Dec. 6, 1938. M. I. WILLIAMSON 2,139,534

DISPLAY RECEPTACLE

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Fig. 1.

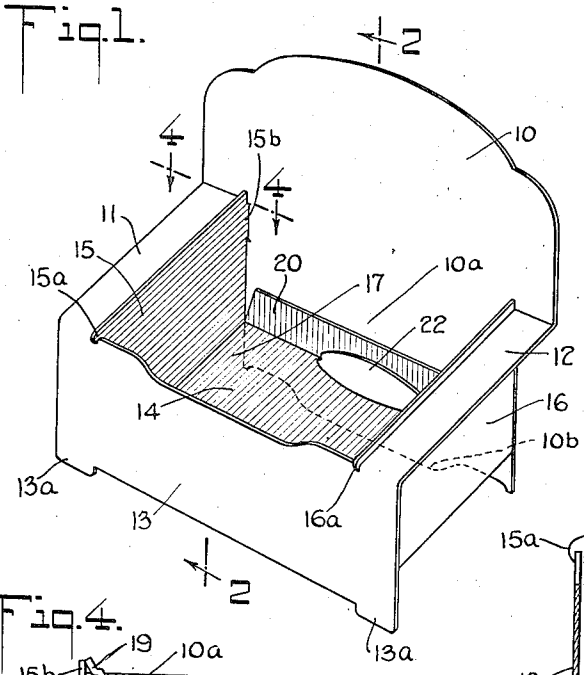


Fig. 2.

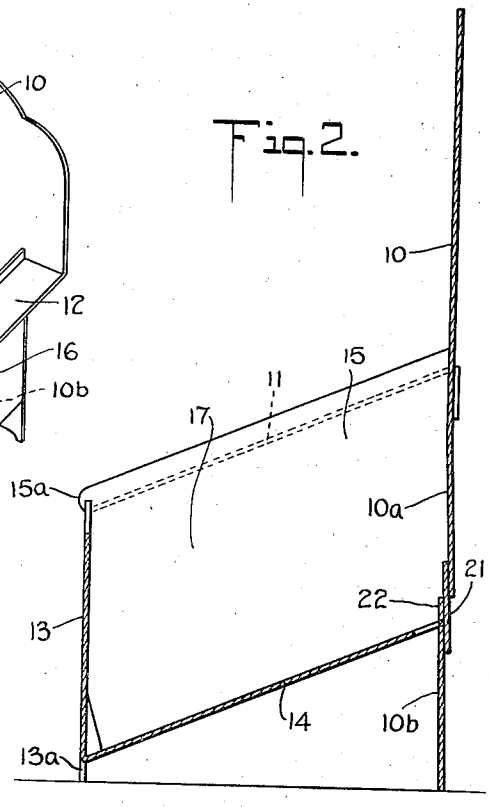


Fig. 4.

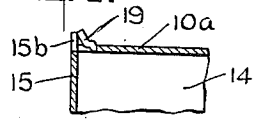
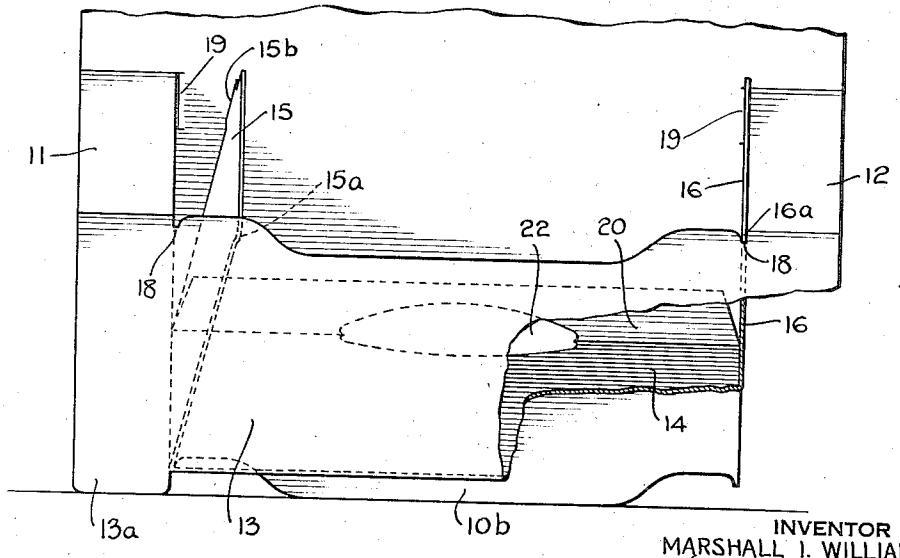


Fig. 3.



