

June 19, 1923.

1,459,706

G. C. MACDONALD

CORRUGATED DISPLAY RACK

Filed March 25, 1922

2 Sheets-Sheet 1

Fig. 1.

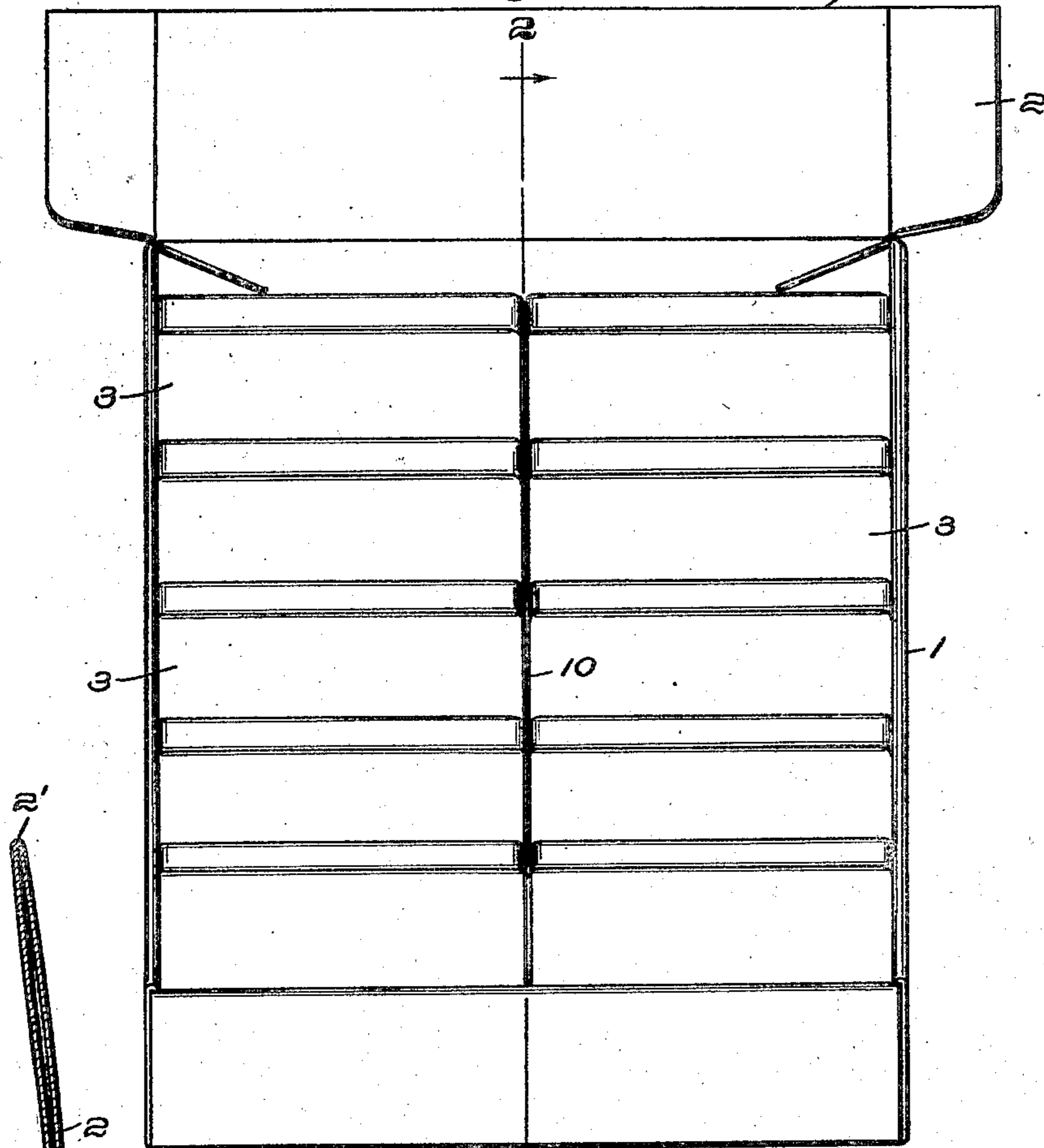
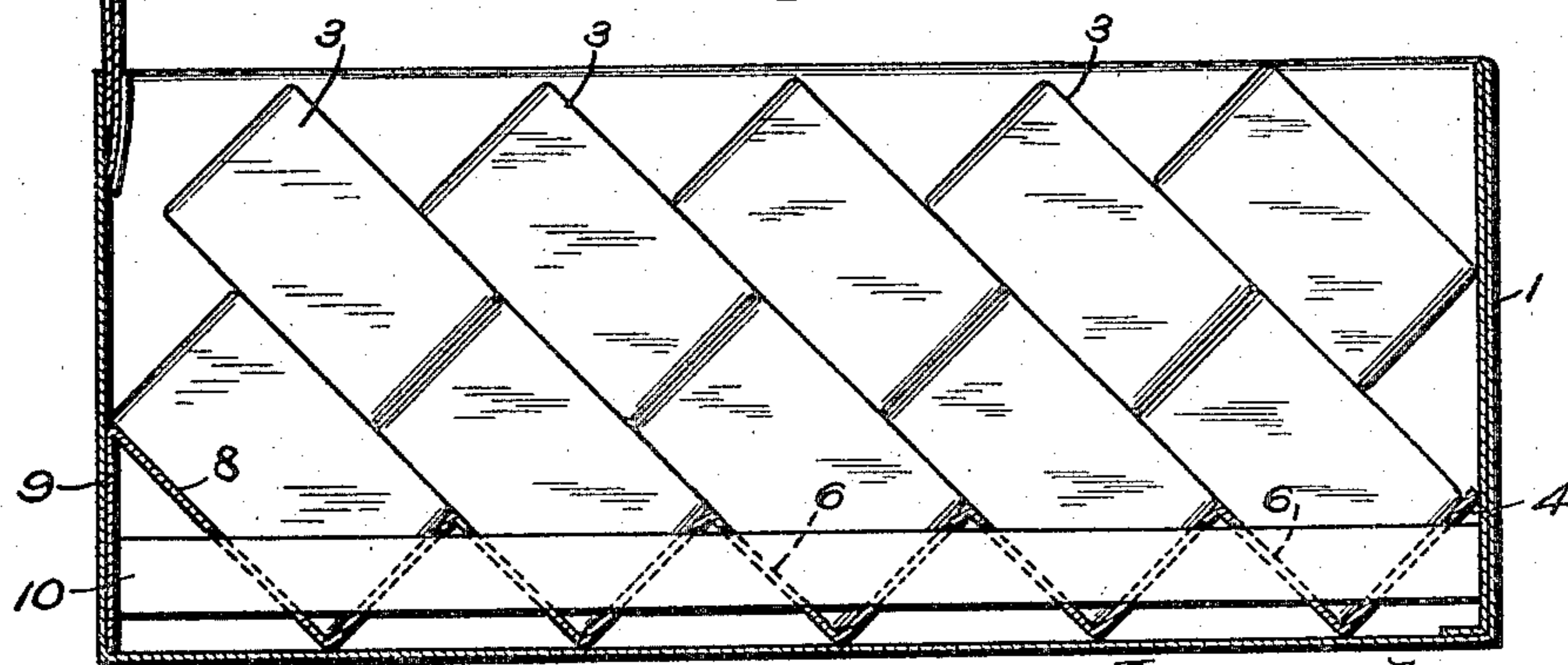


