June 25, 1957 S. P. BELSINGER 2,797,039

EASY PACKING UPRIGHT CONTAINER

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Fig. 1.

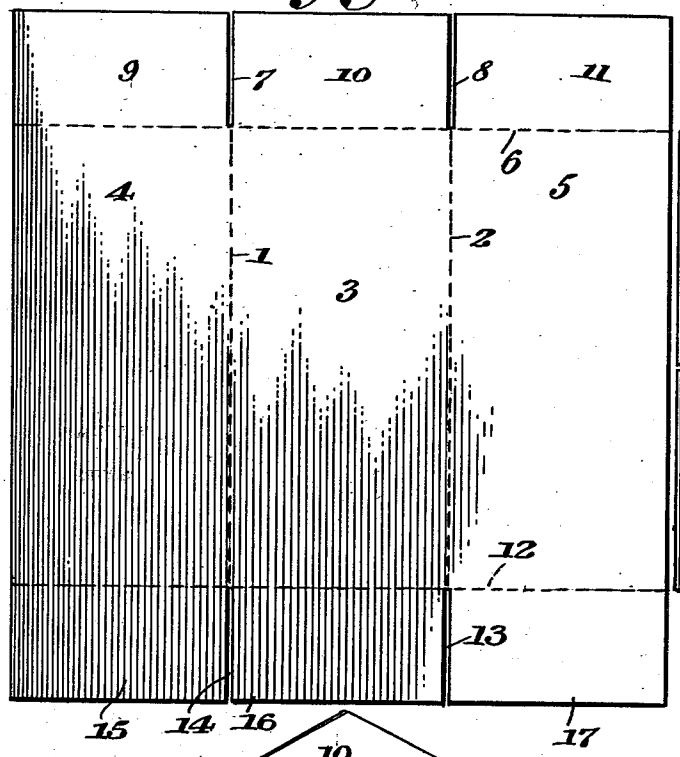


Fig. 2.

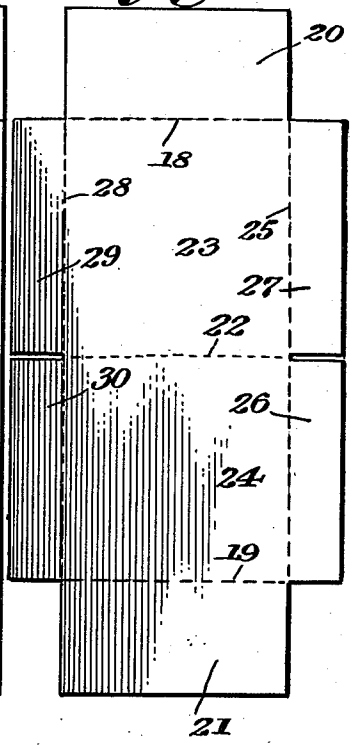
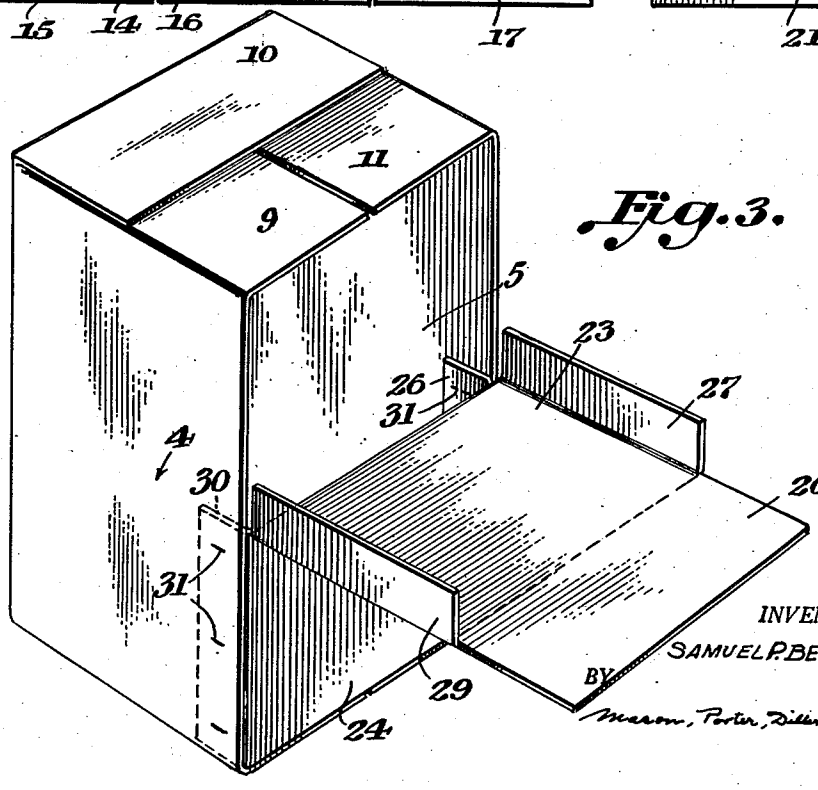


Fig. 3.