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Fig. 5.

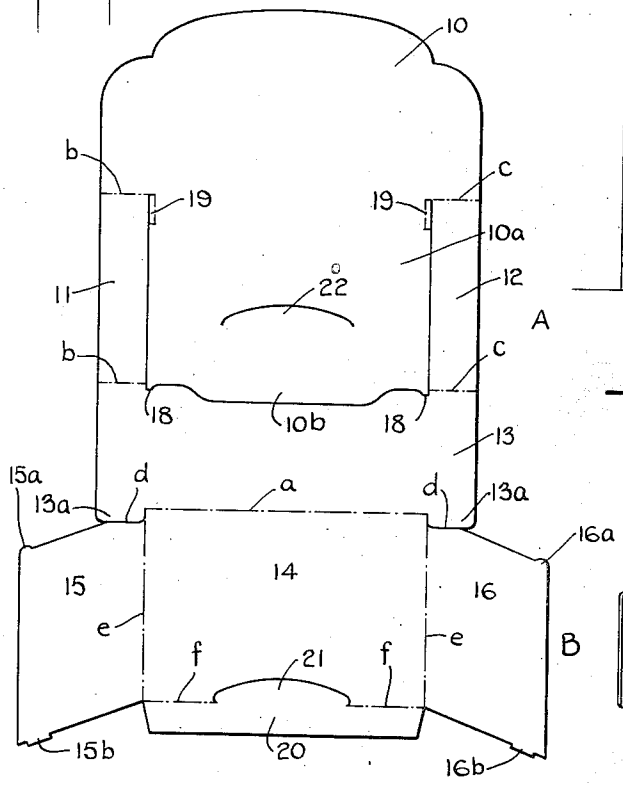


Fig. 8.

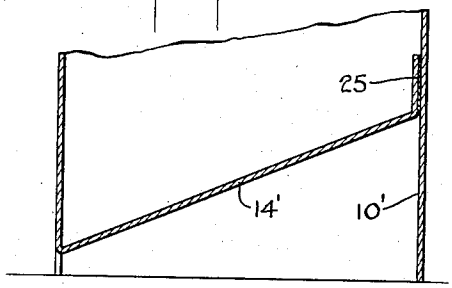


Fig. 10.

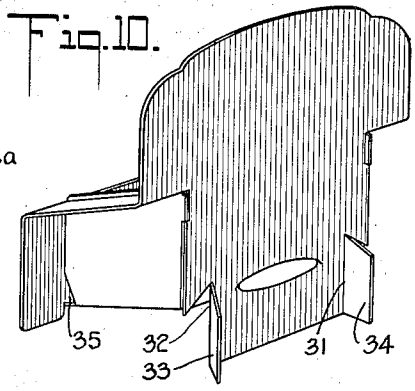


Fig. 6.

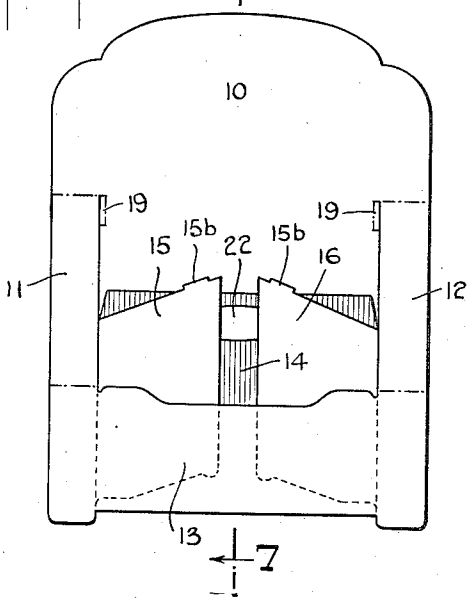


Fig. 7.