Fig. 2.



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2 Sheets-Sheet 2

Fig. 3.

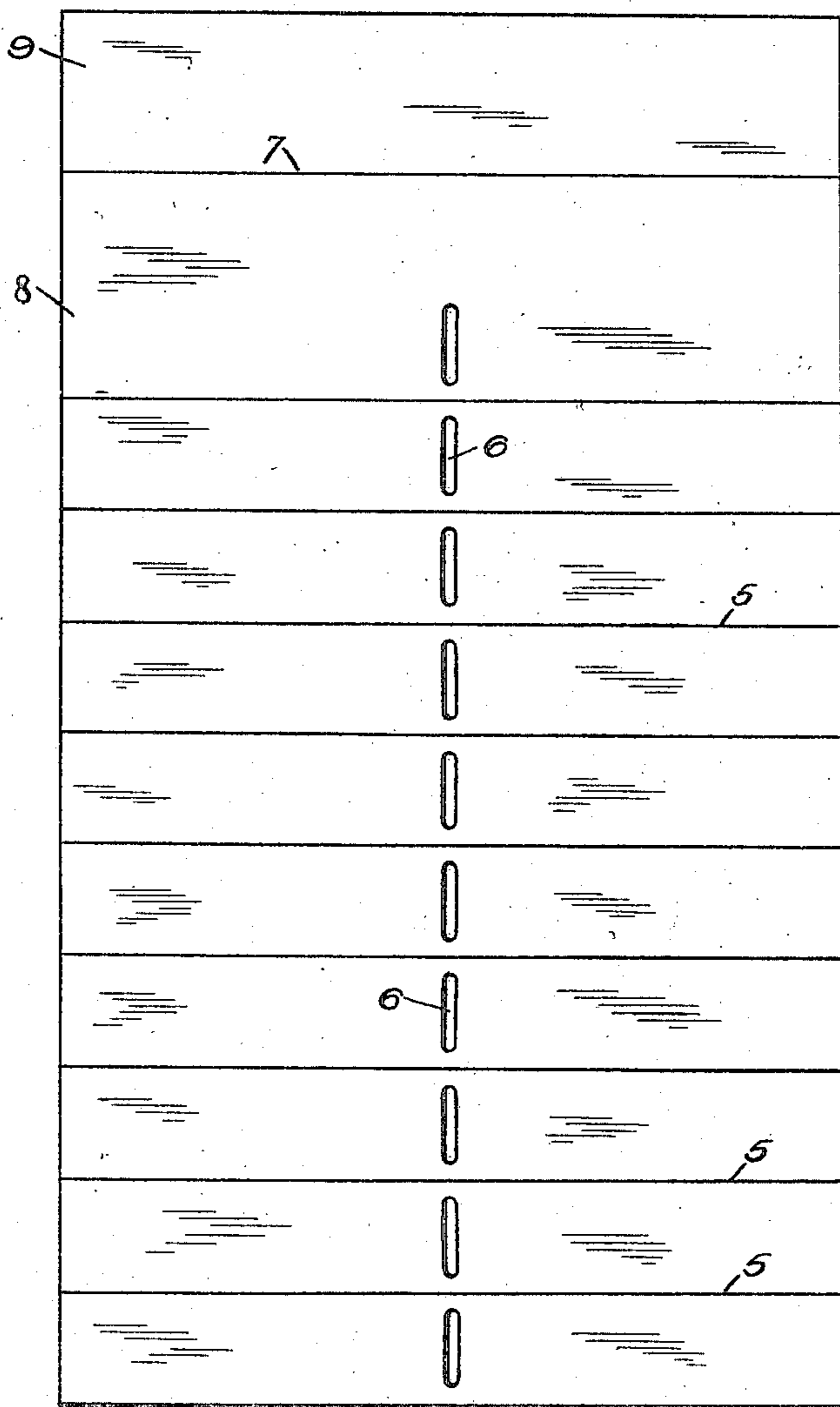
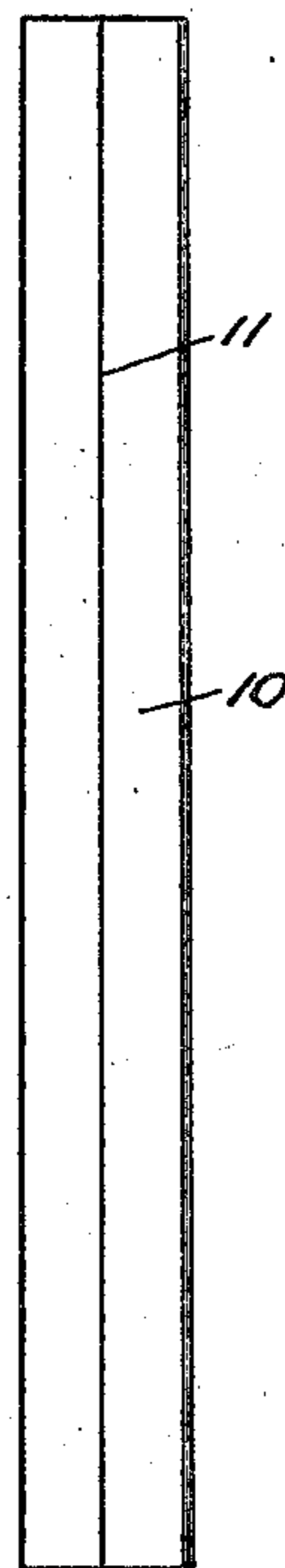