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Fig. 4.

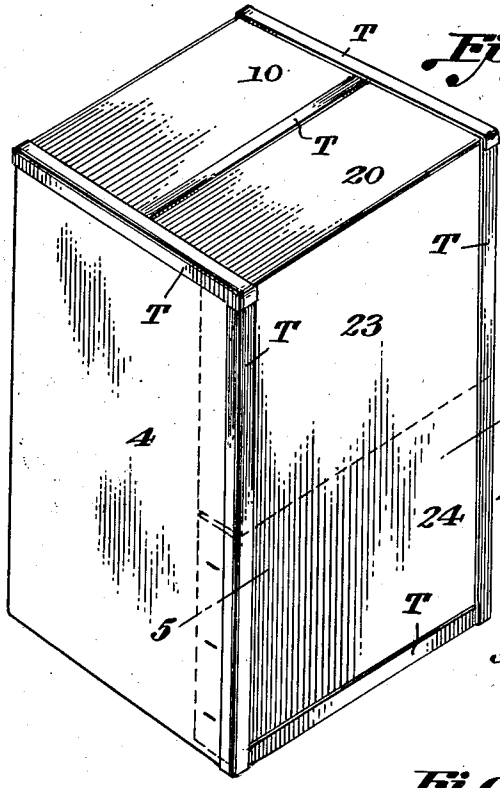


Fig. 5.

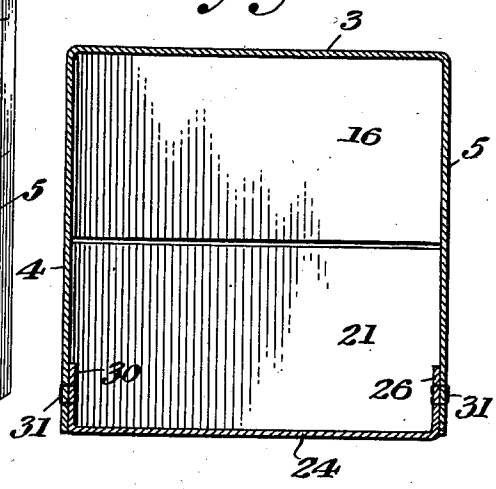
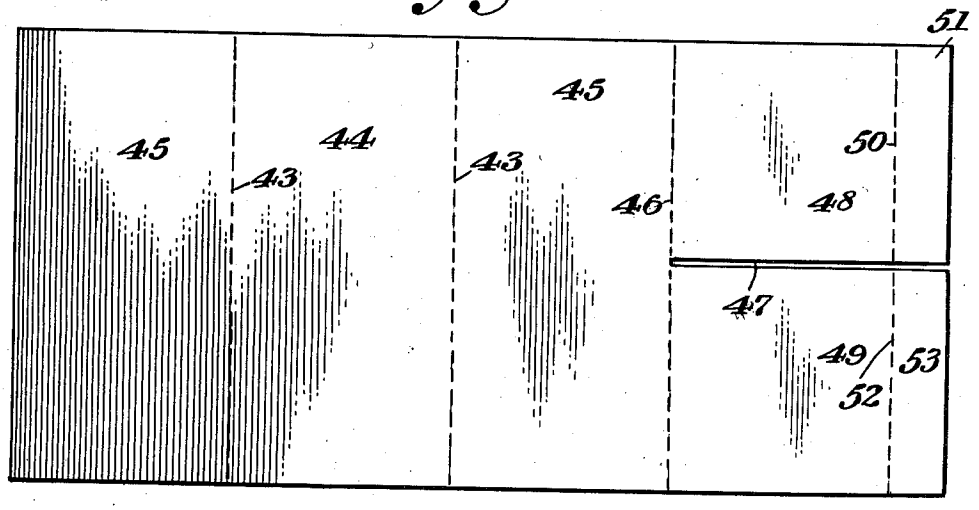


Fig. 12.



