Nov. 11, 1941. E. C. SLOAN 2,262,472

DISPLAY CONTAINER

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FIG. 1.

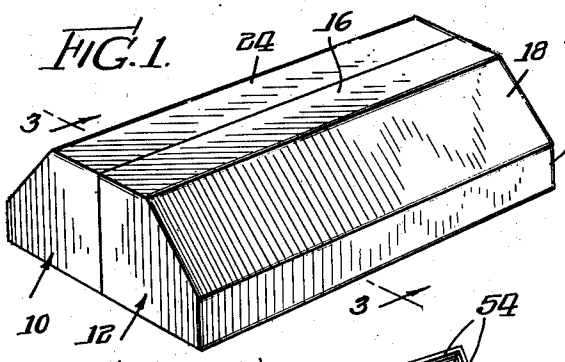


FIG. 2.

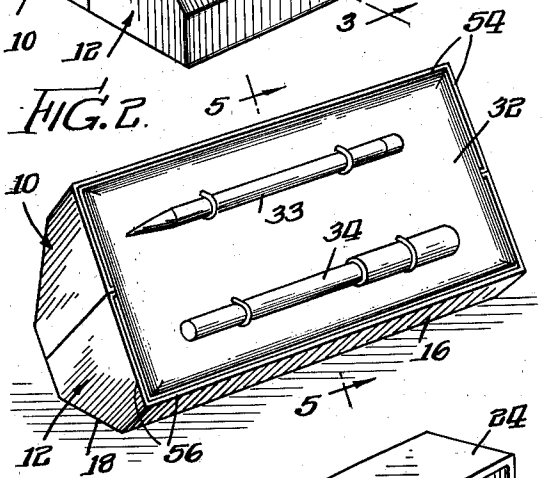


FIG. 3.

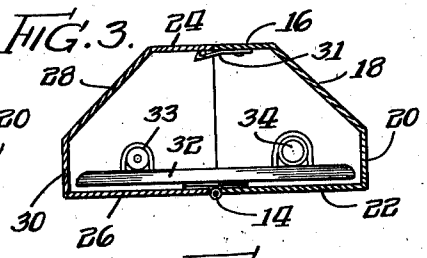


FIG. 4.

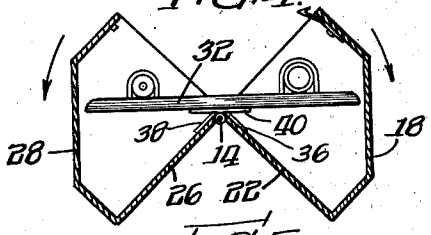


FIG. 5.

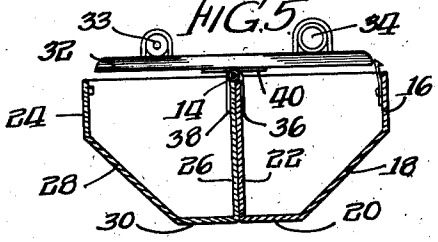


FIG. 6.

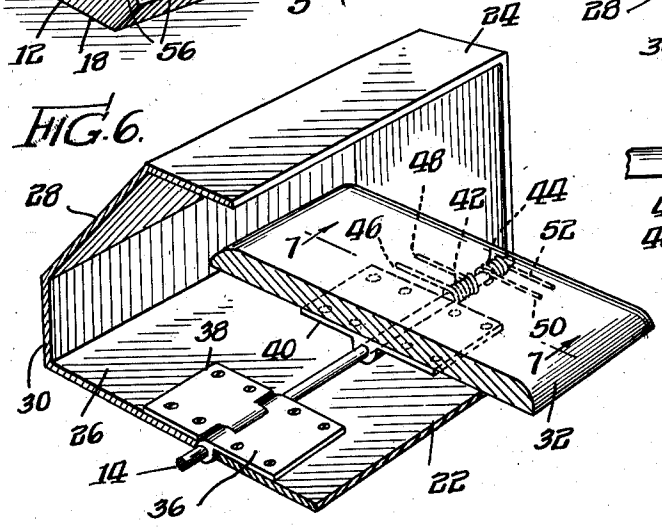


FIG. 7.

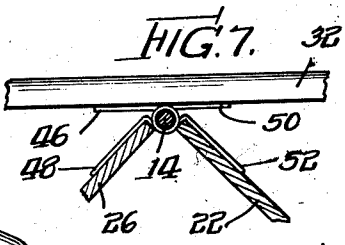


FIG. 9.

