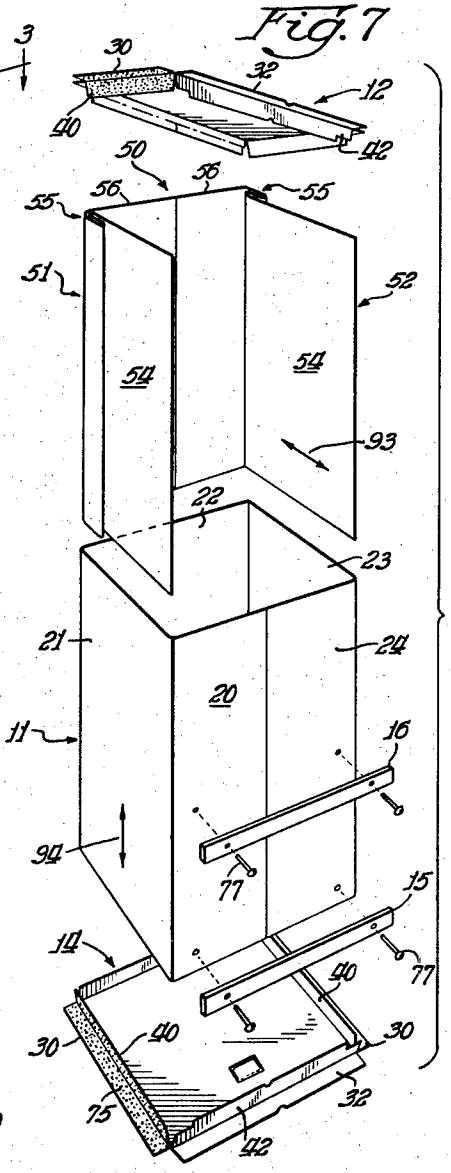
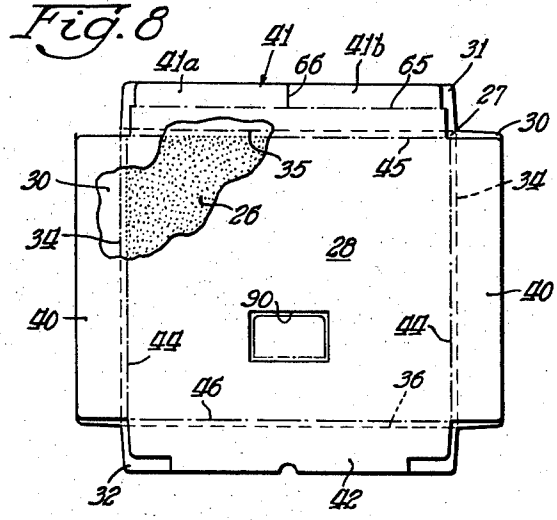


Fig. 8



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SHIPPING CONTAINER WITH SIDE CLOSURE