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CORRUGATED DISPLAY RACK.

Application filed March 25, 1922. Serial No. 546,721.

To all whom it may concern:

Be it known that I, GEORGE C. MACDONALD, a citizen of the United States, and a resident of Elmhurst, in the county of Queens and State of New York, have invented an Improvement in Corrugated Display Racks, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to packaging and displaying commodities, and particularly but not exclusively to a display device for use with containers for holding confections, crackers or the like for shipment and for more advantageous vending and distribution.

In order that the principle of the invention may be readily understood I have disclosed in the accompanying drawings a single embodiment chosen for illustrative purposes.

In the drawings:

Fig. 1 is a view in perspective of a carton and contents in position for display;

Fig. 2 is a vertical section on the line 2—2 of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a plan view of the display rack as it appears before folding; and

Fig. 4 is a detail view.

In displaying commodities it has heretofore been necessary, so far as I am aware, to incline the entire container, in a difficult and unattractive manner or else to rearrange the articles in the shipping carton by tilting a portion or all of the upper layer of articles by means of special trays or easels. My invention, however, contemplates packaging the articles for shipment in position for display without rearrangement and enables the container to rest firmly in horizontal position while displaying the contained articles at an attractive angle.

In the particular embodiment of my invention chosen for illustrative purposes I have shown in Figs. 1 and 2 a carton 1 which may be of paste-board or other suitable material. Said carton or receptacle is preferably of the type having an attached flap cover indicated at 2. Said cover 2 is shown as foldable along its transverse median line at 2' enabling its lower edge to be inserted within one end wall of the carton or recep-

tacle. The folded cover thus forms a convenient flap or strip integral with the box or carton presenting an area for inscription or lettering for display purposes. The receptacle is proportioned, in the form shown, to receive a double row of articles, or packages of wafers, crackers or the like, of which I have indicated a plurality at 3, 3, placed in alignment both transversely and longitudinally of the carton.

In order so to arrange the articles or packages 3 as to present them most advantageously for display, I provide means for holding the same in the shipping receptacle at an inclination to the horizontal of approximately 45°. To this end I have provided a rack member 4 shown in assembled position in Fig. 2 and in detail in Fig. 3. Said rack member 4 may be formed of cardboard, fiber, or other suitable material, but as shown is of cardboard of medium weight and thickness. As best seen in Fig. 3, said rack member is formed from a sheet of such suitable material substantially rectangular in form which is folded transversely along parallel lines as indicated at 5. Said parallel lines or folds are preferably equally spaced longitudinally of the rack and in the strip portion between each fold there are cut out or stamped perforations, indicated at 6. Said perforations 6 are shown in the form of elongated slots placed in alignment longitudinally of the rack member, and arranged along substantially the longitudinal median line of said rack member.