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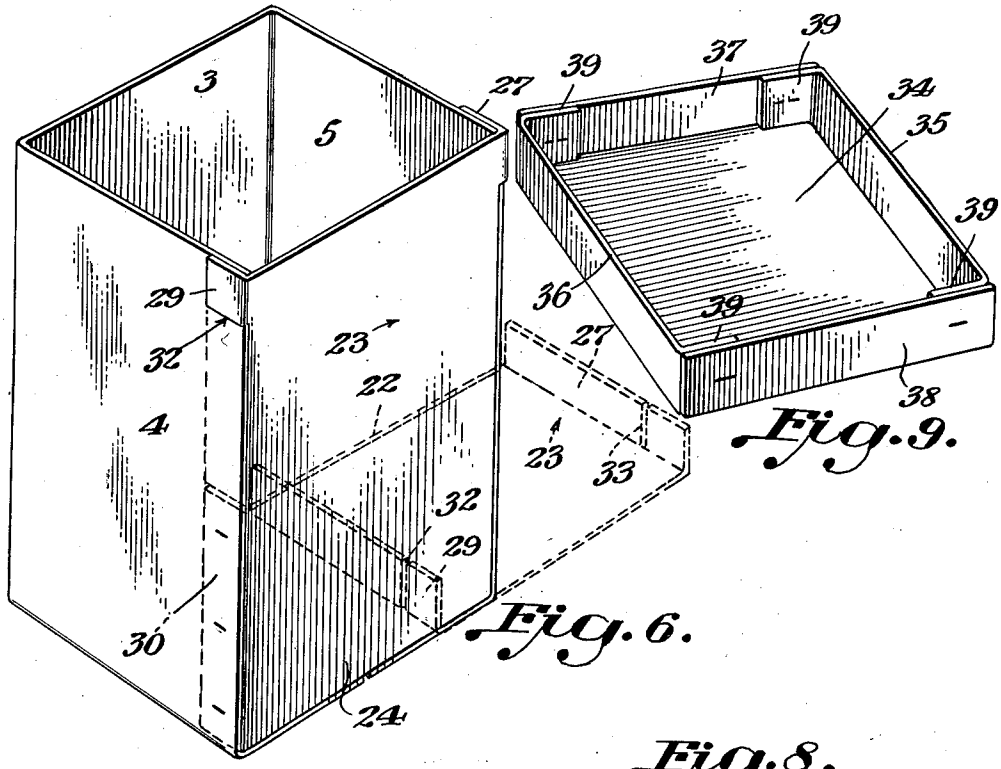
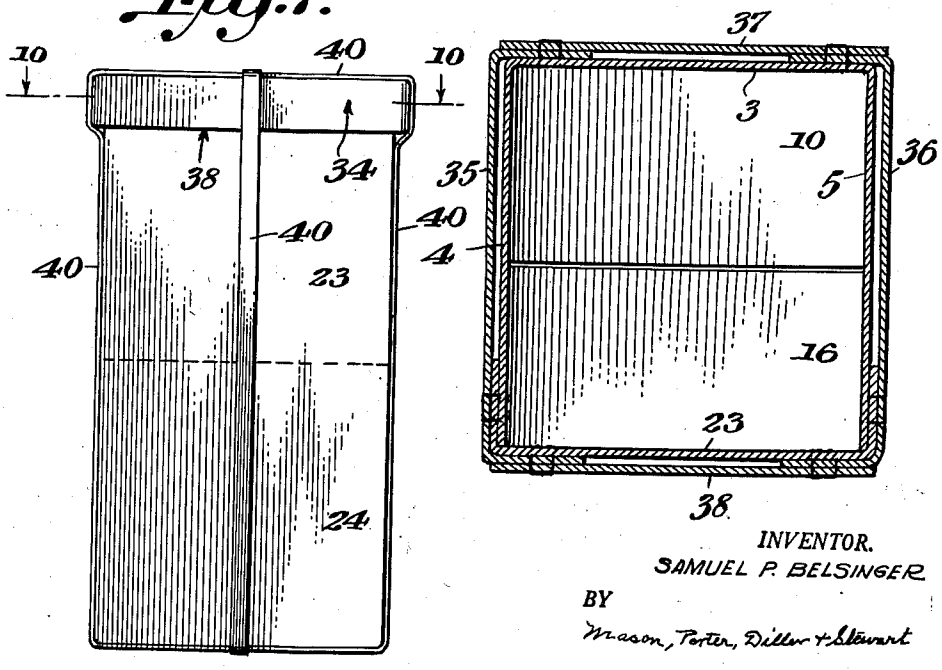


Fig. 9.

Fig. 6.

Fig. 8.

Fig. 7.



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Fig. 10.

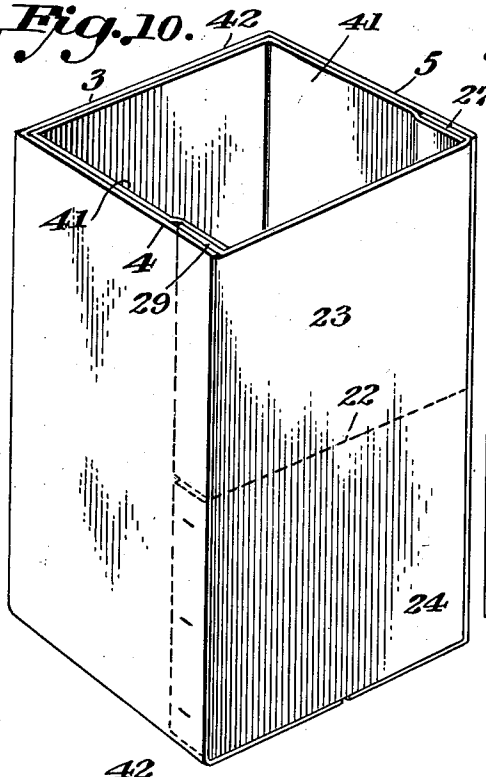


Fig. 13.

