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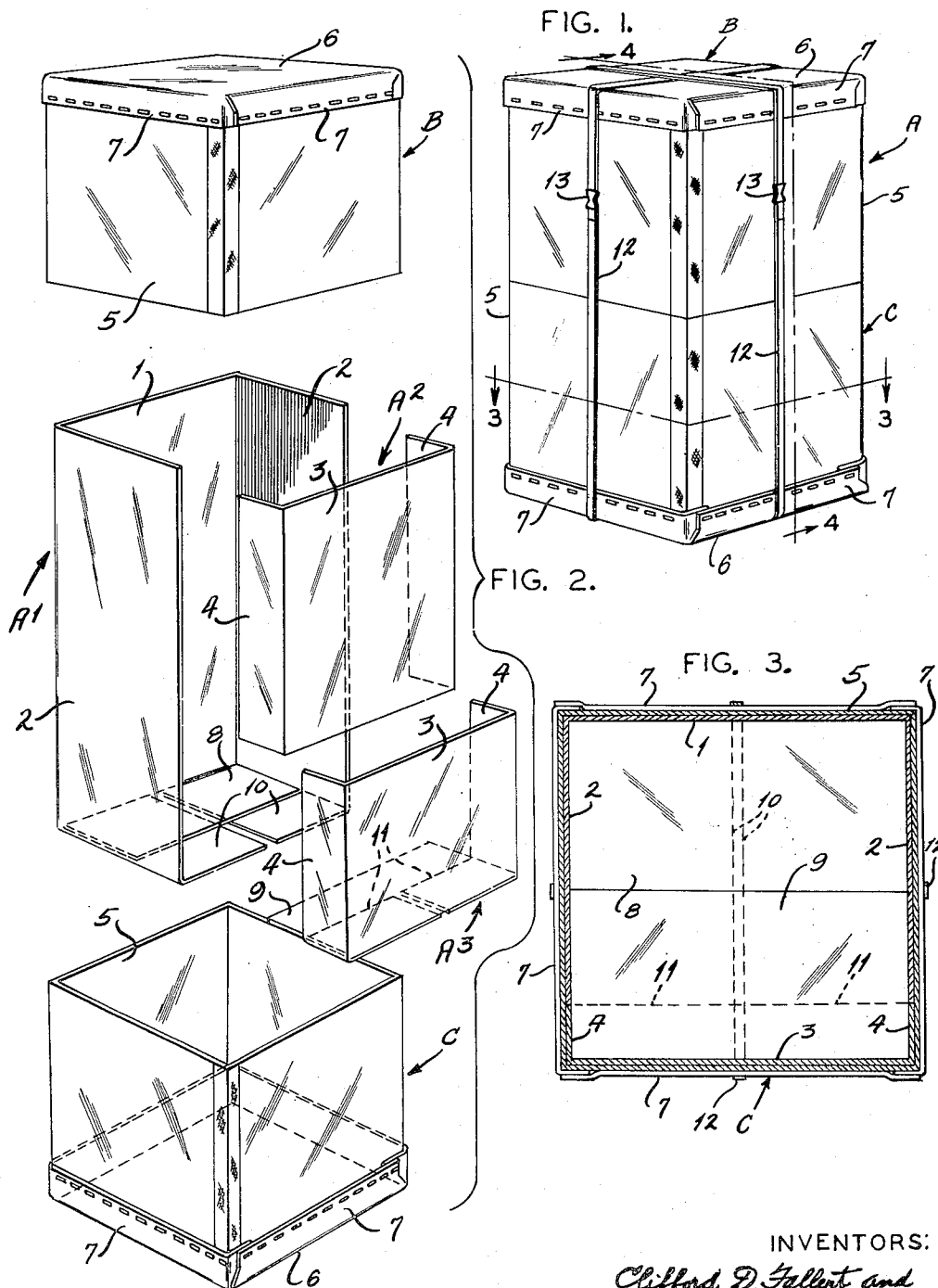
C. D. FALLERT ET AL

2,656,089

MASTER SHIPPING CONTAINER

Filed Sept. 23, 1949

2 Sheets-Sheet 1



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FIG. 4.