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Fig. 2

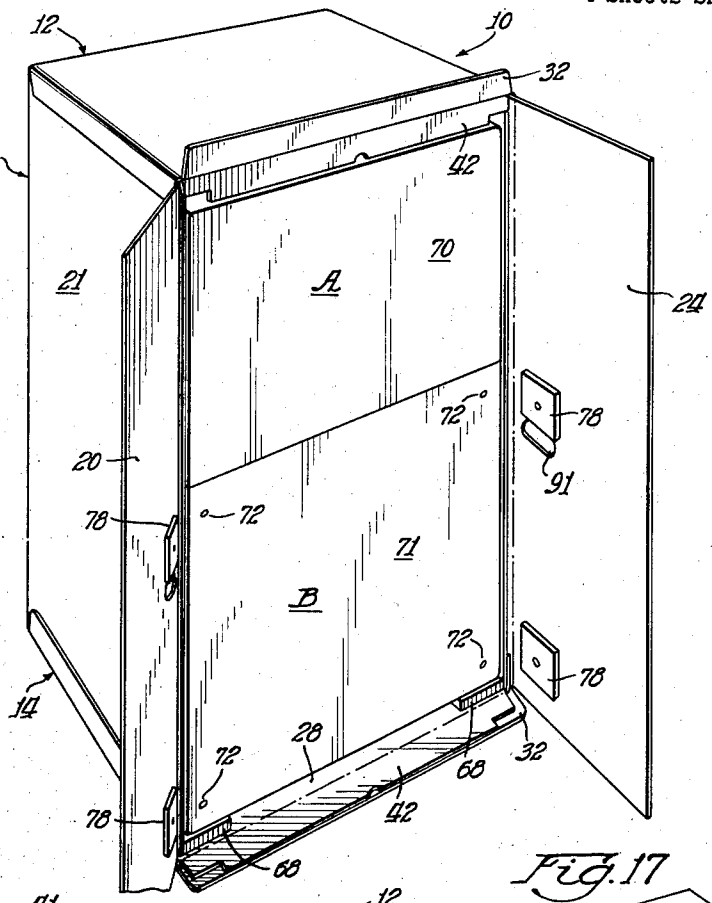


Fig. 5

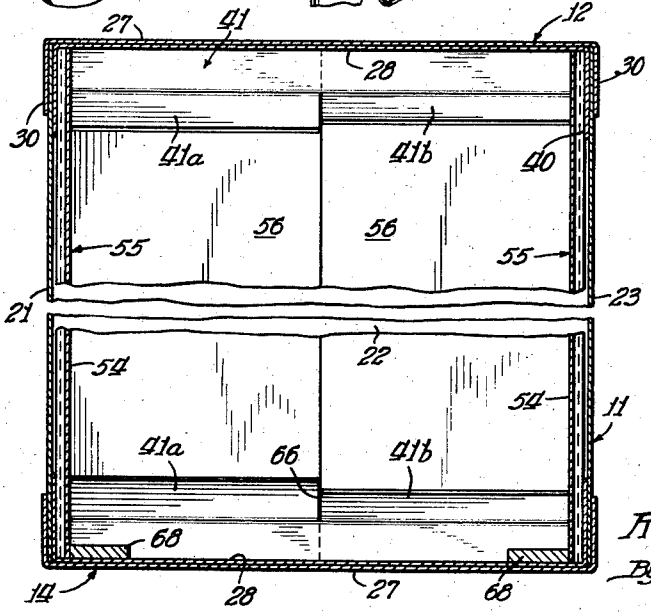
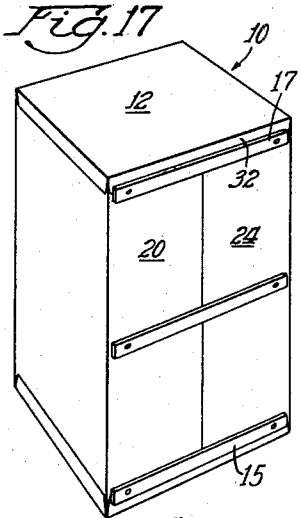


Fig. 17



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SHIPPING CONTAINER WITH SIDE CLOSURE

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Fig. 3

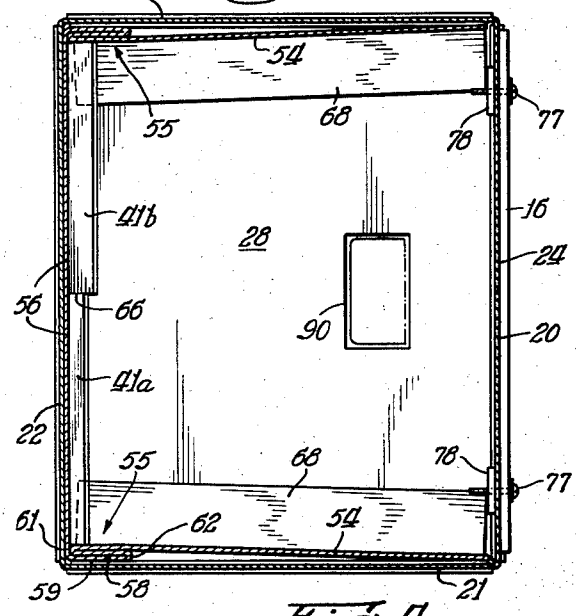


Fig. 6

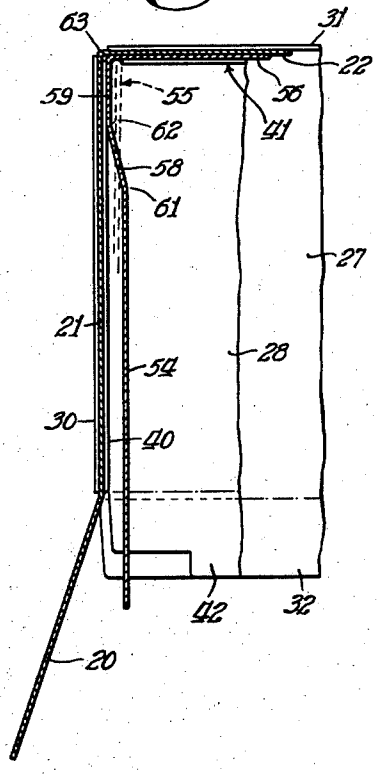


Fig. 4

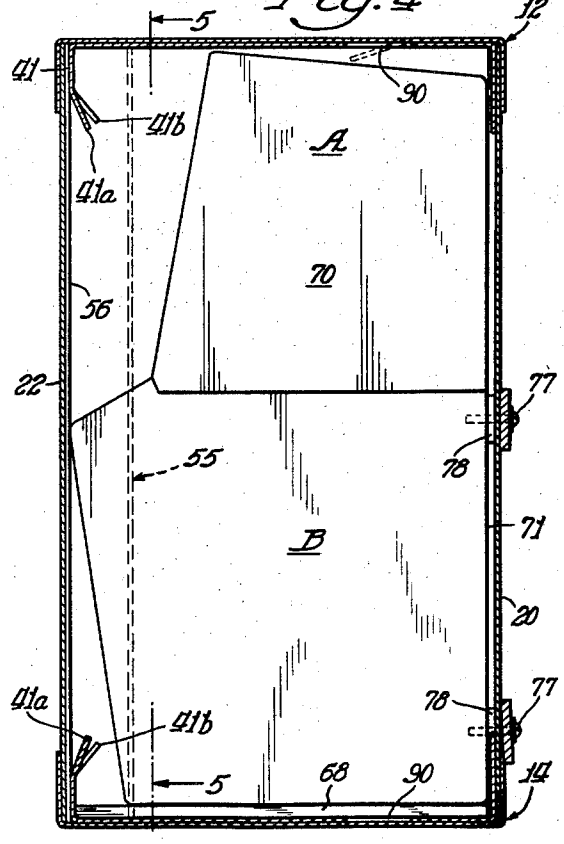
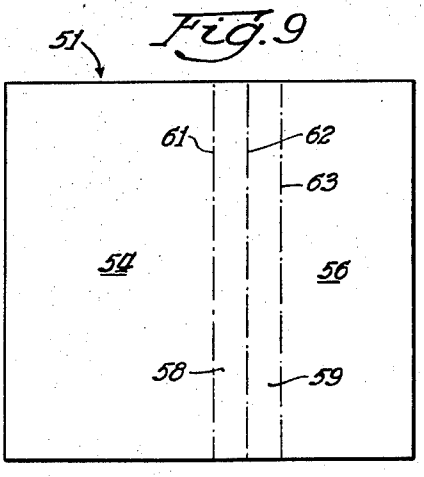