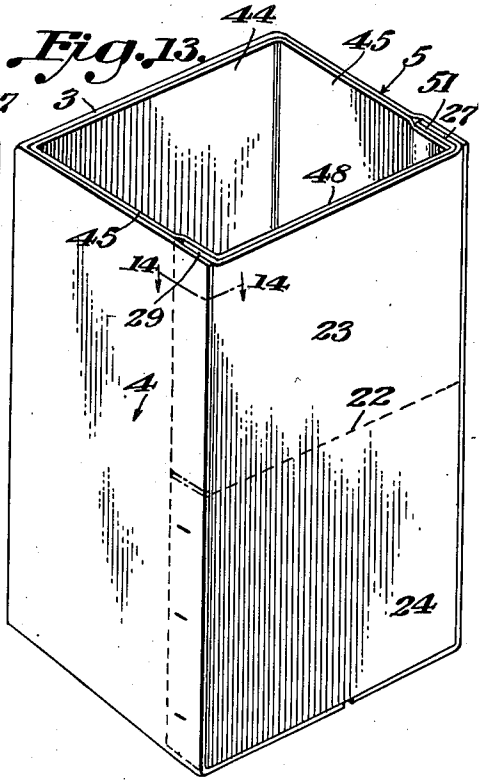


Fig. 11.

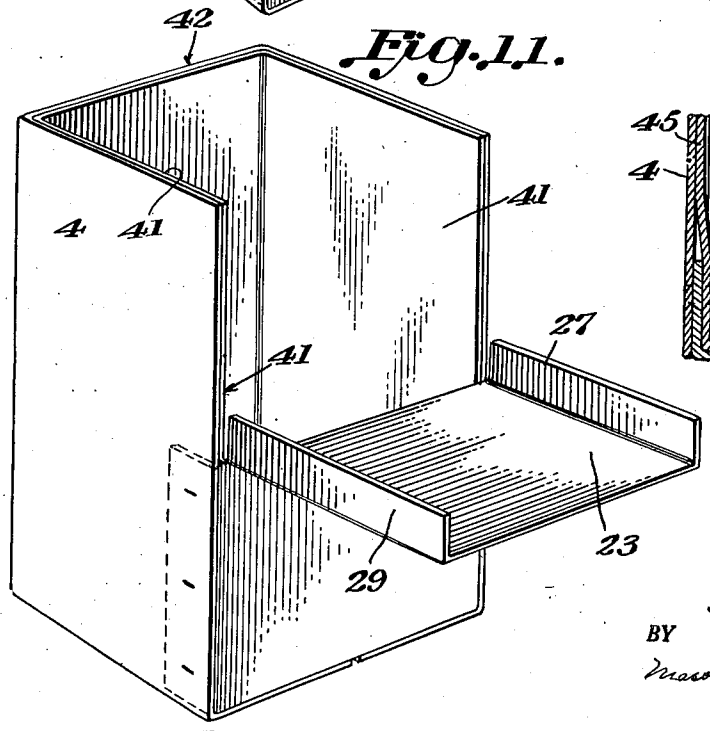
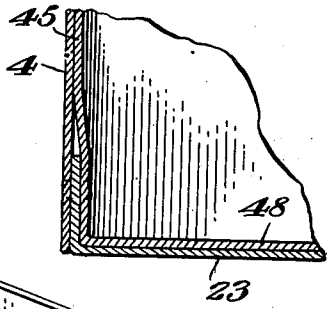


Fig. 14.