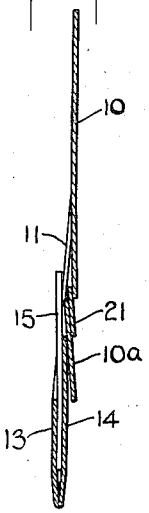
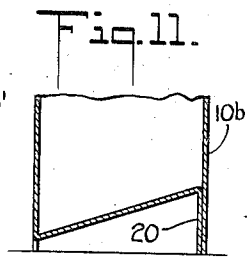


Fig. 9.



Fig. 11.



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DISPLAY RECEPTACLE

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Fig. 12.

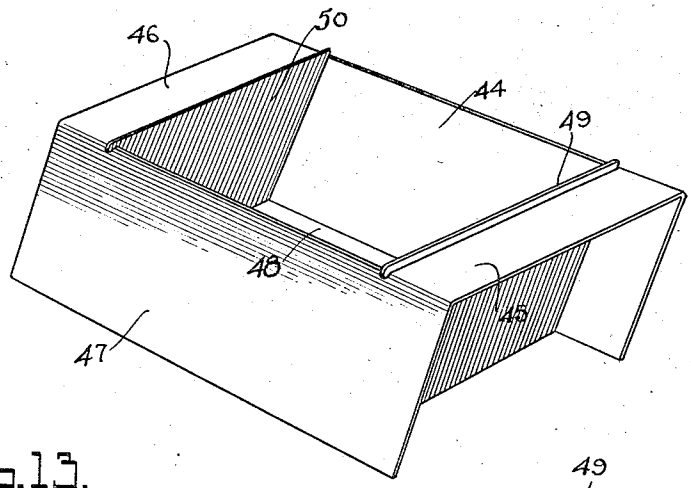
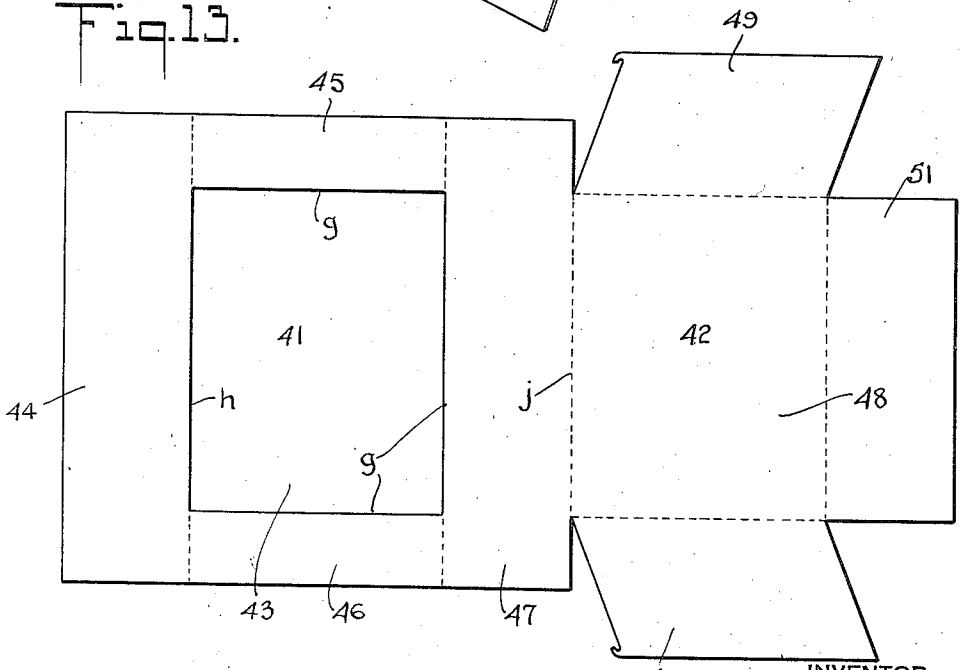


Fig. 13.



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Patented Dec. 6, 1938 2,139,534

UNITED STATES PATENT OFFICE

2,139,534

DISPLAY RECEPTACLE

Marshall I. Williamson, Edgewater, N. J.

Application April 23, 1936, Serial No. 75,926

12 Claims. (Cl. 206—44)

This invention relates to receptacles for the display of merchandise or the like, and more particularly to such receptacles prepared from sheet material and capable of collapse from set-up status to a flat storage and shipping status.