Fig. 9



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SHIPPING CONTAINER WITH SIDE CLOSURE

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Fig. 10

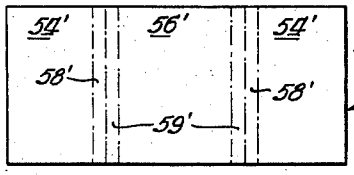


Fig. 12

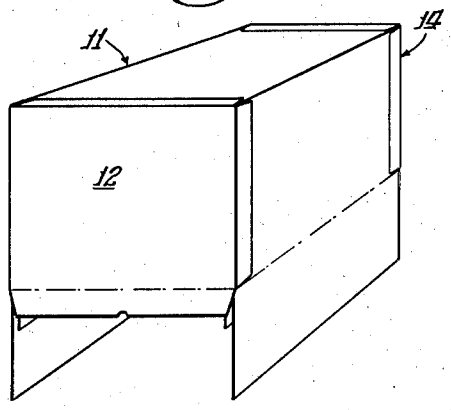


Fig. 11

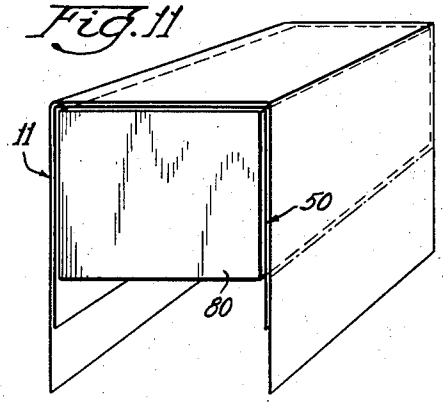


Fig. 14

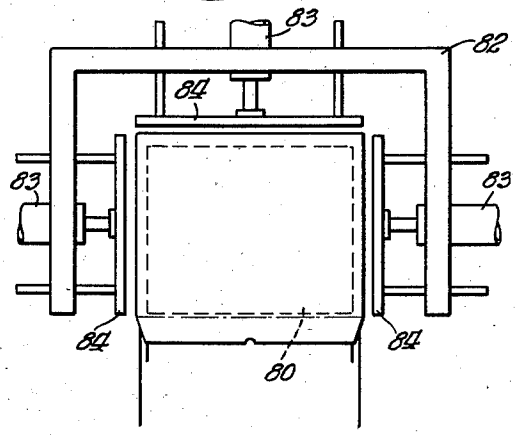


Fig. 13

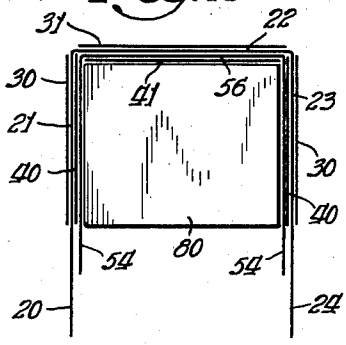


Fig. 15

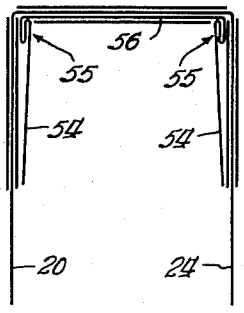
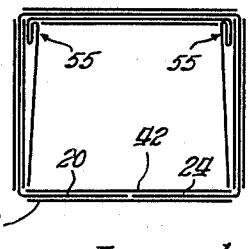


Fig. 16



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United States Patent Office 2,947,414 Patented Aug. 2, 1960

2,947,414

SHIPPING CONTAINER WITH SIDE CLOSURE

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Filed Apr. 25, 1958, Ser. No. 730,880

12 Claims. (Cl. 206—46)

The present invention relates to shipping containers made of paperboard designed for heavy duty, such as the packaging of refrigerators, washers, dryers, ranges, and similar large, heavy articles. In particular it has to do with a heavy duty container of the type described, having reclosable side opening features for removing and replacing the article packaged.

In the packaging of large, heavy articles such as refrigerators, washers, automatic vending machines, and the like, in paperboard, it is customary to utilize a container that can be "top loaded," i.e., the article is lowered into an open top container, after which a top closure is effected. Such "top loaded" containers are seldom, if ever, provided with a reclosable top closure since the necessity of removing and replacing the packed article from and through a top opening requires the use of special and expensive equipment, such as cranes, hoists, etc., as well as a large work area, and, of course, top loading and unloading of such large, heavy articles is attendant with the danger of accidents resulting in damage to the article itself, or injury to personnel in the work area. Consequently, top loaded containers which reach the production line in partially assembled condition offer little real advantage package-wise over the traditional style container which comes to the production line in flat form and is then assembled about and around the article. Both types of container are usually intended to make on trip only, i.e., removal of the article from the container requires destruction of the container itself.