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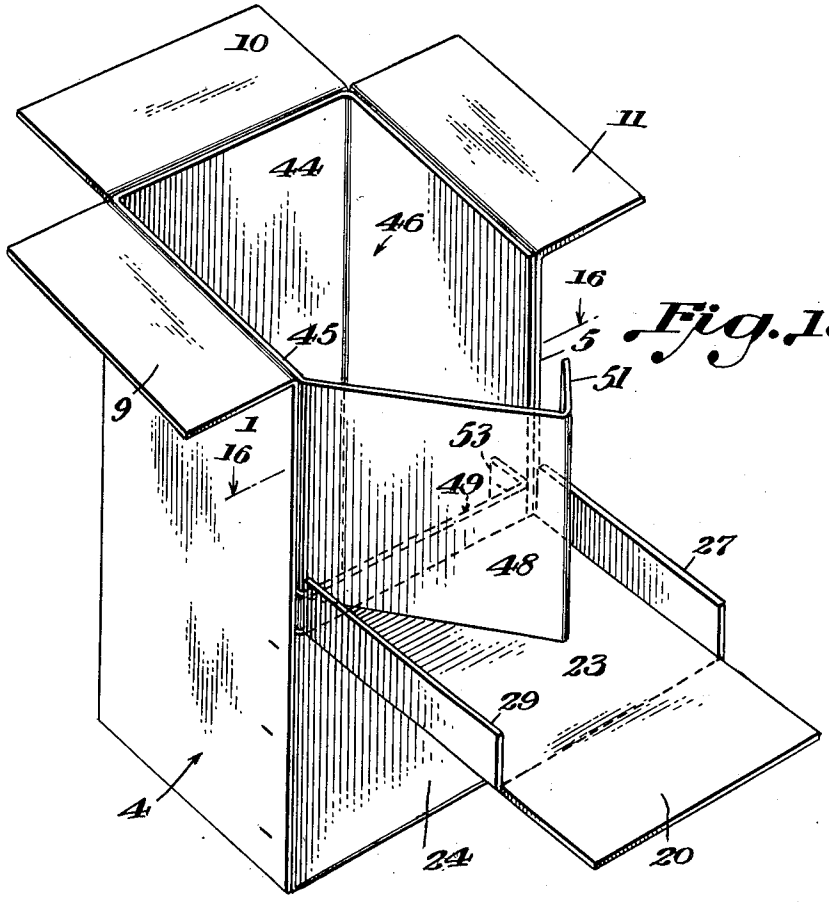


Fig. 15.

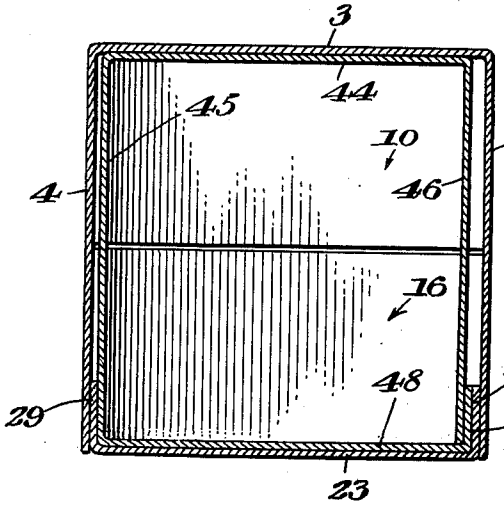


Fig. 16.

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2,797,039

EASY PACKING UPRIGHT CONTAINER

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Application March 1, 1954, Serial No. 413,307

4 Claims. (Cl. 229—23)

The invention relates to fiber containers for packing and shipping merchandise and more particularly to containers which are of relatively large capacity having a depth greater than the reach of the packer. In my prior Patent No. 2,635,802, granted April 21, 1953, such a container is shown and the present invention resides in improvements which have been applied to the container of the type disclosed in said patent. One of the characteristics of the containers of this type is that it is packed, stored and shipped while standing on end and one of the side panels has an access opening through which the container is packed. This access opening is closed by a swinging panel section.

An object of the invention is to provide an upright container of relatively large capacity wherein the rear panel and side panels are integral and formed from a one-piece blank while the front panel is formed from another blank and wherein means is provided for connecting the front panel to the side panels which adds strength to the front corners of the container.

A further object of the invention is to provide a container of the above type wherein the front panel is scored horizontally to provide a down folding panel section which in open position provides an access opening for packing purposes.

A still further object of the invention is to provide a container of the above type wherein the front panel has holding flaps at each side edge thereof, the flaps on the lower panel section being stitched or otherwise secured to the side panels and the flaps on the upper panel section make frictional engagement with the side panels of the container.

A still further object of the invention is to provide a container of the above type with a liner covering at least the rear and side panels and wherein the flaps on the swinging front panel section are adapted to engage between the side panels and the liner section therefor.

A still further object of the invention is to provide a container of the above type with a liner covering all four sides of the container and wherein the liner for the front panel is divided horizontally above the upper edge of the lower section of the front panel to provide a swinging liner section that may be moved outwardly through the access opening in the front panel during packing and unloading the container.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings:

Figure 1 is a plan view of a blank cut and scored for producing the side panels and the rear panel with flaps for forming in part the end closures of the improved container.

Figure 2 is a plan view of a blank cut and scored for producing the front panel of the container having a down folding section to aid in packing, end flaps to complete the end closures and side flaps for securing the lower portion of the panel to the side panels of the container

and for holding the upper down-folding section in closed position for storing and shipping.

Figure 3 is a perspective view showing the two blanks in assembled position with the upper front panel section swung downwardly to open position to give access to the container for the packing and unloading of the container.

Figure 4 is a view similar to Figure 3 but showing the upper panel section in closed position and showing the taping of the container for storage and shipping purposes.

Figure 5 is a sectional view on the line 5, 5 of Figure 4.