Display receptacles constructed pursuant to the present invention are characterized by a bin structure having a set of opposing walls normally locked against arm members of the receptacle when such receptacle is in set-up status, such opposing walls being capable of being folded inwardly toward one another in causing the receptacle to assume its flat storage and shipping status.

Advantageously, the display receptacle is formed from a single blank of sheet material, preferably a material of the nature of cardboard, cut to the proper configuration, and provided with the necessary score, cut, and fold lines at proper locations on its face.

In its essentials, such single blank is configurated to provide a display-forming section, and a bin-completing section extending integrally from an end of the display-forming section. The former section includes means for creating an aperture therein, and the latter section includes a set of oppositely positioned extensions capable of being folded inwardly toward one another for reception within the aforesaid aperture and support against appropriate defining edges thereof at the setting-up stage.

In preferred embodiments of the present invention the display-forming section of such single blank is provided with cut-lines or the like defining a tongue member, preferably rectangular in contour, of substantial magnitude relative to the area of the display-forming section and spaced apart from the edges thereof, the tip of the tongue being directed toward the bin-completing section. The area and configuration of the tongue member normally determine the area and configuration of the bin display opening, and the placement of the tongue relative to the respective edges of its including section is a factor determining the external configuration of the completely set-up display receptacle.

In such preferred embodiments, the tongue member and/or the portion of the blank thereabove, assuming the free end of the display-forming section to be the top of the blank, represent the back panel of the display receptacle when in set-up position; the portion of the display-forming section of the blank below the tongue member represents the front panel; and the portions of the blank laterally of the tongue member represent side arms defining, together with the back and front panels when the tongue member has been pushed out of planar coincidence with its surrounding sheet material preliminary to the assembling operation, a bin display opening. Such tongue member may either be retained as an integral and functional portion of the present display container to act as a structural wall for the container bin or as a display panel, or it may be removed partially or entirely by the provision of a cut line in the blank at an appropriate location near the base of the tongue member.

The bin-completing section of the blank is configurated and dimensioned and its component members are configurated and dimensioned for co-operation with the display-forming section in the formation of the set-up display container.

Accordingly, a panel member is provided of dimensions substantially equivalent to the dimensions of the tongue member of the display-forming section and thus to the dimensions of the resulting bin display opening, such panel member representing in the set-up container, the bottom panel of the bin. Extending laterally from such bottom panel are members dimensioned to serve, upon proper placement in the set-up position of the receptacle, as side panels of the bin. An extension from the bottom panel downwardly forming the lower end of the blank, is provided to afford means whereby the bottom panel may be secured to the back panel at an appropriate location to maintain the display container in assembled form whether in its set-up display position or its collapsed storage or shipping position.

Further features and objects of the invention will be more fully understood from the following detailed description together with the accompanying drawings, in which

Fig. 1 is a top-front perspective view of a preferred embodiment of the present invention fully assembled and in set-up position.

Fig. 2 is a vertical section on the line 2—2, Fig. 1.

Fig. 3 is a fragmentary front perspective view of the embodiment illustrated in Fig. 1, portions being broken away for clarity, and one side panel being shown in a position just prior to locking engagement with the front and back panels.

Fig. 4 is a detail view in horizontal section taken on the line 4—4, Fig. 1.

Fig. 5 is a plan view of the front face of the blank from which the embodiment of Fig. 1 was assembled.

Fig. 6 illustrates in front elevation the embodi-

ment of Fig. 1 in collapsed position ready for storage or shipping.

Fig. 7 is a vertical section taken on the line 7—7, Fig. 6.

Fig. 8 is a fragmentary view in vertical section taken centrally from front to back through another embodiment of the present invention.

Fig. 9 is a view corresponding to that of Fig. 7 of the embodiment illustrated in Fig. 8.

Fig. 10 is a view in back, side perspective of another embodiment of the present invention.

Fig. 11 is a view corresponding to that of Fig. 8. of a further embodiment of this invention.

Fig. 12 is a top-front perspective view of still another embodiment of the present invention in set-up display position.

Fig. 13 illustrates in plan the blank used in the formation of the embodiment of Fig. 12.