While the advantages of a side opening heavy duty container are well known and many, the provision of same presents many difficulties. The foremost problem in providing any container with a reclosable opening is the tendency of such provision to weaken the container in that area, and particularly when the opening is formed in a side wall which is a load bearing wall in stacking of containers one upon another. Another problem attending the provision of a reclosable side opening in a heavy duty container involves the inner liners or support members necessary to cooperate with the container walls to provide adequate strength of the wall structure to retain and protect such a large and heavy article. While a top loaded or flat form container present no problem in the positioning or arranging of liners, pads, support members, etc., particularly when the container is not designed to afford multiple unloading and loading of the article packed therein, there is a problem when the container has a side opening and is intended to reach the production or packaging line in assembled condition. Thus, while the inner members must be an integral part of the container, so as to remain in position during subsequent unloading and loading of the article, they must be suitably arranged to permit proper assembly of the container walls and end closures.

Incidental to any container construction is the method or procedure utilized to assemble the container. Many difficulties arise in assembly of a heavy duty container having inner support or reinforcing members, especially

when a side wall must remain in a movable or displaceable condition to afford a reclosable opening feature, and particularly when the container is to be completely assembled prior to packing the article therein. In main, the problems reside in maintaining the container parts in proper arrangement and disposition one to another during application of securing means, and to do so in an efficient and economical manner.

Accordingly, in meeting and overcoming the above mentioned difficulties, it is most desirable and advantageous to provide a strong, efficient, and economical container construction for packaging large, heavy articles, affording access to the container interior for removal of the article packaged and subsequent replacement of the article therein.

It is, therefore, an important object of the present invention to provide in a container of the character described, reclosable side opening members, which are displaceable from and replaceable to a normal position of assembly and support, to permit access to the container interior.

Another object of the invention is to provide in a heavy duty container having reclosable side opening members, removable locking means cooperative with the article packaged to secure the side opening members in assembled and load bearing position.

A further object of the invention is to provide in a heavy duty container having reclosable side opening members, reinforced top and bottom closures formed with flap portions which embrace the vertical side walls of a tubular body including the side opening members, and removable locking means cooperative with those flap portions embracing the side opening members to permit opening and closing of said members.

A still further object is to provide in a heavy duty container having a tubular body portion, end closure means adapted to cooperate and interlock with reinforcing members disposed within the tubular body coextensive therewith.

A yet further object is to provide in a heavy duty container having a tubular body portion, an inner liner member displaceable in part from an original position of face to face contact with body side walls to form a multi-fold reinforcing member coextensive with the tubular body portion.

Another object of the invention is to provide a novel, efficient and economical method of fabricating a heavy duty container of the type described.

According to the general features of the present invention and in one embodiment thereof, it is contemplated that a heavy duty container will be comprised of a tubular body portion having reinforced end closures in which flap portions extend from the end closures to disposition embracing adjacent parts of the tubular body portions. The tubular body portion is provided with opening means, and while the end closure flap portions are permanently secured, in most parts, to those parts of the tubular body portion disposed therebetween, the flap portions embracing the opening means are secured by removable locking members, said locking members cooperating, in part, with an article packed within the container to secure the opening means in assembled conditions. Reinforcing members disposed within the container and operatively positioned to add strength and rigidity to the tubular body portion are interlocked with the end closure portions, said reinforcing members having been displaced from an original position of extension during assembly to a supporting position of contraction wherein the aforementioned interlocking occurs. Such a container, incorporating these features, while adequately supporting and protecting an article packed therein, also provides for removal of the article from the container for inspection, repair, adjustment, etc.,

in an easy manner, by and with inexpensive and simple equipment.

Further objects, features, and advantages of the present invention will appear or be apparent to one skilled in the art from the following description, reference being made to the accompanying drawings, in which:

Fig. 1 is a perspective view of a shipping container constructed according to the teaching of this invention.

Fig. 2 is a view similar to that of Fig. 1, but showing the locking members removed and the side opening members displaced to a position affording access to the article packed within the container.

Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 1, but with the packed article not shown.

Fig. 4 is a vertical sectional view taken substantially on line 4—4 of Fig. 1, with the packed article shown in elevation.

Fig. 5 is a vertical sectional view, with parts broken away, taken substantially on line 5—5 of Fig. 4.

Fig. 6 is a fragmentary horizontal sectional view indicating the formation of an inner liner or reinforcing member and its relation to the container body walls.

Fig. 7 is an exploded view in elevation of the container showing the arrangement and relation of various parts thereof.

Fig. 8 is a plan elevational view, with parts broken away, of the bottom closure member.

Fig. 9 is an elevational view of the blank from which a liner or reinforcing member is formed.

Fig. 10 is an elevational view of a blank from which a modified reinforcing member can be formed.

Fig. 11 is a perspective view showing the initial relative position of the body and inner liner members in assembly of the container.

Fig. 12 is a view similar to that of Fig. 11, but showing the end closure members in a position of assembly.

Fig. 13 is a diagrammatic view showing the relative disposition of the end closure flap portions with the liner and body portions of the container, during assembly.

Fig. 14 is a diagrammatic view showing a form of apparatus suitable for applying pressure at and about the end closure for aiding securement of portions of the container body thereto.

Fig. 15 is a diagrammatic view showing the relative disposition of members after displacement of the liner to supporting or reinforcing position.