Near one end the rack member is folded as at 7 to provide a strip 8 of greater dimension transversely of said strip than the strip portions formed by the folds 5, said strip 8 preferably being of approximately the same width as one of the articles or packages to be displayed. Beyond said strip 7 the rack terminates in an end portion 9 of width intermediate between that of the strip 8 and the strip portions formed by the folds 5.

In Fig. 2 I have shown the rack member in folded form and placed within the carton in position for receiving the articles to be displayed. When folded said rack member 4 presents alternate ridges and grooves or troughs whose inclined walls enclose between them an angle of approximately 90° and form with the bottom of the carton angles of approximately 45°.

In order to hold the rack in its folded position I have provided a rib or spacer 10 shown in detail in Fig. 4. Said rib 10 preferably is formed of a strip of cardboard 5 folded along its longitudinal median line as at 11 to form a two-ply strip or reinforcing member V-shaped in cross section. Although I have shown said rib 10 as formed of cardboard, fiber, wood or other suitable 10 material may be employed. Said rib 10 is adapted to be inserted through the aligned slots 6, in which position it is frictionally held owing to the tendency of the two plies or folds to separate. Within the scope of 15 my invention, however, a rib of single thickness may be employed. The spacer or rib 10, when in folded form, is of a width slightly less than the length of the slots 6, said slots and rib being so positioned and 20 proportioned as to hold the rack member 4 in its corrugated form with the walls or inclines of the alternate ridges and grooves mutually perpendicular.

In assembled position and as clearly shown 25 in Fig. 2, the end portion 9 of the corrugated rack rests against one end wall of the carton 1 with its lower edge in contact with the bottom of the same. In this manner the portion 8 is prevented from slipping down or becoming 30 displaced when the articles or packages 3 are arranged upon the rack.

According to my invention the rack is first 35 folded to form corrugations and the longitudinal rib inserted through the slots 6 to retain the rack in its folded position. Said assembly is then placed within the carton and rests upon the bottom thereof. A layer of the articles 3 to be shipped and displayed 40 is then positioned upon the rack. Said articles are placed edgewise and at an inclination to the horizontal and rest with their lower rear edge in the grooves of the corrugated rack. As shown in the drawings, the 45 articles or packages of crackers, wafers, or the like are substantially rectangular in cross section having a greater dimension transversely than in depth. The articles therefore overlap, each package acting in part as a support for the following package starting 50 at the rear of the carton, that is, at the upper part of Fig. 1. The rearmost package or row of packages is supported by the wider strip portion 8 of the rack. The lower layer of articles when positioned in the carton forms a series of grooves or 55 troughs equal in number to those formed in the rack. A second layer of articles is placed in said last-mentioned grooves or troughs, said articles also being placed edgewise and at an inclination to the horizontal. 60 Obviously, if desired, additional layers may be placed upon the second layer, or but a single layer may be formed, depending upon the size and proportions of the particular 65 carton employed.

As is seen clearly in Fig. 1, the packages or articles 3 when in position in the carton are in alignment longitudinally of the carton one behind the other but with the upper portion of their front sides clearly exposed 70 to view, and are maintained in even spaced relation transversely of the carton with their inner ends abutting the spacer or rib 10. Said rib 10 thus not only serves as a strengthening bar or brace for the rack member, but 75 also divides the rack into pockets or compartments each adapted to receive one package. In the form shown I have provided for two longitudinal rows of packages separated by a single spacer or rib. Obviously, however, 80 any desired number of additional rows may be placed within a carton depending upon the size thereof and of the packages themselves, in which case additional ribs would be provided to separate and evenly to space 85 the longitudinal rows.