Referring to the drawings, Fig. 1 illustrates a preferred embodiment of the present invention in set-up form ready to receive suitable merchandise or the like for display and merchandising purposes. Such embodiment is advantageously assembled from a single, integral blank, see Fig. 5, of sheet material, usually cardboard, and comprises in its essentials a back panel 10, side arm members 11 and 12, a front panel 13, a bottom panel 14, and side panels 15 and 16, all related to one another to form a display receptacle having a considerable area of visible display surface, and a bin structure indicated generally at 17 of substantial voluminal capacity and substantial area of display opening.

The blank from which the display receptacle is advantageously assembled and set-up is configurated, and provided with suitable score, cut, and/or fold lines, according to the desired configuration of the completely set-up receptacle, and, as illustrated in Fig. 5, comprises a display-forming section, designated A, and a bin-completing section, designated B, extending integrally from one end of the display-forming section. The opposite or free end of the display-forming section, for convenience, is termed the top of the blank and the other respective sides of the blank are termed accordingly.

Score, cut, and/or crease lines are impressed upon the face of the blank to define the component members of each of the sections A and B, the two sections being divided from each other by the transverse score or crease line *a*.

The display-forming section A includes cut-lines defining a tongue member, as at 10*a*, preferably rectangular in shape and wholly spaced apart from the edges of the section A, with its free end or tip directed toward the section B. The free end or tip of the tongue may be configurated to provide in itself a back leg member 10*b*, and to provide at appropriate locations in the material there surrounding, locking notches 18, 18 for a purpose hereinafter made clear. Such tongue member 10*a*, together with the portion of the blank extending upwardly therefrom constitutes the back panel 10 of the set-up receptacle.

The material of the blank lying laterally of the tongue member 10*a* comprises the side arms 11 and 12, such side arms 11 and 12 being further defined by the score or crease lines *b*, *b* and *c*, *c* respectively.

Proximate the base of the tongue member 10*c* and extending inwardly from the lateral sides of same may be provided by a suitable combination of cut and crease lines as shown, the locking-slot means 19, 19 for a purpose to be hereinafter explained.

The portion of the blank lying below the tongue member 10*a* and below the side arm members 11 and 12 which together form the section A, constitutes the front panel 13 of the set-up receptacle, and serves to integrally connect section A with section B. Portions of such front panel 13 proximate its lateral sides may conveniently extend slightly below the section-dividing crease line *a* and meet cut lines *d*, *d* to form the front leg members 13*a*, 13*a*.

The bin-completing section B is configurated and provided with the necessary crease lines, specifically in the embodiment shown the longitudinal crease lines *e*, *e* and the latitudinal crease line *f* cooperating with the section-dividing crease line *a*, to form the bottom panel member 14, having an area approximately coextensive with the area of the tongue member 10*a*, and thus of the area of the bin-display opening afforded by the set-up receptacle, and further to form side-panel members 15 and 16 extending from respective lateral sides of the bottom panel member, and advantageously a securing lap 20, extending from the lower end of the bottom panel member. Desirably, as shown, the crease line *f* between the bottom panel member and the securing lap is broken centrally by a cut-line directed to afford a tuck lock member, 21, for mutual coordination with a like tuck lock member 22 provided at a suitable location in the tongue member 10*a*.

The component members of section B, as specified above, are related to one another and to the component members of section A with respect to configuration and relative placement in the blank for cooperation in the assembling and the setting-up of the display receptacle.

Advantageously, in this connection, the side-panel members 15 and 16 are each provided with a locking protuberance 15*a* and 16*a* respectively at their upper ends for interlocking with the notches 18 of the front panel 13, and a locking protuberance 15*b* and 16*b* respectively at their lower ends for interlocking with the slot-means 19, in a manner to be explained. The side-panel members 15 and 16 are preferably parallelograms whose angular relations are determined according to the degree of slope desired for the bottom of the bin.