Fig. 16 is a diagrammatic view similar to that of Fig. 15, but showing the opening members displaced to a position of assembly.

Fig. 17 is a perspective view of a modified form of shipping container.

Referring now to the drawings, and particularly Fig. 1, the reference numeral **10** indicates in general a heavy duty shipping container constructed according to the teaching of the present invention, said container comprising a body portion **11**, top closure **12**, bottom closure **14**, and locking members **15**, **16**, and **18**. The container as herein disclosed is preferably formed of heavy corrugated paperboard or heavy bendable, solid fibreboard, although other materials may be used without departing from the scope of the invention.

The tubular body member **11** is formed from a single blank of heavy paperboard and, as best seen in Fig. 7, comprises serially connected panels **20**, **21**, **22**, **23**, and **24**. These panels in their assembled disposition constitute the vertical side walls of the container, and for a purpose to be more fully described later, panels **20** and **24** are half panels, i.e., when disposed in aligned and adjacent relationship, as shown, they constitute together one side wall, which for purpose of description can be termed the front wall.

The top closure **12** and bottom closure **14** are identical in construction and function, and it is understood that a description of the designated bottom closure **14**, see Fig. 8, will suffice for the top closure also, similarly related parts being indicated by like reference numerals. Thus, the bottom closure is formed from two superposed blanks of heavy corrugated or solid fibre paperboard secured together in any desired manner but preferably glued, indicated at **26**, to provide a uniformly strong bond throughout the overlapping surfaces of panels **27** and **28**. As viewed in Fig. 8, the lower or outer blank comprises a main panel **27** having side flaps **30**, **30**, back flap **31**, and front flap **32** extending therefrom and defined from the main panel by fold or hinge lines **34**, **34**, **35**, and **36**, respectively. The spacing of these fold or hinge lines conforms to the outer dimensions of the erected tubular body member **11** so that in assembly the flaps can be folded to lie snug and flat against the exterior portions of the tubular body member walls.

The upper or inner blank of the bottom closure comprises a main panel **28** from which extend side flaps **40**, **40**, back flap **41**, and front flap **42** defined from the main panel by fold or hinge lines **44**, **44**, **45**, and **46**, respectively. The spacing of these fold or hinge lines is preferably such that in assembly the side flaps **40**, **40**, and front flap **42** are folded to be disposed flatwise on the adjacent inner wall surfaces of the tubular body member, while back flap **41** is folded to a position spaced from its adjacent wall surface sufficiently to accommodate the placement of a liner **50** therebetween. Figs. 3, 4, and 5 illustrate this arrangement in which the end portions of the body member walls, and at the back portion including a liner, are snugly embraced between the inner and outer closure flaps.

Referring now to Fig. 7, which is an exploded elevational view of the container, the aforementioned liner **50** is shown in set-up condition, but detached from the described assembled position. In assembly, the liner affords a three-wall configuration adapted for disposition within the tubular body member **11** to provide reinforcement for the body side and back walls. Preferably, the liner **50** is composed of complementary members **51** and **52**, each formed similarly to provide a side wall **54**, a corner post **55**, and a partial back wall **56**. As shown in Fig. 9, the blank from which a liner member is formed comprises panels **54**, **58**, **59**, and **56**, serially connected by score-lines **61**, **62**, and **63**, respectively, corner post **55** comprising the panels **58** and **59** when said panels are manipulated to be disposed in a multifold condition of face to face contact. Such manipulation of the liner member to form the panels **58** and **59** into corner post **55** is of great importance in the method employed for fabrication of the described container, and will be more fully described later.

Referring once again to Fig. 8, which illustrates an end closure member, it is to be noted that the back flap **41** of the upper or inner blank is provided with a scoreline **65** parallel to and spaced outwardly from the fold or hinge line **35**, and said flap is slit centrally thereof from the flap edge to said scoreline, indicated at **66**, whereby to provide independently movable flap portions or tabs **41***a* and **41***b*. As shown in Figs. 3, 4, and 5, the flap portions **41***a* and **41***b* are displaceable from their original planar position in flap **41**, about scoreline **65** to a position whereby to wedge or lock the adjacent corner post **55** between said flap portion and the container side wall. Although the liner panels **56** are disposed between the back flap **41** and body wall **22**, it is the locking action of flap portions **41***a* and **41***b* against corner posts **55** which maintain said posts in set-up condition during assembly. The provision of securing skids or wood blocks **68** upon the bottom closure panel **28**, while designed primarily for support of the article to be packaged, augments the described locking action by abutting liner panels **54** and retaining them in the angled disposition shown in Fig. 3. Such angled disposition of liner panels **54** facilitates loading of the article to be packaged, as will be more full explained later.

As shown in Figs. 2 and 4, an article **70** disposed within

the container **10** rests upon the skids **68**, elevated sufficiently from bottom closure **14** to accommodate lift forks, or equipment of a like nature for loading and unloading of the article. The article **70** has a wall **71** disposed adjacent the container half panels **20** and **24**, said wall being provided with a plurality of threaded bores **72**, which constitute part of the locking means for the container, as will now be described.