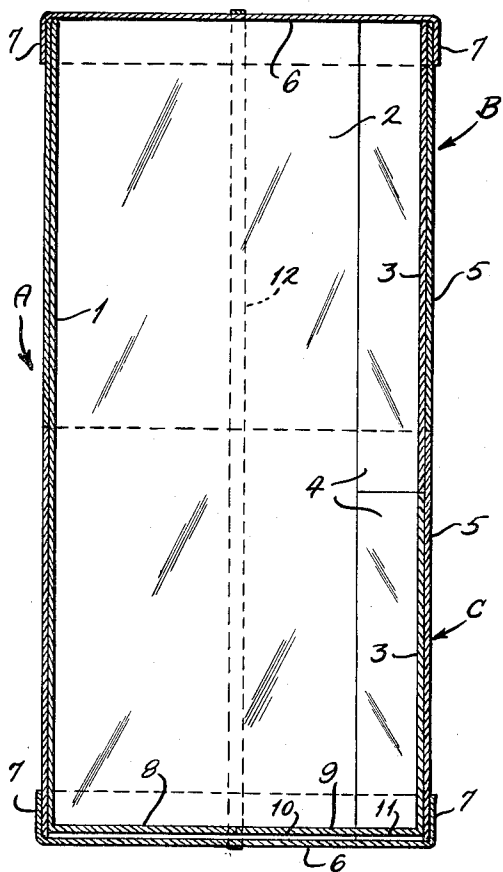


FIG. 5.

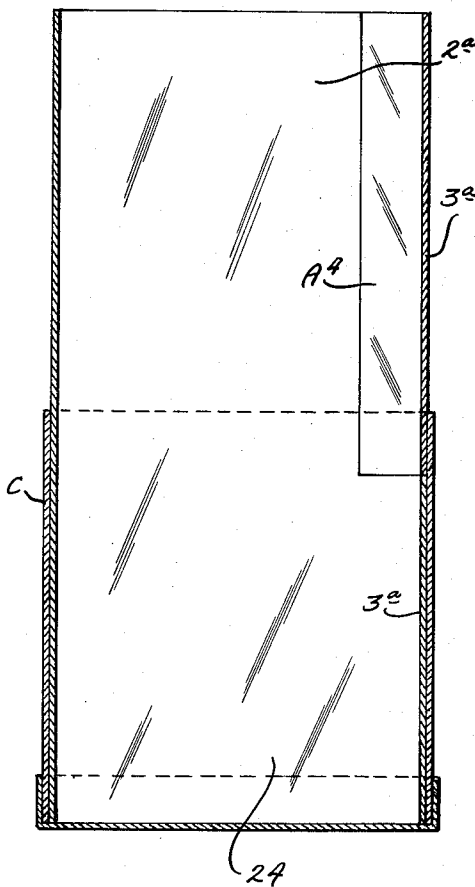
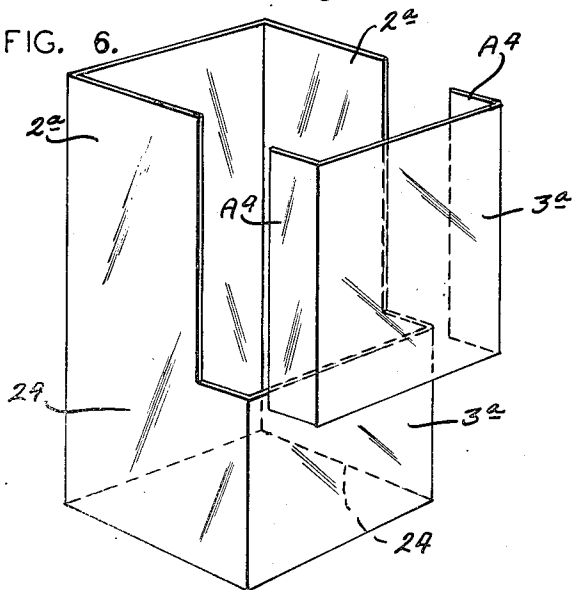


FIG. 6.