Figure 6 is a view in perspective showing a slightly modified form of structure wherein the flaps forming the upper closure end are omitted and the container closed by a cap telescoping over the upper end of the container. The front upper panel section is shown in broken lines in open position and in full lines in closed position.

Figure 7 is a view showing the container of Figure 6 with the closure cap in place and a baling applied for storage and shipping purposes.

Figure 8 is a sectional view on the line 10—10.

Figure 9 is a perspective view of a closure cap as viewed from the underside thereof.

Figure 10 is a view in perspective of the container shown in Figures 6 to 9 with a three-sided liner inserted within the container, the closure cap being omitted from this view.

Figure 11 is a view similar to Figure 10 but showing the upper section of the front panel as swung to open position to provide an access opening for packing.

Figure 12 is a plan view of a four-sided liner for the container.

Figure 13 is a perspective view of the improved container having a cap for closing the upper end thereof in which container is placed a four-sided liner such as shown in Figure 12.

Figure 14 is a sectional view on the line 14 of Figure 13.

Figure 15 is a perspective view of the container shown in Figures 1 to 4 with a four-sided liner such as illustrated in Figure 12 placed in the container, the upper panel section being in partial open position, the swinging section of the line also in partial open position and the end closure flaps in open position.

Figure 16 is a sectional view on the line 16—16 of Figure 15.

The invention relates to an easy packing container of relatively large capacity such as illustrated in my prior Patent No. 2,635,802. The improved container may have flaps of the usual type for end closures or it may have telescoping caps of the usual type for end closures, and again the bottom may have flaps for end closures and the top end of the container closed by a cap.

The container is made of fiber board, preferably corrugated board and may have a liner depending upon the use to which the container is to be employed.

Referring more in detail to the illustrated forms of the container, Figures 1 to 5 show a container without a liner and having flaps for closure ends. The container is made from two separate blanks.

Figure 1 shows in plan view a blank which has been scored and cut so as to provide side panels and a rear end panel with the flaps which form in part upper and bottom end closures.

In Figure 2 there is a plan view of a blank cut and scored to form the front panel and the closure flaps which complete the end closures when the container is closed.

In Figure 1 the blank is scored along the lines 1 and 2 to offset a rear panel 3, and side panels 4 and 5. The blank is also scored along the lines 6 and cut along the lines 7 and 8 to provide end flaps 9, 10 and 11. The

blank is scored along the line 12 and cut along the lines 13 and 14 to provide end flaps 15, 16 and 17.

The blank shown in Figure 2 is scored along the lines 18 and 19 to provide a front panel having flaps 20 which cooperate with the flaps 9, 10 and 11 in forming the upper end closure and the flap 21 which cooperates with the flaps 15, 16 and 17 in forming a bottom end closure. This blank is scored along the line 22 to provide a fold line separating the front panel into an upper section 23 and a lower panel section 24. The blank is also scored along the line 25 to provide holding flaps 26 and 27 for one side of a front panel and it is scored along the line 28 for forming holding flaps 29 and 30 for the other side of the front panel sections.

The container shown in Figure 3 shows the two blanks as folded along the lines referred to and assembled to provide the improved container. The side panels 4 and 5 are brought into parallel relation and the bottom flaps 15, 16, 17 and 21 folded in the usual manner to provide a bottom end closure. The flaps 9 and 11 are folded down into a common plane and then the flap 10 is folded down onto these flaps 9 and 11 and the flaps are then secured in this position by stitching or other suitable means. The front panel is then placed in position and the flap 21 secured to the flaps 15 and 17 to complete the bottom end structure. The side flaps 26 and 30 are spaced as shown in Figure 3 on the inner face of the side panels 4 and 5 and are secured thereto by suitable holding means indicated at 31. While these flaps are shown in engagement with the inner faces of the panels 4 and 5 they can, if desired, be placed on the outer face of said panels. The upper front panel section 23 is shown in Figure 3 in open or partially open position and this provides an access opening through which the container may be packed or unpacked. The fold line 22 may be a line midway between the upper and lower ends of the container. It is essential, however, that this fold line shall be so positioned as to provide a packing space beneath the same which has a depth not exceeding the normal reach of a packer. The container itself may be of a height considerably greater than the normal reach of a packer.

The container is particularly adapted for the packing and shipping of merchandise. When the upper section of the front panel is folded outwardly and downwardly so as to provide the access opening the packer can reach all points within the packing space and thus arrange the material in proper packed relation. The packer can continue packing the merchandise in the container until it is filled to capacity after which this upper panel section 23 may be swung upwardly to closed position. The flaps 27 and 29 may move into the container and will be held by friction in closed contact with the inner face of the side panels of the container or these flaps may be placed on the outside of the side panels and secured by taping or other means. The flap 20 folds down onto the flaps 9 and 11 and can be secured thereto by taping or otherwise. It is noted that these flaps 27 and 29 when in closed position are in abutted relation to the flaps 30 and 26 respectively. This makes a reenforced corner section which gives great strength to the container.