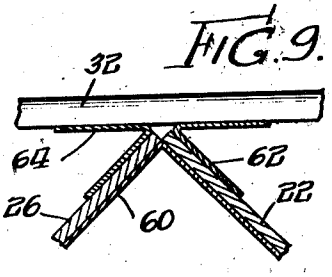
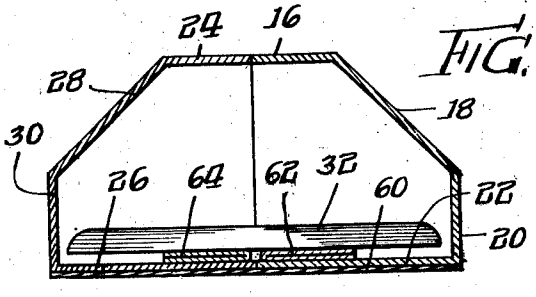


FIG. 8.



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FIG. 10.

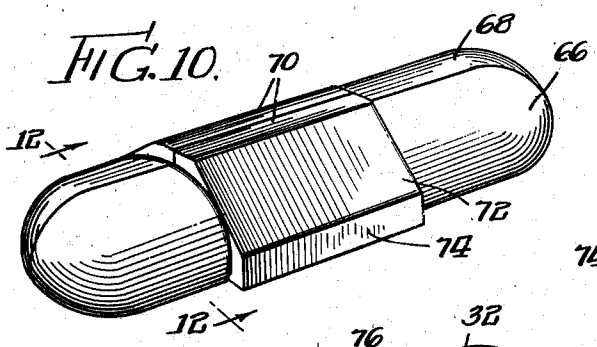


FIG. 12.

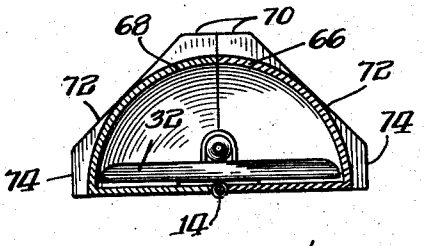


FIG. 11.

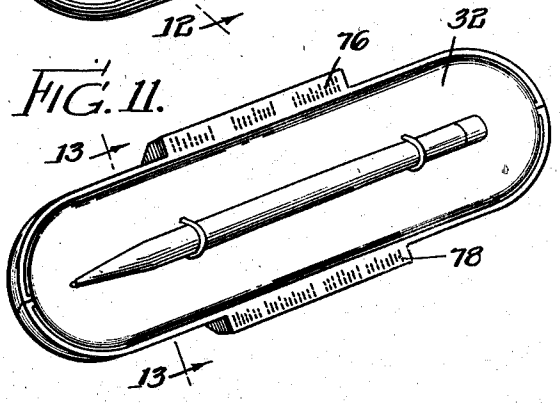


FIG. 13.

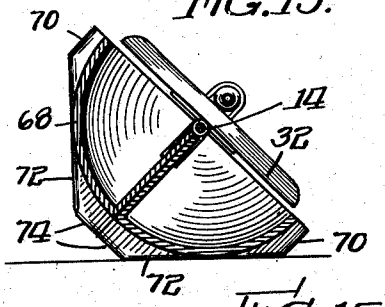


FIG. 14.

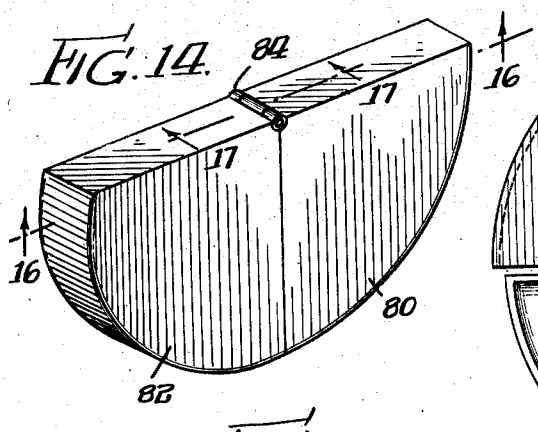


FIG. 15.