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## UNITED STATES PATENT OFFICE

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## MASTER SHIPPING CONTAINER

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6 Claims. (Cl. 229-14)

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This invention relates to relatively tall heavy duty master shipping containers of the kind that are made of paperboard or other bendable material and are used for shipping in stack formation a multiplicity of relatively small packages or articles.

A container of the above type usually comprises a full length upright tubular liner of rectangular cross-section and duplicate upper and lower half-length slip covers of corresponding cross-section that fit over the upper and lower ends of said liner with their opposing ends in abutting relation substantially midway of the height thereof. A serious practical objection to the above type container is that the height of the upright liner prevents the packer from reaching through the open upper end of the liner to pack and unpack the lower portion thereof.

The principal object of the present invention is to provide a master shipping container of the above type whose liner includes a separate removable wall forming section adapted to provide a relatively large side opening in the liner above the lower cover therefor through which easy access may be had to the lower portion of said liner to facilitate packing and unpacking of such portion. Other objects of the invention are to provide for ready assembly and disassembly of parts of the container, simplicity and economy of construction, and adequate strength and durability.

The invention consists in providing the container with a tubular liner comprising a main full length body section having a side opening therein above the lower cover therefor, and a separate removable side wall forming section for closing said side opening. The invention also consists in utilizing the top and bottom slip covers for holding the separate removable section in wall forming and opening closing position. The invention also consists in providing the sectional liner with a closed multi-ply bottom. It also consists in providing the tubular liner with a side opening that extends from top to bottom thereof and is closed by separate upper and lower closure sections that are removable by the lower cover and an upper side wall held in place by the upper and lower covers. The invention also consists in the master shipping container and in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur:

Fig. 1 is a perspective view of a paperboard

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master shipping container embodying our invention,

Fig. 2 is a perspective view, showing the parts of the carton in disassembled relation,

Fig. 3 is an enlarged horizontal cross-sectional view through the container on the line 3-3 in Fig. 1,

Fig. 4 is a vertical sectional view on the line 4-4 in Fig. 1,

Fig. 5 is a section similar to Fig. 4, showing a modification of the invention; and

Fig. 6 is a perspective view, showing in disassembled relation the modified sectional liner of Fig. 5.

In the accompanying drawings our invention is shown embodied in a shipping container comprising a relatively tall four-sided sectional liner A having a closed lower end and an open upper end, and counterpart upper and lower slip covers B and C fitting respectively over the upper and lower end portions of said liner with their opposing ends in abutting relation substantially midway of the height thereof, all preferably made of corrugated board, fiberboard or other suitable bendable material.

The tubular liner A is made in three sections: namely, a main full length body section A<sup>1</sup> having a rear panel 1 which forms the entire back wall of the liner, and side panels 2 that are disposed at right angles to said rear panel from top to bottom of the liner and form the greater width of the two opposite side walls of the liner, and removable upper and lower front sections A<sup>2</sup> and A<sup>3</sup>, respectively, having front panels 3, which cooperate to form the entire front wall of the liner, and side panels 4 that are disposed at right angles to said front panels and cooperate with the side panels 2 of the main body section A<sup>1</sup> to form the remaining width of said opposite side walls of said liner. The lower front section A<sup>3</sup> of the liner A seats on the closed bottom of the lower cover C and terminates short of the upper edge thereof; and the upper front wall section A<sup>2</sup> of the liner extends into the upper end of said lower cover, seats on the upper end of the lower front wall section therein, and extends upwardly therefrom to the top of the liner.