The half panels **20** and **24** are intended to be displaceable from their cooperative wall forming position in assembly, illustrated in Fig. 1, to afford access to the container interior, such displacement of said half panels being shown in Fig. 2. In assembly, the vertical side walls comprising panels **20**, **21**, **22**, **23**, and **24**, each have their upper and lower ends disposed between the coextending spaced apart flaps of the top and bottom closures, and liner **50** is disposed and secured within the container, all as previously described. Whereas the side and back walls (including liner walls **56**) are permanently secured, as by adhesive indicated at **75**, to and between the closure flaps, the front half-panels **20** and **24** are not so secured. The inner flaps **42**, of the top and bottom closures lie freely against the inner surfaces of half-panels **20** and **24**, urged outwardly by the tendency of said flaps to return to their original planar disposition, and definitely confined by wall **71** of the packed article **70**. The outer flaps **32** of the closures are folded onto the outer surfaces of half-panels **20** and **24**, and secured in such position by removable means, as now described. A flat elongated member **15**, which may be a wooden slat, is positioned as shown to extend across the half-panels **20** and **24**, substantially the width of the container, and bolts **77** disposed therethrough thread into bores **72** of the packed article. As clearly shown in Figs. 1 and 4, bottom closure flap **32** extends under the slat **15** and is trapped between said slat and the container wall, wherein tight and complete threading-in of bolt **77** pinches the flap preventing its withdrawal therefrom. Spacer pads **78** secured in any suitable manner, to the inner surfaces of half-panels **20** and **24** seat flush against wall **71** of the article and prevent buckling or distortion of the front wall panels when bolts **77** are tightly threaded-in. A similar slat **16** disposed horizontally centrally of the container, while locking the half-panels in closed position, cooperates with similar spacer pads thereat to maintain said half-panels and the packed article in spaced apart relation. It is noted that slats **15** and **16**, while locking the half-panels **20** and **24** and bottom closure flap **32** in assembled position, secure the packed article to the container front wall whereby to positively retain the article in proper packed position. This integrating of the article and container in the area of a reclosable opening is considered a very important feature of the invention, since it adds great strength to an otherwise weakened wall structure.

As indicated in Fig. 1, outer flap **32** of top closure **12** is secured in locking position extending across half-panels **20** and **24** by strips of tape **18**. While it is obvious that locking means similar to that utilized at the bottom closure, as by slot **15**, could also be used at the top closure, as by slot **17** (see Fig. 17), the container disclosed illustrates a commercially proven style adapted to accommodate a particular two-piece article, and removable locking means of the slot and bolt type at the top closure could not properly be used. However, such disclosure shows the versatility of this container, and particularly the reclosable opening feature. Thus, article **70** comprising an upper portion A and a bottom portion B is intended to be assembled as follows: bottom portion B is packed in the container and shipped to another location whereupon the container is opened, bottom portion B removed, upper portion A secured thereon, and the completed article **70** packed in the container for further shipment.

Referring now to Fig. 6, there is shown a horizontal sectional view illustrating the manipulation of a liner

member to produce the vertically disposed reinforcing corner post **55**. As previously described the liner panel **56** is secured at its top and bottom portions between the closure flaps **31** and **41**, while panels **54**, **58** and **59** are disposed inwardly of the closure side flaps **30** and are free for movement. Manipulation of panel **54** to move said panel toward the back of the container will displace panel **58** pivotally about fold line **62** to a position of abutment with panel **59**, and simultaneously relative displacement of panel **58** and **54** about fold line **61** will place panel **54** in abutment with panel **58**. This double fold of the liner member **51** and **52** provides a triple thickness of liner material, designated collectively by numeral **55**, disposed vertically at the back corners of the container. As before described, the liners are maintained in post forming condition by inward movement of flat portions **41*a*** and **41*b***, said flaps in extended or locked position preventing unfolding of the post panels, and further by the securing of skids **68** to the bottom closure, said skids abutting and positioning panels **54** at an angle, see Fig. 3.

As shown in Fig. 10, a modified form of liner **50'** contemplates a single blank which having similarly arranged panels **54'**, **58'**, **59'**, and **56'** can be manipulated in the same manner and with the same result as described for liner **50**, comprising members **51** and **52**.

The construction and arrangement of the liner which permits manipulation thereof to form reinforcing corner posts after assembly of the container proper, is most important in permitting proper securement of the top and bottom closure members to the tubular body members. Such manipulation permits employment of a definite and simple procedure in container fabrication, which is always a problem when dealing with large portions of paperboard, particularly when forms of liner reinforcement are utilized. The steps in a method of container assembly are diagrammatically shown in Figs. 11–15.

In Fig. 11, the liner **50**, in this case shown as comprising two liner members, is draped over a rectangular shaped block of form **80**, in a manner whereby the liner back panels lay upon the block with the remainder of the liner hanging therefrom along the sides of said block. Superposed over the liner is body member **11**, the back panel of which lays upon the liner back panels, while the remainder thereof hangs along and adjacent the hanging portions of the liner.

With the body member and liner in position draped over the form **80**, end closures **12** and **14** are now placed in disposition of assembly therewith, see Fig. 12, and the flaps of said closures embrace portions of the body and liner walls in a manner as previously described. Thus, as shown in Fig. 13, back flaps **31** and **41** of the end closure are disposed to embrace body back panel **22** and liner back panel **56**, whereas the side flaps of the end closure are disposed to embrace only the body side wall, **21** or **23** as the case may be, with liner panel **54** extending freely along the form **80**.