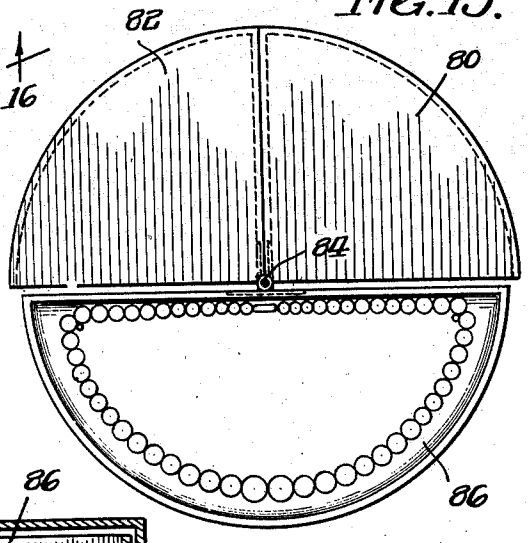


FIG. 16.

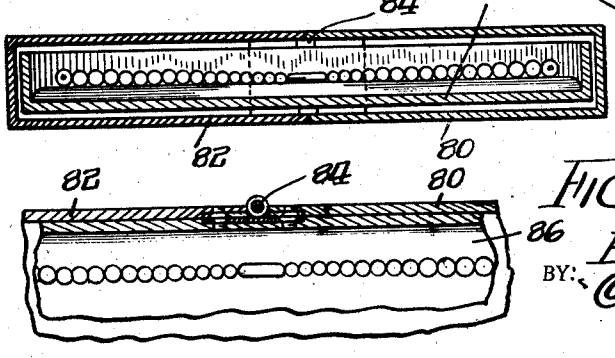


FIG. 17.

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UNITED STATES PATENT OFFICE

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DISPLAY CONTAINER

Edward C. Sloan, Geneva, Ill.

Application April 30, 1938, Serial No. 205,291

6 Claims. (Cl. 206—44)

This invention relates to display boxes or containers, and more particularly to containers of the type which are adapted, when shut, to enclose and protect the goods therein and, when opened, to display the goods.

It is an object of the invention to provide a display box or container of new and improved construction which will effectively house and protect the articles placed therein when in closed position and which will effectively display the articles when opened.

Further objects of the invention are to provide a display box or container of simplified and economical construction wherein, due to the arrangement of the parts, the display platform upon which articles are adapted to be mounted or carried is automatically brought to effective display position upon the opening of the box; wherein the display platform can be readily adjusted by the positioning of the box so as to display the articles at any desired angle; wherein the display platform covers or conceals the box interior when the box is open; and wherein the box provides an ornamental or advertising border for the display platform when in open or display position.

Other objects and advantages of the invention will appear from the following description when taken in connection with the accompanying drawings in which certain preferred embodiments of the invention are set forth for purposes of illustration.

In the drawings, wherein like reference numerals refer to like parts throughout:

Fig. 1 is a perspective view illustrating a display box or container in closed position made in accordance with one form of the invention.

Fig. 2 is a similar view illustrating the box in open or display position.

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a similar sectional view illustrating the movement of the box body members from closed to open position.

Fig. 5 is a view illustrating the box in open position, and taken along the line 5—5 of Fig. 2.

Fig. 6 is a partial perspective view on an enlarged scale illustrating one suitable form of hinge construction for the body members and mounting for the display platform.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6, but showing the box in partly open position.

Figs. 8 and 9 are views illustrating modified forms of hinge and platform supporting constructions, Fig. 8 showing the body members in closed position and Fig. 9 showing them in partially open position.

Figs. 10 and 11 illustrate a modified form of display box constructed in accordance with the invention in closed and open positions respectively.

Figs. 12 and 13 are sectional views taken along the lines 12—12 and 13—13 of Figs. 10 and 11.

Figs. 14 and 15 illustrate a still further modified form of display box in closed and open positions respectively.

Fig. 16 is a sectional view of the box shown in Fig. 14, taken along the line 16—16 thereof, and

Fig. 17 is a partial detail view of the Fig. 14 construction taken along the line 17—17.

Referring first to Figs. 1 to 7 inclusive of the drawings, it will be seen that the box or container construction set forth for purposes of illustration comprises a pair of body members 10 and 12 hinged together as indicated at 14 for movement from closed position, as shown in Figs. 1 and 3, to open position as shown in Figs. 2 and 5. The body member 12 in the form illustrated is provided with an upper horizontal section 16, an inclined section 18, a vertical section 20, and a lower horizontal section 22. The complementary body member 10 is similarly provided with upper and lower horizontal sections 24 and 26, and with inclined and vertical sections 28 and 30. A suitable clasp, as indicated at 31, releasable by pressing the body section 16 downwardly slightly with respect to body section 24, may be provided for holding the body members in closed position. A display pad or platform 32 adapted to carry articles, such as indicated at 33 and 34, is mounted on the body members, along the line of the hinged joint 14. As will be seen by comparison of Figs. 3, 4 and 5, as the body members are pivoted from closed to open position, the display platform is moved into exposed or display position.