Each of the upper and lower slip covers B and C comprises a four-sided tubular body portion 5 which is snugly telescoped over one end of the open-ended tubular liner A, and an end closure cap 6 having marginal flanges 7 that are stapled or otherwise secured flatwise to the outer faces of the side walls of said tubular body portion of

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said cover. The lower end of the sectional upright tubular liner is closed by a lower closure flap 8 on the lower edge of the back panel 1 of the main liner section A<sup>1</sup>, a corresponding closure flap 9 on the lower edge of the front panel 3 of the lower front section A<sup>3</sup>, closure flaps 10 on the lower edges of the two relatively wide side panels 2 of said main section, and closure flaps 11 on the two relatively narrow side wall panels 4 of said lower front section. The flaps 8 and 9 are of the same width and abut edgewise midway between the front and rear walls of the liner; and the flaps 10 and 11 are folded beneath the flaps 8 and 9 and are disposed in substantially edgewise abutting relation midway of the two opposite side walls of said liner. The flaps 10 of the relatively wide side wall panels 2 extend forwardly beyond the flap 8 of the back wall panel 1; and the flap 9 of the front wall panel 3 of the lower front section A<sup>3</sup> extends rearwardly beyond the relatively narrow side wall panels 4 thereof and seats on the portions of the flaps 10 not covered by the flap 8. The flaps 10 of the relatively wide side wall panels 2 of the main liner section A<sup>1</sup> abut edgewise against the flaps 11 of the lower front wall section A<sup>3</sup> along a line offset forwardly of the joint between the abutting edges of the flaps 8 and 9 and in line with the joints between the abutting edges of the relatively wide side wall panels 2 and relatively narrow side wall panels 4.

The hereinbefore described master shipping carton is assembled in the following manner: The main, full height liner section A<sup>1</sup> is telescoped into the upwardly opening lower cover C with the back and two opposite side wall panels 1 and 2 of said section seated flatwise against the corresponding walls of said cover and with the closed bottom of said section seated upon the closed bottom of said cover. In this position, the side wall panels 2 of the main liner section A<sup>1</sup> terminate short of the front wall of the lower cover. The lower front wall liner section A<sup>3</sup> is then slipped downwardly into the lower cover C with the front wall panel 3 of said section seated flatwise against the front wall of said cover and with the relatively narrow side wall panels 4 of said section seated flatwise against the two opposite side walls of said lower cover and in edgewise abutting relation to the relatively wide side walls 2 of the main liner section A<sup>1</sup>. In this position of the lower front wall section A<sup>3</sup>, the closure flap 9 of the front wall panel 3 of said liner section A<sup>3</sup> seats on the exposed portions of the closure flaps 10 of the wide side wall panels 2 of the main liner section A<sup>1</sup> and abuts against the closure flap 8 of the back wall panel 1 thereof, while the closure flaps 11 of the narrow side wall panels 4 of the lower front wall section A<sup>3</sup> abut edgewise against the closure flaps 10 of the wide side wall panels 2 of the main liner section A<sup>1</sup> along a line offset forwardly of the meeting edges of the flaps 8 and 9.

At this stage of assembly of the container, the tubular liner A is open above the lower cover C from the top thereof to the top of the liner along the entire front thereof and also along the front portions of both sides thereof, thereby providing ample space to permit small packages or articles to be placed in the lower portion of the liner through said space. At this stage of the packing operation, the upper front wall section A<sup>2</sup> of the liner may be inserted in the upper portion of the lower cover C with its lower end seated on the upper edge of the lower front wall

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section A<sup>3</sup> and with its narrow side wall panels 4 abutting edgewise against the wide side wall panels 2 of the main liner section A<sup>1</sup>, thus completing the assembly of the liner. The remaining packages or articles are then placed in the liner through the open upper end thereof, after which the upper cover B is telescoped downwardly over the exposed upper end portion of the liner with the top of the cover seated on the top of the liner and with the bottom of said cover seated on the upper edge of the lower cover C. The container is then bound with crossed metal securing bands or straps 12 that are locked in contracted position by suitable coupling members 13.

In the modified liner construction shown in Figs. 5 and 6, the lower end of the upright tubular liner is left open and seats on the bottom of the lower cover C; and said liner is provided below the upper edge of said cover with a permanent front wall 3a and with full width lower side wall portions 2a and above the level of the permanent lower front wall with narrow upper side wall portions 2a, thereby providing an access opening along the front and forward sides from the upper edge of the lower cover to the top edge of the liner. This opening is closed by an upper front wall section A<sup>4</sup> whose lower portion is disposed within the upper portion of the lower cover C with its front wall panel 3a seated on the upper edge of the permanent lower front wall 3a of the liner and with its narrow side wall panels 4a seated on the upper edges of the wide lower side wall portion 2a of the liner abutting edgewise against the narrow upper side wall portions 2a of said liner, thus completing the liner above the upper edge of the lower cover.