In Figure 4 of the drawings, taping has been applied to the meeting portions of the flaps and panels so that the container is completely sealed and ready for storage or shipment. These tapes are indicated at T.

In Figures 6, 7, 8 and 9, the container is shown without any flaps forming the top end closure. The top end of the container is normally open until the container is packed and then a telescoping cap is applied to the container. The body portion of the container is similar to the construction of the body portion of the container shown in Figures 1 to 5 and similar numerals have been applied to these parts in the drawings. The only difference in the structure shown in Figure 6 over that shown in Figure 3 resides in the omission of the upper end closure flaps and the slitting of the flap 29 along the line 32 and the flap 27 along the line 33. The purpose of the slitting of these flaps is so that the upper portion of the flaps can be placed outside of the side panels while the other portion of the flaps can be placed inside of the side panels. This will provide an abutment for limiting the swinging movement of the upper section of the front panel so that it will not move into the container but will remain held in rigid position in the plane of the lower section of the front panel. These flaps will be held in place by friction or may be stitched or otherwise secured when the upper section of the panel is in closed position. In Figure 6 this upper section of the panel is shown in full lines in closed position and in broken lines in open position so as to provide an access opening for packing purposes. The fold line 22 in the panel 23 is positioned in the container shown in Figure 6 in the same manner as the fold line 22 in the container of Figure 3. After the front panel has been swung to closed position and the container packed ready for storage or shipment a closure cap is applied which telescopes down over the sides of the panels of the container. This closure cap is of well known construction. It consists of a top 34 having depending flanges 35 and 36 along the sides thereof and depending flanges 37 and 38 along the other sides or ends thereof. The flanges 35 and 36 have extensions 39 which are folded inwardly and stitched to the end depending flanges 37 and 38. After the cap has been placed on the container then baling bands 40 may be applied for holding the cap in place and sealing the container.

As shown in Figure 10 the container is of the same general construction as shown in Figure 6 except that there is no slit in the flaps carried by the upper section of the front panel. The flaps are of one piece as shown in Figure 3. There is inserted in the container a three-sided liner. This three-sided liner consists of side sections 41 and a rear section 42. These sections are integrally connected and cover the rear panel 3 and the side panels 4 and 5.

As clearly shown in Figure 11 the front edges of the liner side sections 41 are flush with the edges of the panels 4 and 5 respectively or substantially so. When the upper swinging section 23 of the front panel is moved to closed position the flaps 27 and 29 will move inbetween the liner section and the panel as shown in Figure 10. This makes a very firm connection between the swinging panel when closed and the side panels of the container. These flaps may, if desired, be stitched in closed position. This upper foldable section of the panel when in closed position abuts against the edges of the side liner sections and is prevented from movement into the container when these flaps are in position between the liner sections and the panels and the upper foldable section is in abutted relation to the liners. There is a very rigid connection for holding the movable panel in the plane of the lower front panel section. After the panel is closed then a cap such as shown in Figure 9 is telescoped over the panels for closing the container.

A four-sided liner may be used in connection with the container which has been described above. Such a four-sided liner is made from a single blank as shown in Figure 12. The blank is scored along the lines 43, 43 to set off a rear section 44 and side sections 45, 45 which are formed integral therewith. It is also scored along the line 46 to set off the front liner section which really is made in two sections by dividing the panel along the line 47. The upper section is indicated at 48 and the lower section at 49. The blank is further scored along the line 50 to set off a tab 51 which is integral with the upper section 48 of the liner. The blank is likewise scored along the line 52 to set off a tab 53 which is integral with the liner section 49. These scored lines referred to in connection with this blank are really fold lines indicating the place where the fiber board is to be bent when forming the liner so that it can be placed in the container.

In Figures 13 and 14 the four-sided liner is shown as

applied to the container shown in detail in Figures 6 to 9. In Figure 13 the container with the liner is shown in perspective with the upper section of the front panel in closed position. The upper section of the liner is also in closed position. The flap **53** is placed on the outer face of the liner section **45**, and inbetween said liner section and the outer side panel **5**. When the upper section of the front panel **23** is closed the flaps **27** and **29** carried thereby are placed inbetween the side liner section **45** and the side panel **4**. The other flap **27** is placed inbetween the flap **51** and the inner face of the side panel **5**. The same is true of the flaps **26** and **30** on the panel section **24**. When it is desired to pack the container the upper section **23** of the front panel is folded downwardly along the fold line **22** and the upper front section of the liner **48** is swung on a vertical hinge line thus providing an access opening so that the operator can reach all parts of the packing space at the bottom of the container. This dividing line **47** in the liner is sufficiently above the fold line **22** so that the upper section of the liner may be swung outwardly to expose the access opening.