To assemble and set up the described embodiment of display receptacle from its flat, blank status, the tongue member 10*a* of display-forming section A is pushed backward out of planar coincidence with its surrounding sheet material, and the side-arm members 11 and 12, together with the portions of the blank depending therefrom, are brought forward and upward, folding on the crease lines *b* and *c*. Such side-arm members, in conjunction with the back panel 10 and the front panel 13, define a bin display opening of an area equal to the area of the tongue member 10*a*. The side-panel members 15 and 16 of the bin-completing section B are then bent backwardly against the back face of the bottom panel member 14 on the crease lines *e*, *e*, as is also the securing lap 20 on the crease line *f*, and the entire section B is folded backwardly and upwardly on the section-dividing crease line *a* until the tuck-lock member 21 of the securing lap is brought into engagement with its coordinating tuck-lock member 22 of the tongue member, the bottom panel member 14 thus becoming the bottom panel of the bin of the

receptacle. The side panel members 15 and 16 are then raised, as illustrated in Fig. 3, to bear against the inside edges of the side-arm members 11 and 12 respectively, the locking protuberances 15a, 16a and 15b, 16b engaging their respective locking notches 18, 18 and locking-slots 19, 19 respectively, the latter engagement being illustrated in detail in Fig. 4, to afford securement for the side-panel members in this set-up position. Such side-panel members now become the side panels of the bin 17 of the display receptacle. As illustrated, the side-arms lie in planes which are angularly related to the planes in which the side panels of the bin 17 lie.

The receptacle in its set-up status, Fig. 1, is adapted to display merchandise retained in the bin 17. It will be noted that all important visual surfaces thereof in its set-up position were grouped on one face of the blank, and thus were capable of being impressed with suitable display indicia or decoration in one operation.

For the purposes of storage or shipping, the set-up receptacle may be collapsed to a substantially flat status, see Figs. 6 and 7, without disassembly, the side-panels 15 and 16 being folded inwardly against the bottom panel 14, to effect this result. Collapse of the remainder of the container is afforded by the bending function of the appropriate crease lines. A subsequent re-setting-up of the container necessitates only raising the side panels 15 and 16 to locking position.

The convenience with which the present display receptacle can be collapsed from set-up status to a substantially flat status and vice versa permits the permanent securement, see Fig. 8, of the bottom panel, here designated 14', relative to the back panel 10' as for instance by gluing, see 25, where it is advantageous to use such method of securement, without losing the spacial storage and shipping advantages offered by the flat, blank status. Such permanently assembled receptacle is illustrated in its collapsed status in Fig. 9.

If, in the blank illustrated in Fig. 5, the lower crease lines b, c are connected by a straight line cut, rather than being connected by the configurated cut-line as shown, and the free end of the tongue member 10a is provided at its lateral sides with a combination of vertical crease lines, indicated in Fig. 10 at 31, and diagonal cut lines, indicated in Fig. 10 at 32, the set-up receptacle will assume the form illustrated in Fig. 10 in which lateral wing members 33 and 34 serve as additional supports for the back panel. In such embodiment of the present invention, the lock notches 18, 18 and the therewith cooperating locking protuberances 15a and 16a are eliminated, and the side panels are retained in position by the lock slots 19, 19 and the therewith coordinating locking protuberances 15b, 16b.

As clearly illustrated at 35, Fig. 10, the provision of the front feet 13a, 13a in each of the illustrated embodiments of this invention provides a cutting away of a portion of the material of the side panels at the indicated location, which material would otherwise have a tendency to bind in the collapsing of the receptacle.

If desired, the back leg 10b of the receptacle may be reinforced and materially strengthened by increasing the length of the securing tab 20, and folding such tab forward on its crease line during the assembling operation, to make such tab 20 substantially coextensive with the back leg 10b in the assembled receptacle as illustrated in Fig. 11.

Referring now to Figs. 12 and 13 which illustrate another embodiment of the present invention wherein the hereinbefore described tongue member is eliminated in its entirety from the blank; Fig. 13 illustrates a blank comprising the display forming section 41 and the bin-completing section 42, the former including cut lines g defining what would be in previously described embodiments a tongue member, but which here takes the form of an aperture 43 because of the additional defining cut line h. The panel member 44 in the present embodiment becomes the back panel of the set-up receptacle, rather than a display panel as at 10, Fig. 1. The remaining portions of the display-forming section 41, including the side-arms 45 and 46, and the component members of the bin-completing section 42, including the bottom panel 48, the side panels 49 and 50, and the securing tab 51, remain in form and function substantially unchanged over hereinbefore described embodiments. Also the front panel 47 serves to integrally connect the display-forming section and the bin-completing section.