In this disposition of assembly and with a suitable adhesive applied to the inner surfaces of closure flaps **30**, **40**, **31**, and **41** (such as indicated at **75** in Fig. 7), pressure is applied about the closure flaps to hold the assembled portions in close and positive contact during the period required for the adhesive to set. While such pressure can be applied by hand, machine application is to be preferred, and to this end a suitable form of pressure applying machinery is diagrammatically illustrated in Fig. 14. As shown, a U-shaped frame member **82** has hydraulic units **83** arranged to move pressure pads **84** inwardly to contact with the outer closure flaps, said pad moving against the block **80** squeezes together the intermediately disposed flaps and embraced portions of the liner and body walls. It is in respect to this pressure application that the liner construction, previously described with reference to Fig. 6 is particularly adapted, as will now be explained.

Referring to Fig. 13, it is noted that the liner member presents only a three-sided configuration, indicated as back panel 56 and side panels 54, post forming panels 58 and 59 not being indicated since they lie in the same plane as panels 54. In such disposition liner panels 54 (and 58 and 59) lie flat against the sides of block 80, thereby permitting pressure application to be uniform over the areas to be adhered one to another. Obviously a liner having pre-formed corner posts would have to be positioned within and secured to the container in a separate operation after assembly of the body and closure members. The present liner construction permits said liner to be integrally joined with the container during assembly thereof, and then through the manipulation of liner panels as heretofore described, form reinforcing corner posts 55 as shown in Fig. 15.

Enclosing of half panels 20 and 24 to disposition between closure flaps 32 and 42, see Fig. 16, results in an assembled container adapted for article loading. At this stage, i.e., prior to packing an article in the container, the side opening panels 20 and 24 are maintained closed by outer flaps 32 of the end closure members, which may be taped down in the manner before described in conjunction with the top closure (Fig. 1, tape 18).

A container thus assembled upon reaching the packaging line can be readied for use by removal of the tape strips and swinging open the front half-panels 20 and 24. The article to be packed is thus side-loaded, using equipment or means of the packer's choice, and placed on the skids 68. During insertion of the article into the container the angled liner panels 54 act as guides to permit slight shifting of the container (or the article), leading the article to snug positionment between back corner reinforcing posts 55. With the article 70 thus packed (see Fig. 2) closure flaps 42 are folded inwardly against article wall 71, half panels 20 and 24 are swung inwardly to wall forming position, and closure flaps 32 are folded over the half panels, whereupon locking members 15, 16, and 18 are applied as previously described to secure the container assembly for shipment (see Fig. 1).

To facilitate sliding tilting or moving of the packed container handhole 90 is provided in the end closure member. For the same purpose handholes 91 are formed in the front half panels immediately adjacent and below spacer pads 78.

As an aid to further increase the strength and rigidity of this heavy duty container, it is preferred that the grain direction of the liner, indicated at 93, be at right angle to the grain direction of the tubular body member, indicated at 94. Such variance of grain direction fortified the container against lateral blows and pressures, the reinforcing posts 55 and the integrating of article 70 with front wall panels 20 and 24, providing sufficient vertical stacking strength.

From the foregoing description it is apparent that the present invention affords a novel and improved container, well adapted for the packaging of large, heavy articles. The desired reclosable side opening feature is attained without sacrificing strength of the container wall, and is done in a simple and convenient manner through utilization of inexpensive removable locking means, secured to the article packed within the container. Inner reinforcing liner means integral with the container are designed to be completely formed in a support condition after container assembly, and locking of said formed reinforcing liner in a position of support is accomplished in cooperation with container wall portions. The container is constructed of members well suited to a simple and efficient method of fabrication.

While the foregoing specification sets forth the invention in specific terms, and with reference to a preferred embodiment, it is to be understood that many variations and modifications may be resorted to without departing from the broad aspects of the invention as defined in the appended claims.

Having now described the invention, what is claimed is:

1. In a heavy duty container an article packed therein, a hollow body member having a plurality of vertical sides, one of said vertical sides comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to provide access to the container interior, a reinforcing liner member disposed vertically interiorly of and adjacent the other sides of the body member, extending from one end of the body member to the other end thereof, a closure member for each end of the body member, each of said closure members comprising an outer and an inner sheet interconnected with one another, each closure member sheet including a main panel, each edge of said main panel having an integrally connected flap extending therefrom into overlapping relation with a marginal portion of the end of the body member, including a marginal portion of the end of the liner, the flaps being secured in said overlapping relation at the back and side walls, and removable locking means disposed in part over the flaps overlapping the front wall panel portions securing said flaps in said overlapping relation, said locking means including means disposed through the panel portion attached to the article in the container.

2. In a heavy duty container having an article packed therein, a hollow body member having front, back, and side walls, providing a tube of substantially rectangular cross section, the front wall comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to afford access to the container interior, a reinforcing liner member disposed interiorly of the body member, extending from one end of the body member to other end thereof, said liner being formed to provide posts extending substantially parallel and in spaced relation to one another, the posts being disposed in the corners of the container formed by the juncture of the side walls with the back wall of the body member, areas of the liner intermediate the posts being disposed substantially in face to face abutment relation against the inner face of the back wall of the body member, a closure member for each end of the body member, each of said closure members comprising an outer and an inner sheet interconnected with one another, each closure member sheet including a main panel of substantially rectangular shape corresponding to the cross sectional shape of the body member, each edge of said main panels having an integrally connected flap extending therefrom into overlapping relation with a marginal portion of the end of the body member, including a marginal portion of the end of the liner abutting the back wall of the body member, the flaps being secured in said overlapping relation at the back and side walls, and removable locking means disposed in part over the flaps overlapping the front wall panel portions securing said flaps in said overlapping relation.

