Aug. 6, 1940. A. BOCKMAN 2,210,566

DISPLAY RECEPTACLE

Filed Sept. 2, 1939 2 Sheets-Sheet 1

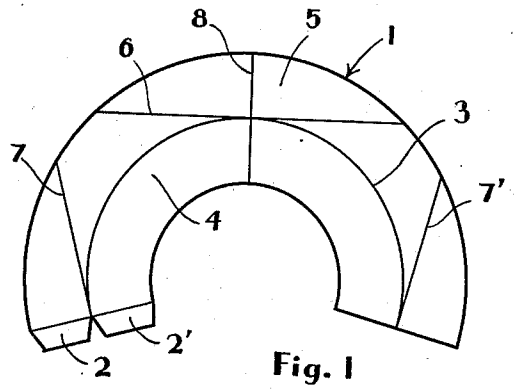


Fig. 1

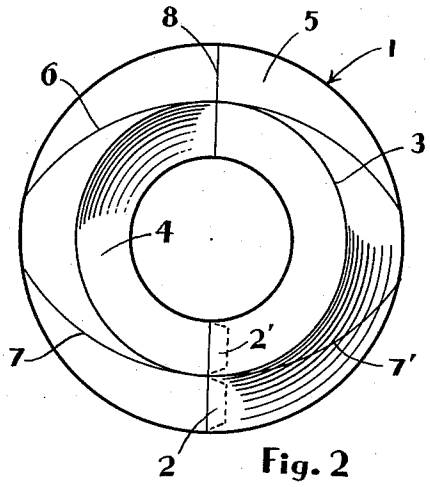


Fig. 2

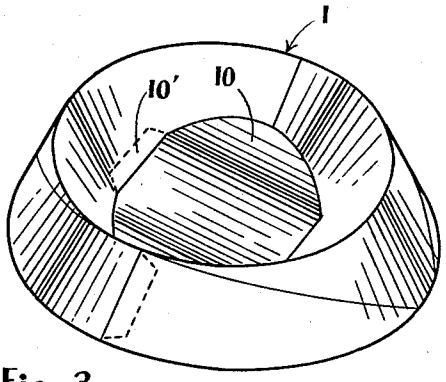


Fig. 3

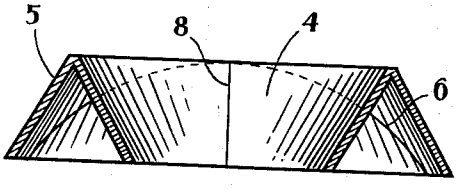


Fig. 4

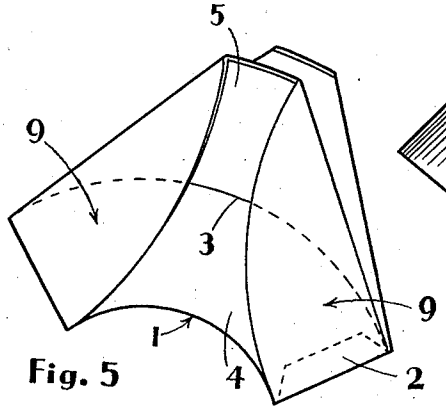


Fig. 5

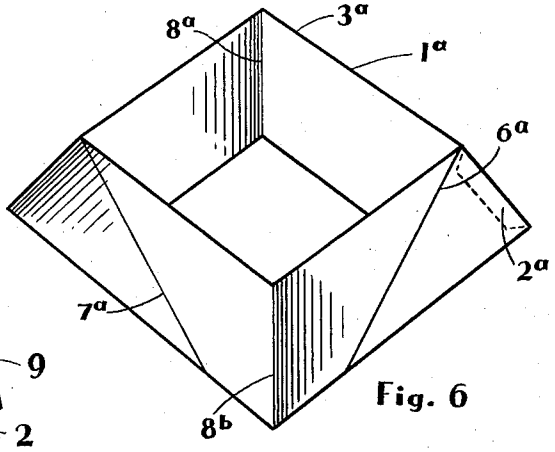


Fig. 6

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Aug. 6, 1940. A. BOCKMAN 2,210,566