In assembling the instant embodiment from the blank status of Fig. 13 to the set up status of Fig. 12, the back-panel 44 and the front panel 47 are folded backwardly at substantially right angles to the side-arms 45 and 46, the side panels 49 and 50 are folded back against the underside of bottom panel 42, and the securing tab 51 is folded back at substantially right angles to the bottom panel. Thereupon, the bin completing section 42 is folded back on the dividing fold line j, the tab 51 secured, as by gluing, to the back panel 44, and the side walls 49 and 50 are raised into locking position against the inner edges of the side-arms 45 and 46.

Collapse of the instant embodiment to a flat shipping or storage status is accomplished, as in hereinbefore described embodiments, by folding the side panels 49 and 50 inwardly toward each other. Setting-up of the receptacle from its collapsed status entails merely raising the side panels 49 and 50 to their locking position.

Generically, embodiments of the invention may be described as being of tubular construction having an aperture formed in one of the walls of the tube and having bin walls extending from the wall of the tube which is opposite the aperture, for engaging the first mentioned tube wall at the ends of the aperture, the tube walls being provided with fold lines at appropriately spaced locations along their lengths for affording collapse of the structure when the bin walls are folded down flush with the last mentioned wall of the tube.

Whereas this invention has been described by reference to specific forms thereof, it will be understood that many changes and modifications may be made without departing from the spirit of the invention as set forth in the following claims.

I claim:

1. In a display receptacle formed of sheet material and collapsible from set-up status to a flat storage or shipping status, a bin structure comprising a back wall, side-arms extending forwardly from the lateral sides of said back wall and spaced apart upwardly from the bottom of same, said side-arms defining therebetween a display-aperture, a front wall extending downwardly from the forward ends of said side-arms, a bottom panel extending backwardly from the lower end of said front panel and secured to said back panel, and side walls extending upwardly from respective lateral sides of said bottom panel and disposed in engagement with the inner edges of

said side-arms, said side walls being capable of collapse inwardly toward one another in effecting collapse of the display receptacle as an entirety.

2. A display container formed from a single blank of sheet material, comprising a back panel, side-arm members extending forwardly from the lateral sides of said back panel at locations intermediate the top and bottom of same and defining a display opening therebetween, a front panel extending downwardly from and between the forward ends of said side-arms to substantially the level of the bottom end of said back panel, a bottom panel extending between said front and said back panels and approximately coextensive with said display opening, and side panels extending upwardly, between said front and said back panels, from the lateral sides of said bottom panel to at least the top surface level of said side-arms.

3. A display container, formed from a single blank of sheet material, comprising a back panel, side-arm members extending forwardly from the lateral sides of said back panel at locations intermediate the top and bottom of same and defining a display opening therebetween, a front panel extending downwardly from and between the forward ends of said side-arms to substantially the level of the bottom end of said back panel, a bottom panel extending between said front and said back panels and approximately coextensive with said display opening, said bottom panel sloping upwardly from the front to the rear end of the bottom panel, a flap extending from the rear end of the bottom panel, said flap being secured to the back panel, and side panels extending upwardly between said front and said back panels, from the lateral sides of said bottom panel to at least the top surface level of said side-arms.

4. A display container formed from a single blank of sheet material comprising a rear panel, side-arms extending integrally from and forwardly of the lateral sides of the back panel at locations intermediate the top and bottom of same and serving to define between each other a display opening, a front panel extending integrally downwardly from and between the forward ends of the side-arms to substantially the level of the bottom end of the back panel, a bottom panel extending integrally backwardly from the front panel proximate its bottom end and from a location intermediate its lateral sides, said bottom panel being approximately coextensive with, but spaced apart vertically from the display opening, means for securing the free end of the bottom panel to the back panel, and side panels extending integrally upwardly from the lateral sides of the bottom panel, and between the front and back panels, to meet the side arms and thus complete the formation of a bin in said display container.

5. A bin provided display receptacle formed from foldable stiff sheet material, comprising a tubular structure having an aperture defined in one of its walls, and bin-forming walls articulatively extending from the wall of the tubular structure, located opposite the aperture, for engagement with the aperture-defining wall of the tubular structure at the ends of the aperture, the walls of the tubular structure being provided with fold lines along their length for affording collapse of the structure when the bin-forming walls are folded down flush with the said wall of the tubular structure located opposite the aperture.