In Figures 15 and 16 the four-sided liner is shown as applied to a container such as illustrated in Figures 1 to 5 where the top end as well as the bottom end closures are formed by flaps which are integral with the side panels and rear and front panels. As far as the outer container is concerned the parts are all the same, and the same numerals have been applied to these figures.

In the perspective view shown in Figure 15 the flaps forming a portion of the upper closure end are folded outwardly merely for the purpose of showing up the structure. They are preferably folded into lapped relation as shown in Figure 3 before the packing of the container. The construction of the four-sided liner is the same as shown in Figures 12 to 14. The upper section of the front panel is swung to open position and an upper portion of the front section of the liner is moved to partial open position. So far as the interengaging of the parts is concerned in this container shown in Figures 15 and 16 they are the same as described in connection with the container shown in Figures 13 and 14 and further description of the container shown in these figures is not thought necessary.

It is to be understood that in the containers shown in Figures 10 to 16 that after the container is packed and closed tapes will be applied or a bale band, or both, for sealing a container and holding the parts in their closed position during storage and shipping.

It is obvious that many changes may be made in the details of construction without departing from the spirit of the invention as set forth in the appended claims.

I claim:

1. An upright container comprising a body including a rear panel and side panels formed integral therewith and a separate front panel adapted to be connected to said side panels, closure members for closing the bottom and top ends of said body, said panels being dimensioned so as to provide a packing space of greater depth than the normal reach of a packer, a front panel having a horizontal hinge line dividing said panel into a lower section and an upper section, said lower section having flaps at each side thereof permanently connected to the side panels and defining with the side and rear panels a packing space beneath the hinge line which has a depth not exceeding the normal reach of a packer, said upper panel section being adapted to swing about the hinge line to open position to provide an access opening to the packing space, said upper panel section having flaps at each side thereof adapted to engage the side panels when the upper section is in closed position, said flaps on the swinging panel section being divided horizontally adjacent the upper ends thereof so that the upper portions may be placed on the outside of its associated side panel and the lower portion thereof on the inside.

2. An upright container comprising a body including a rear panel and side panels formed integral therewith and a separate front panel adapted to be connected to said side panels, closure members for closing the bottom and top ends of said body, said panels being dimensioned so as to provide a packing space of greater depth than the normal reach of a packer, a front panel having a horizontal hinge line dividing said panel into a lower section and an upper section, said lower section having flaps at each side thereof permanently connected to the side panels and defining with the side and rear panels a packing space beneath the hinge line which has a depth not exceeding the normal reach of a packer, said upper panel section being adapted to swing about the hinge line to open position to provide an access opening to the packing space, said upper panel section having flaps at each side thereof adapted to engage the side panels when the upper section is in closed position, and a liner for said body including a rear and side members extending from the bottom to the top of the body, the flaps on the upper and lower front panel sections engaging between the side liners and the side panels when the container is closed.

3. An upright container comprising a body including a rear panel and side panels formed integral therewith and a separate front panel adapted to be connected to said side panels, closure members for closing the bottom and top ends of said body, said panels being dimensioned so as to provide a packing space of greater depth than the normal reach of a packer, a front panel having a horizontal hinge line dividing said panel into a lower section and an upper setion, said lower section having flaps at each side thereof permanently connected to the side panels and defining with the side and rear panels a packing space beneath the hinge line which has a depth not exceeding the normal reach of a packer, said upper panel section being adapted to swing about the hinge line to open position to provide an access opening to the packing space, said upper panel section having flaps at each side thereof adapted to engage the side panels when the upper section is in closed position, and a liner for said body including rear and side members extending from the bottom to the top of the body, the front edges of the liner side members terminating at the front of the side panels and serving to limit the swinging movement of the front panel section when moved to closed position with the flaps carried thereby engaging between the side liners and the side panels.

4. An upright container comprising a body including a rear panel and side panels formed integral therewith and a separate front panel adapted to be connected to said side panels, closure members for closing the bottom and top ends of said body, said panels being dimensioned so as to provide a packing space of greater depth than the normal reach of a packer, a front panel having a horizontal hinge line dividing said panel into a lower section and an upper section, said lower section having flaps at each side thereof permanently connected to the side panels and defining with the side and rear panels a packing space beneath the hinge line which has a depth not exceeding the normal reach of a packer, said upper panel section being adapted to swing about the hinge line to open position to provide an access opening to the packing space, said upper panel section having flaps at each side thereof adapted to engage the side panels when the upper section is in closed position, and a liner for said body including a rear liner member, side liner members and a front liner member formed integral with one of said side liner members, said front liner member being divided horizontally above and adjacent the upper edge of the lower panel section to provide upper and lower liner sections and to permit the upper liner section to swing outwardly through the access opening in the front panel to form an access opening in the front liner member, said front liner sections having flaps engaging between a liner side member and a side panel, the flaps on the front panel

being adapted to engage between the side liner members and the side panels.

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