DISPLAY RECEPTACLE

Filed Sept. 2, 1939 2 Sheets-Sheet 2

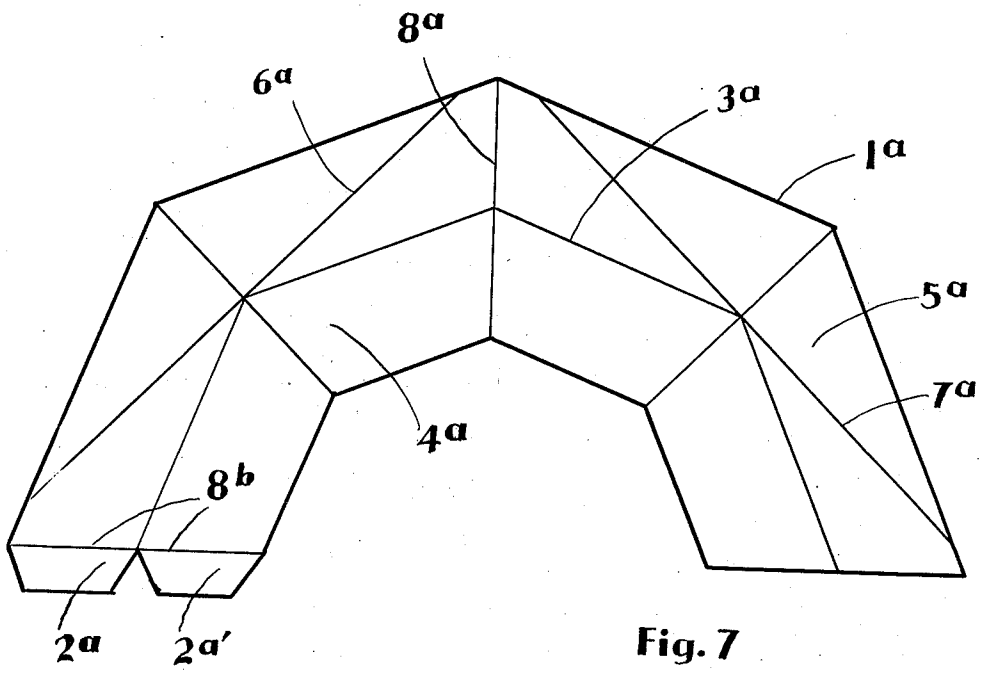


Fig. 7

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2,210,566

UNITED STATES PATENT OFFICE

2,210,566

DISPLAY RECEPTACLE

Arthur Bockman, Chicago, Ill.

Application September 2, 1938, Serial No. 228,082

8 Claims. (Cl. 229—41)

This invention relates to improvements in display receptacles, and particularly, to that type of receptacle used to receive and display various articles, commonly characterized in the trade as a "jumbled tray," the invention having for an object to provide a receptacle of the stated character, capable of being flatly folded when in inoperative condition, and, when in operative condition, being form-sustaining within itself notwithstanding the degree of stress imparted thereto by articles contained therewithin.

It is also an object of the invention to provide a display receptacle which, when expanded and arranged in operative position, will have its rigidity and stability increased by the weight thereupon of those articles contained within the same, due to the novel construction of its side and retaining walls.

Furthermore, another object of the invention is to provide a receptacle so constructed that it may be adjusted to its "open" or operative position with but a minimum of effort and by simple and easy movement of parts thereof, and moreover, capable of being as easily and simply folded into "closed" or inoperative position, in which state it will assume a completely flat and space-conserving shape and size, hence, materially facilitating packing or shipping thereof.

Yet another object of the invention resides in providing a foldable display receptacle manufacturable at a minimum of cost and providing a maximum of advertising area upon its exposed surfaces, such advertising as presented upon said surfaces being capable of being printed thereon when the receptacle is in a blank form state prior to its assembly.

Other objects of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those skilled in the art to which it appertains, I have, in the accompanying drawings and the detailed description based thereupon, set out several embodiments of my invention.