6. A blank for forming a bin provided display receptacle, comprising a sheet of foldable stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including aperture defining means placed wholly within and spaced apart from the edges of the blank; and said bin-completing section including a main panel and panels extending integrally, respectively, from opposite lateral sides of said main panel for cooperation with opposite lateral side portions of the said aperture defining means in forming lateral walls for the bin of the display receptacle which may be set up from the blank.

7. A blank for forming a bin provided display receptacle, comprising a sheet of foldable stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including aperture defining means placed wholly within and spaced apart from the edges of the blank; and said bin-completing section including a main panel and panels extending integrally, respectively, and at mutually similar angles other than the perpendicular, from opposite lateral sides of said main panel for cooperation with opposite lateral side portions of the said aperture defining means in forming lateral walls for the bin of the display receptacle which may be set up from the blank.

8. A blank for forming a bin provided display receptacle, comprising a sheet of foldable stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including a tongue portion, defined by cut lines, and placed wholly within and spaced apart from the edges of the blank with its tip directed toward the bin-completing section, the tongue per se becoming the back wall of the bin of the set-up receptacle, and the portions of the blank laterally of the tongue becoming side arms defining between each other the display opening of the said bin; said bin-completing section including a main panel and panels extending integrally, respectively, from opposite lateral sides of said main panel for cooperation with respective inner edges of said side arms in forming lateral walls for the said bin, the said main panel becoming the bottom of said bin, and said wall-forming panel becoming the front wall of the bin.

9. A blank for forming a bin provided display receptacle, comprising a sheet of folding stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including a tongue portion, defined by cut lines, and placed wholly within and spaced apart from the edges of the blank with its tip directed toward the bin-completing section, the tongue per se becoming the back wall of the bin of the set-up receptacle, and the portions of the blank laterally of the tongue becoming side arms defining between each other the display opening of the said bin; said bin-completing section including a main panel and panels extending integrally, respectively, from opposite lateral sides of said main panel for cooperation with respective inner edges of said side arms in forming lateral walls for the said bin, the said main panel becoming the bot-

tom of said bin and having an area substantially coextensive with the said tongue, and said wall-forming panel becoming the front wall of the bin.

10. A blank for forming a bin provided display receptacle, comprising a sheet of foldable stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including a tongue portion, defined by cut lines, and placed wholly within and spaced apart from the edges of the blank with its tip directed toward the bin-completing section, the tongue per se becoming the back wall of the bin of the set-up receptacle, and the portions of the blank laterally of the tongue becoming side arms defining between each other the display opening of the said bin; said bin-completing section including a main panel and panels extending integrally, respectively, from opposite lateral sides of said main panel for cooperation with respective inner edges of said side arms in forming lateral walls for the said bin, the said main panel becoming the bottom of said bin, and said wall-forming panel becoming the front wall of the bin; and means for securing the main panel of the bin-completing section near its free end to the said tongue, the said extending panels being angularly related, mutually similarly, to the main panel from which they extend, the said angularity determining the location of securement of the free end of the bin-completing section to the tongue.

11. A blank for forming a bin provided display receptacle, comprising a sheet of foldable stiff material having a display-forming section at one end, and a bin-completing section at the opposite end, the two being integrally connected by a wall-forming panel; said display-forming section including aperture defining means placed wholly within and spaced apart from the edges of the blank; said bin-completing section including a main panel and panels extending integrally, respectively, from opposite lateral sides of said main panel for cooperation with opposite lateral side portions of the said aperture defining means in forming lateral walls for the bin of the display receptacle which may be set up from the blank; and means for locking said extending panels in bin-wall status upon setting up of the blank.

12. A foldable display receptacle formed from a single blank of sheet material comprising a back panel, side arms extending from said back panel at a location intermediate the length thereof, a bottom panel, means connecting the forward portions of said side arms with said bottom panel, said side wall panels fitting against the inner edges of said side arms and adapted to fold inwardly upon each other when the display receptacle is collapsed, said side arms lying in planes which are angularly related to the planes in which said side wall panels lie when fitting against said inner edges of the side arms.

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