3. In a heavy duty container of the character described in claim 2 wherein the locking means includes a slat extending across the front wall panel portions and lapping at least one of the flaps which overlaps said front wall panel portions, said slat being secured to the article disposed within the container.

4. A heavy duty container of the character described in claim 2 wherein the reinforcing liner member has panels integrally connected to the liner posts, extending from one end of the body member to the other end thereof, disposed adjacent the side walls of the body members for reinforcing thereof.

5. A heavy duty container of the character described in claim 4 wherein the liner panels extend divergently from the liner posts toward the front wall of the body member.

6. In a heavy duty container having an article packed therein, a hollow body member having front, back, and

side walls, providing a tube of substantially rectangular cross section, the front wall comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to afford access to the container interior, a reinforcing liner member disposed interiorly of the body member, extending from one end of the body member to the other end thereof, said liner being formed to provide posts extending substantially parallel and in spaced relation to one another, the posts being disposed in the corners of the container formed by the juncture of the side walls with the back wall of the body member, a portion of the liner intermediate the posts being disposed substantially in face to face abutment relation against the inner face of the back wall of the body member, a closure member for each end of the body member, each closure member comprising an outer and inner sheet interconnected with one another, each closure member sheet including a main panel of substantially rectangular shape corresponding to the cross sectional shape of the body member, said outer and inner main panels each having an integrally connected back flap extending therefrom into overlapping relation with a marginal portion of the ends of the body back wall and abutting liner member portion, a pair of tabs formed from the inner back flap, each tab extending inwardly to a position of contact with a liner post whereby to wedge said post between the tab and the adjacent side wall of the body member, said outer main panel also having an integrally connected front flap extending therefrom into overlapping relation with a marginal portion of the end of the front wall panel portions, and removable locking means disposed in part over the front flap securing said flap in the overlapping relation.

7. In a heavy duty container of the character described in claim 6 wherein the removable locking means include means disposed through the front wall panel portions attached to the article in the container.

8. In a heavy duty container having an article packed therein, a hollow body member having front, back, and side walls, providing a tube of substantially rectangular cross section, the front wall comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to afford access to the container interior, a pair of reinforcing liner members disposed interiorly of the body member extending from one end of the body member to the other end thereof, each of said reinforcing members comprising a generally rectangular sheet of paperboard formed to provide a back panel disposed substantially in face to face abutment relation against the inner face of the back wall of the body member, a side panel disposed adjacent the inner face of a side wall of the body member, and a multi-fold post portion intermediate said back and side panels, each post being disposed in a corner of the container formed by the juncture of a side wall with the back wall of the body member, a closure member for each end of the body member, one of said closure members comprising an outer and inner sheet interconnected with one another, each closure member sheet including a main panel of substantially rectangular shape corresponding to the cross sectional shape of the body member, each edge of said main panels having an integrally connected flap extending therefrom into overlapping relation with a marginal portion of the end of the body member, including a marginal portion of the end of the liner back panels abutting the body back wall, the flaps being secured in said overlapping relation, and a pair of tabs formed from the inner back flap, each tab extending inwardly to a position of contact with the adjacent liner post whereby to wedge said post between the tab and the adjacent side wall of the body member.

9. A heavy duty container of the character described in claim 8 wherein the liner side panels extend divergently from the posts to the front wall of the body member, whereby said side panels act as guides when the article is disposed within the container to position said article snugly between said posts.

10. A heavy duty container of the character described in claim 8 wherein the outer front flap is secured in overlapping relation with a marginal portion of the end of the front panel portions by removable locking means, said locking means including means disposed through the panel portions attached to the article in the container.

11. In a heavy duty container having an article packed therein, a hollow body member having front, back, and side walls, providing a tube of substantially rectangular cross section, the front wall comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to afford access to the container interior, a pair of reinforcing liner members disposed interiorly of the body member, extending from one end of the body member to the other end thereof, each liner being formed to provide a post disposed in a corner of the container formed by the juncture of a side wall with the back wall of the body member, areas of the liners being disposed substantially in face to face abutment relation against the inner face of a wall of the body member, a closure member for each end of the body member, each of said closure members comprising an outer and an inner sheet interconnected with one another, each closure member sheet including a main panel of substantially rectangular shape corresponding to the cross sectional shape of the body member, each edge of said main panels having an integrally connected flap extending therefrom into overlapping relatioin with a marginal portion of the end of the body member, including a marginal portion of the end of the liner abuting the back wall of the body member, the flaps being secured in said overlapping relation at the back and side walls, and removable locking means disposed in part over the flaps overlapping the front wall panel portions securing said flaps in said overlapping relation.

12. In a heavy duty container made of paperboard or likem aterial having an article packed therein, a hollow body member having a plurality of sides and end closures, one of said sides comprising panel portions displaceable outwardly therefrom to afford access to the container interior, a reinforcing liner member disposed interiorly of the body member, said liner being formed to provide posts extending substantially parallel and in spaced relation to one another, the posts being disposed in the corners of the container formed by the juncture of the side walls in an area opposite the one side wall panel portions, whereby the article within the container has a portion thereof opposite thep anel portions in contact with said posts, and a relatively rigid locking member disposed over the panel portions, having securing means extending from said locking member through said panel portions to securement to the article disposed within the container, whereby said article is held firmly between the posts and the panel portions.

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