In these drawings:

Figure 1 is a plan view of the blank form comprising my invention;

Figure 2 is a top view of the invention in its "open" or operative position;

Figure 3 is a perspective view of a slightly modified form of the receptacle, wherein the same is provided with a foldable bottom;

Figure 4 is a side elevation of the receptacle and particularly, of those forms illustrated in the Figures 2 and 3 with a part shown in transverse section;

Figure 5 is a perspective of that form of the receptacle illustrated in the Figures 1 and 2, showing the same in its "closed" or inoperative or folded position;

Figure 6 is a perspective of another slightly modified form of the invention, and

Figure 7 is a plan view of the blank form of invention illustrated by Figure 6.

Having more particular reference to the drawings, in connection with which like characters of reference will designate corresponding parts throughout, and especially referring to the form of the invention illustrated in the Figures 1, 2, 4, and 5, the receptacle is constituted from a blank patterned form, generally designated by the numeral 1, consisting of a sheet of flat material, such as heavy gauge paper, cardboard of suitable gauge, etc., cut into substantially semi-circular form, as well illustrated in the Figure 1 of the accompanying drawings, one extremity of the blank being provided with flaps 2 and 2' which are adapted to have adhering or other fixed engagement with appropriate portions of the opposite end of the semi-circular blank 1, as will be hereinafter apparent and more specifically described. Disposed intermediately of and substantially parallel to the side marginal portions of the blank 1 and extending throughout the same is a semi-circularly shaped weakened line or scoring or the like 3, providing for continuous articulation between the portions 4 and 5 of said blank, such portions constituting the inner and outer walls of the receptacle body, with formation thereof. A straight weakened line or scoring 6 is formed in the normally outer wall 5 of the blank 1 and has an intermediate portion thereof contacting with an adjacent intermediate portion of the semi-circular line 3. Other straight weakened lines or scorings 7 and 7' are also formed on the normally outer wall 5 of the blank or body 1 and, as will be noted upon reference to the Figure 1 of the accompanying drawings, these lines are disposed tangentially to the semi-circular weakened line 3 and at acute angles to the straight weakened line 6, and moreover, that they extend to the marginal portions of the blank or body 1 and are in outwardly spaced relation to the opposite ends of said straight line 6; these weakened lines 7 and 7', together with the weakened line 6, serving to provide articulation between adjacent portions of the blank 1. Still another straight weakened line or scoring 8 is formed on the blank 1 and is disposed trans-

versely thereof or at right angles to the straight weakened line 6, the same being medially arranged as respects the blank 1.

In forming or effecting the improved receptacle with the blank construction previously described and illustrated in Figure 1 of the accompanying drawings, the same is flexed along the semi-circular weakened line 3 so that the portions 4 and 5 of the blank or body are brought into relatively inverted V-shaped formation or relationship, as is shown in Figure 4 of the accompanying drawings, whereupon that end of the body carrying the flaps 2 and 2' is brought into meeting relationship to the opposite end of such body and are fixedly connected to the undersides or surfaces of such adjacent portions by adhesive or other suitable means, after the fashion as illustrated in Figure 2. In this way, and particularly referring to the Figures 2 and 3 of the accompanying drawings, it will be noted that a circular receptacle or tray will be constituted having cross-sectionally inverted V-shaped walls and providing an intermediate area or chamber for receiving various articles or matters to be contained and displayed thereby. At this point, it may be noted that the receptacle will be positively retained in its "open" or operative position by reason of the application of the weight of the contained articles upon the inner wall 4 of the receptacle, the resulting action tending to outwardly and downwardly stress said inner wall 4 and, by consequence, maintaining the circular formation of the receptacle.