The hereinbefore described master shipping container provides a wide access opening in the front and forward side portions of the side walls of the liner from the top of the lower cover to the top of the liner, thus affording easy access to the liner for packing and unpacking the lower portion thereof. The lower front section of the liner may be easily inserted in the lower cover and cooperates with the main liner section to close the bottom of the liner. The two-ply closed lower end of the liner cooperates with the single-ply bottom cap of the lower cover to form therewith a strong and durable moisture-proof bottom construction for said liner. The upper front wall section of the liner is quickly and easily mounted in place and is held in proper position by the upper portion of the lower cover and by the upper cover. The narrow side wall panels of the upper and lower front wall sections impart additional strength to the tubular liner along the vertical front corners thereof.

Obviously, the size of the container, the construction of the upper and lower covers, and the proportions of the parts may be varied without departing from the invention.

What we claim is:

1. A shipping container comprising a relatively tall upright tubular liner having front, rear and side walls and slip covers telescoping over the upper and lower ends of said liner in abutting relation, said liner comprising a rear section and separate upper and lower front sections, said rear section comprising a rear panel forming the entire rear wall of said liner and side panels extending from top to bottom of said liner and forming portions only of the width of the side walls thereof, said upper and lower front sections comprising front panels that form the entire front wall

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of said liner and foldably connected side panels that form with said side panels of said rear section the entire side walls of said liner, the vertical side edges of said foldably connected side panels being in conterminous abutting relation with the vertical side edges of said side panels of said rear section of said liner, said lower front section terminating below the upper edge of said lower slip cover, said upper front section extending downwardly into said lower cover and seating on the upper edge of the lower front section therein and extending upwardly into said upper cover, said upper front section being adapted, when the upper cover is removed from the liner, to be entirely removed to provide an access opening in said liner below the upper edge of said lower cover.

2. The combination set forth in claim 1 wherein said rear section and said lower front section are each provided with bottom closure flaps, a closure flap of one of said rear and lower front sections overlapping a closure flap of the other section.

3. The combination set forth in claim 1 wherein each of said rear and lower front sections is provided with overlapped bottom closure flaps and the corresponding flaps of the two sections are disposed in edgewise abutting relation.

4. The combination set forth in claim 3 wherein the joints between the abutting edges of the corresponding flaps of said rear and lower front sections are offset relative to one another.

5. A shipping container comprising a relatively tall upright tubular liner having front, rear and side walls and slip covers telescoping over the upper and lower ends of said liner in abutting relation, said liner comprising a rear section and a separate upper front section, said rear section comprising a rear panel forming the entire rear wall of said liner and side panels extending from top to bottom of said liner and forming portions only of the width of the side

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walls thereof, and an outwardly projected partial front wall having an upper edge and adjacent integral inwardly extending side wall portions each having an upper edge, said upper front section comprising a front panel that forms with said projected front wall the entire front wall of the liner and having foldably connected side panels that form with said side panels of said rear section and said inwardly extending side wall portions adjacent said outwardly projected partial front wall the entire side walls of said liner, the vertical side edges of said foldably connected side panels being in conterminous abutting relation with the vertical side edges of said side panels of said rear section of said liner, said upper front section having a portion thereof positioned in said lower cover and having its lower edge seated on the said upper edges of said outwardly projected partial front wall and the adjacent inwardly extending side wall portions and extending upwardly into said upper cover, said upper front section being adapted when the upper cover is removed from the liner to be entirely removed to provide an access opening in said liner below the upper edge of said lower cover.

6. The shipping container as defined in and by claim 5, wherein the said side wall portions of the outwardly projected partial front wall are each integral with the said side panels of the rear section.

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