The carton is so proportioned as to receive the desired number of layers of articles or packages wholly within the confines of its sides or walls. The articles or packages may 90 therefore be arranged in the carton in position for shipment and display and the cover of the carton closed down without disturbing the arrangement of the packages. The packages may be and preferably are packed 95 for shipment in the carton in the position indicated in Fig. 2 and are thus in position for immediate display upon the opening of the cover. No rearrangement or repacking of the carton is necessary. The packages 100 being arranged at an inclination of approximately 45° to the horizontal present their front sides at a most advantageous angle for display.

Having now described my invention it 105 will be seen that I have provided a corrugated display rack which may be readily placed within a carton or receptacle and upon which the articles to be shipped may be quickly and easily arranged at an angle 110 rendering them attractive for display purposes. The articles may be packed and shipped in inclined position within the carton, which is then ready for immediate display upon a store counter or in any other 115 desired location. The positioning of the articles or packages at an inclination also renders them more readily accessible for removal from the carton for vending and distribution. 120

Obviously and within the scope of my invention, but less desirably, the articles or packages may be packed for shipment in the ordinary way, that is, flat, the rack being 125 in such case unfolded and placed within the container, or accompanying it. Upon receipt of the carton so packed the rack would then be folded and installed and the proper number of articles or packages placed at an inclination thereon. I prefer, however, to 130

pack and ship the articles arranged at an angle within the container in position for immediate display.

I desire it to be understood that although specific terms are employed in the description of the illustrative embodiment of my invention they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

Claims—

1. In combination with a carton or other receptacle for packaging and displaying articles, a corrugated member 4 adapted to be placed in the carton or receptacle and to rest upon the bottom thereof, said member having a series of aligned openings 6, and a longitudinally folded rib 10 frictionally held within said openings thereby to maintain constant the angle between corrugations of said member.

2. In combination with a carton or other receptacle for packaging and displaying articles, a corrugated member having mutually perpendicular walls forming right angled troughs and adapted to be placed in the carton or receptacle and to rest upon the bottom thereof, aligned openings in said walls, a longitudinally folded strip frictionally engaged in said openings thereby to maintain said angular relation of the walls and one or more layers of articles supported in the troughs of said corrugated member at an inclination of approximately 45° to the horizontal.

3. A display rack adapted to be placed within a carton or container, comprising a sheet member folded transversely to form alternate ridges and grooves the inclined walls whereof enclose angles of approximately 90° , said member having at one end a portion forming a ridge of greater height and width than the remaining ridges and having a vertical wall adapted to rest flat-

wise against one end wall of the container, a series of aligned slots formed one in each inclined wall, and a rib extending through said slots and abutting at one end a wall of the container and at the other end the inner surface of said vertical wall of the rack member thereby to hold the rack in folded position.

4. A blank for a display rack formed of sheet material, a series of transverse, parallel folds 5 on said blank and spaced apart equal distances, a transverse fold 7 near one end of the blank, parallel with said folds 5 and forming transverse strip portions 8 and 9 of unequal width but both wider than the strip portions between said first named folds, and aligned cut out portions 6 formed in said strip portions between the folds 5, and also in said strip portion 8, said cut-out portions adapted to receive therethrough when the blank is collapsed a rib member 10 for holding the blank in folded position.

5. In combination with a carton or other receptacle for packaging and displaying articles, a rack adapted to be placed in the carton or receptacle and to rest upon the bottom thereof, said rack comprising a sheet member folded transversely to form alternate ridges and grooves, the inclined walls whereof enclose angles of approximately 90° , said inclined walls being of a width less than the width of the articles, said member having at one end a ridge having an inclined wall of a width substantially equal to the width of the articles and a vertical wall resting flatwise against an end wall of the container, a series of aligned slots in said inclined walls and a rib frictionally engaged in said slots to maintain the desired angular relation of said inclined walls.

In testimony whereof, I have signed my name to this specification.

GEORGE C. MACDONALD.