When it is desired to effect folding collapse of the receptacle, i. e., fold the same to its "closed" or inoperative position, inward thrust is imparted to the opposite sides of the now "open" tray, causing opposite portions of the wall 5 to hinge or swing inwardly. This movement, in turn, will transmit transverse hinged movement along the weakened line 8 and the oppositely hinged connection of the flaps 2 and 2' with the meeting end of the body 1 to the relatively opposite portions of said body, permitting the same to be flatly folded to that position as shown in the Figure 5 of the accompanying drawings, wherein said opposite portions of the body will be arranged in substantial parallelism with the inwardly folded portions 9 of the outer wall 5 arranged as is also therein shown. Thus, the "closed" or inoperatively positioned receptacle may be conveniently handled, packed, or otherwise arranged or placed in a materially limited space. Moreover, it will be appreciated that with the receptacle in its "closed" or inoperative position, as just described, a number of the same may be arranged or packed in superposed relation and, in so doing, effect a great saving of shipping or storage space.

As illustrated in Figure 3 of the drawings, the circular type of receptacle may, if desired, be equipped with a bottom, now designated for convenience by the numeral 10, the same being integrally formed with an inner marginal portion of the inner wall 4 of the receptacle body, and being shaped and sized so that the same will approximately conform with the circular opening formed within said receptacle upon its arrangement in an "open" or operative condition; a tongue or other extension 10' being carried upon the opposite free end of the bottom and adapted to have overlapping engagement with an adjacent portion of said inner wall 4, as is shown in said Figure 3. Of course, if desired, various other forms of detachable or interconnecting means other than the extension 10' may be used for effecting connection between the free end of the bottom 10 and the adjacent portion of the body 4 of the receptacle. Also, if desired, the bottom 10 may be formed separate from the receptacle and may be attached to an appropriate portion of its inner wall 4 by suitable connecting means (not shown).

Instead of producing my improved receptacle in circular formation, as hereinbefore described, it is to be understood that the shape of such receptacle may be changed or varied, as for example, the receptacle may be of substantially square formation, as illustrated in Figure 6 of the accompanying drawings, wherein the body 1^a is formed with an angularly shaped weakened line or scoring intermediately of and substantially parallel to the marginal portions of the same from which the same is constituted, as indicated by the numeral 3^a; flaps 2^a being formed upon one of the free ends of said blank and adapted to have connection with the opposite end of the blank, as heretofore described in connection with the form of invention illustrated in Figure 1 hereof. Weakened lines or scorings 6^a and 7^a are formed in portions of the outer wall of the body and correspond to the weakened lines 6, 7, and 7' of the first described embodiment of the invention, and obviously, function in a manner corresponding thereto. Thus, to arrange the receptacle in its "open" position, the folded portions of the body are swung outwardly until it assumes such position shown in Figure 6, whereupon, the now "open" receptacle is arranged upon a suitable receiving surface and is ready for usage. To close the receptacle, those opposite corner portions of the same in proximity to the weakened lines 6^a and 7^a are thrust inwardly and, at the same time, the opposite portions of the receptacle body will transversely hinge along the hinged joints 8^a and 8^b at the opposite corners of the receptacle, thereby permitting the body to be folded into a "closed" or relatively flat condition.

It will be understood that when the improved receptacle is in an "open" or operative position, the same assumes a substantially truncated conical or truncated pyramidal (see Figures 3 and 6) formation, and also, that by reason of the inverted V-shaped cross-sectional shape of the walls constituting the receptacle, that the greater the downward stress upon its sides, the greater or more positive will be its retention in "open" or operative position. The receptacle will afford a device capable of retaining various articles of considerable weight in attractive, unique, and ornamental display and, by reason of its construction, as hereinbefore described, will embody relatively strong and durable characteristics as well as constituting a receptacle capable of being instantly folded to "closed" or inoperative positions during periods of non-usage, packing, shipping, etc.

The exposed surfaces of the receptacle afford an advantageous area for the presentation of various characters or forms of advertising matter, the same being preferably printed or otherwise suitably presented thereon, for economical reasons, when the body of the receptacle is in its blank form, as for example, in the form shown in the Figure 1 of the accompanying drawings.

Manifestly, the construction shown is capable of further modification, and such modification as is within the scope of my claims, I consider within the spirit of my invention.

I claim:

1. A folded receptacle, comprising a body of substantially inverted V-shaped cross sectional shape articulated at the meeting edges thereof, said body being also articulated at substantially right angles to said first articulation thereon at opposite points, and having portions of its outer walls articulated along lines tangential to said first articulation.

2. A foldable receptacle, comprising inner and outer walls arranged in relative angular formation and hingedly connected at their normally upper sides, said body being also articulated at substantially right angles to the hinged connection at relatively opposite points, and the normally outer wall of the body having portions of the same articulated along lines tangential to said hinged connection.

3. A foldable receptacle, comprising a body of substantially inverted V-shaped cross-sectional shape, articulated along the apex thereof, said body being also articulated at substantially right angles to said first articulation at relatively opposite points and having other portions of its outer walls articulated along lines tangential to said first articulation, the last mentioned articulations contacting with portions of the first mentioned articulation and terminating adjacent the normally lower sides of the outer walls of the body in spaced relation.

4. A foldable receptacle, comprising a body of substantially inverted V-shaped cross-sectional formation, articulated adjacent and entirely about the apex thereof, the body being also articulated at substantially right angles to said first articulation at relatively opposite points, and having other portions of its outer walls articulated along lines tangential to the first mentioned articulation, portions of which contact with portions of the first mentioned articulation and the outer ends thereof terminating adjacent the lower sides of said outer walls of the receptacle in spaced relationship.

5. A foldable receptacle, comprising relatively angularly disposed inner and outer walls hingedly connected at and entirely about their upper sides, said walls being transversely articulated therethroughout at relatively opposite points and the outer wall being articulated along lines tangential to said hinged connection, portions of such articulations contacting portions of said hinged connection and the extremities thereof terminating adjacent the lower sides of said outer walls in spaced relationship.

6. A foldable receptacle blank, comprising a sheetlike body having a medially arranged weakened line formed therein and extending throughout its length, a straight weakened line formed in a portion of the body outwardly of the medially arranged weakened line, terminating at the margins of the body and medially contacting a portion of the first mentioned weakened line, other weakened lines formed in the body disposed tangentially to said first mentioned weakened line and having certain of their ends contacting the extremities thereof and their remaining ends terminating adjacent portions of the body outer margins in spaced relation to the opposite ends of the second mentioned weakened line, a transversely disposed weakened line formed in the body medially of the same bisecting the first and second mentioned weakened lines, and means on the body for interconnecting the opposite ends thereof.

7. A foldable receptacle blank, comprising a semi-circular sheet-like body having a medially arranged weakened line formed therein and extending throughout its length, said weakened line being parallel to the side margins of the body, a straight weakened line formed in a portion of the body outwardly of the medially arranged weakened line terminating at the outer margins of the body and medially contacting a portion of the first mentioned weakened line, other straight weakened lines formed in the body outwardly of said first mentioned weakened line and disposed tangentially thereto, having certain of their ends meeting the extremities of the first mentioned weakened line and their remaining extremities terminated adjacent portions of the body outer margins in spaced relation to the opposite ends of the second mentioned weakened line, a transversely disposed weakened line formed in the body medially of the same bisecting the first and second mentioned weakened lines, and means on the body for interconnecting the opposite ends thereof.

8. A foldable receptacle blank, comprising an angularly formed sheetlike body having a medially arranged weakened line formed therein and extending throughout its length in parallelism to the side marginal portions thereof, a straight weakened line formed in a portion of the body outwardly of the medially arranged weakened line terminating at the outer margins of the body and medially contacting a portion of the first mentioned weakened line, other straight weakened lines formed in the body outwardly of the first mentioned weakened line, disposed tangentially thereto, and having certain of their ends contacting the extremities of said first mentioned weakened line and their remaining ends terminated adjacent portions of the body outer margins in spaced relation to the opposite ends of the second mentioned weakened line, a transversely disposed weakened line in the body medially of the same and bisecting the first and second mentioned weakened lines, and means on the body for interconnecting the opposite ends thereof.

ARTHUR BOCKMAN.