Any suitable form of hinge or pivot connection may be employed for securing the body members together. In Fig. 6 one suitable form of hinge is illustrated comprising a pair of metal hinge brackets 36 and 38 secured to the sections 22 and 26 of the body members and pivoted for rotation about shaft 14. Similarly various suitable means may be employed for mounting the display platform 32 upon the body members at the hinge connection. One suitable means illustrated in Figs. 6 and 7, comprises a bracket 40 secured to the underside of the display platform and pivoted

for rotation on the shaft 14. A pair of springs 42 and 44 also mounted upon the shaft 14 provide means for balancing or holding the display platform in proper display position when the box is opened. The spring 42 has an upper projecting arm 46 adapted to bear upwardly against the underside of the display platform, and a lower arm 48 adapted to bear downwardly against the horizontal or base section 26 of the body member 10. Similarly the spring 44 is provided with an upper arm 50 adapted to bear upwardly against the display platform and a lower arm 52 adapted to bear downwardly against section 22 of the body member 12. The springs provide the dual function of aiding in moving the body members to open position and of resiliently holding the display platform in proper display position when the box is opened. The arrangement of the springs is such that they are substantially relaxed when the box is open. Accordingly when the container is in open position the springs exert no substantial force upon the display platform but will hold the platform against inadvertent displacement away from the balanced or horizontal display position shown, for example, in Fig. 5.

The display box of the present invention provides a simple and economical container for effectively housing or enclosing articles therewithin when the box is in closed position, and for moving the articles to an effective and attractive display position upon the opening of the box. The display pad or platform is mounted upon the hinge line or axis of the pivoted body members, and this axis, due to the arrangement of the parts, is automatically moved from the bottom to the top or outside of the construction as the body members are opened. Accordingly the display platform is automatically moved to an effective exposed display position as the box is opened, and this result is effected without the provision of lifting cords or the like which are unnecessary.

When in open position, the various sections of the body members provide effective means for arranging the article platform in any desired angle of display. Thus in Fig. 2 the box is supported by the inclined section 18 of the body member 12 effecting an inclined display position for the platform 32. In Fig. 5 the box is illustrated resting upon the body sections 30 and 20 effecting a horizontal positioning of the display platform. A vertical positioning of the platform may be effected by supporting the box upon either of the sections 16 or 24. When arranged in any of these positions, the body members automatically hold themselves in open position, and the springs 42 and 44 retain the display platform in proper position. As previously stated, these springs may be of substantial strength so that they aid in opening the container, or they may be of very light construction sufficient only to balance the display platform but insufficient to exert any substantial box opening force. In this event the clasp 31 may be dispensed with, the body members automatically holding themselves in closed position when resting on their bottom sections 22 and 26.

It is further to be noted that when the box is open the display platform covers and conceals the entire box interior. Only the edges 54 and 56 of the body members are exposed. These edges may be suitably ornamented to provide an attractive frame for the display platform, and it is unnecessary to ornament or line the box interior as the interior is concealed from view. The arrangement provides a simplified and economical construction.

In Figs. 8 and 9 a modified and simplified form of hinge or pivot construction is illustrated, which may be preferable for use in various instances. In this embodiment the body members may be hinged together by means of a flexible hinge member 60 adhesively secured to the lower faces of body sections 26 and 22. The hinge member 60 may be commensurate with the body sections, as illustrated, or provided only along the hinge axis with sufficient lateral width to enable it to be adhesively secured to the body sections. Similarly the display platform 32 is secured in position by a pair of flexible hinge members 62 and 64 adhesively secured to the lower face of the display platform and the body sections 22 and 26. The hinge members may be of any suitable flexible material, but are preferably formed of material having a slight resiliency as well as flexibility, such as heavy paper, leatherette, Scotch tape or cellulose tape. The slight resiliency of the hinge members 62 and 64 will hold the display platform 32 in balanced display position, and the provision of springs, as in the embodiment previously described, may be dispensed with. The display platform may also be made of sufficient length that it exerts a slight frictional contact against the ends of the body members thus aiding in holding the platform in adjusted display position.

The container may be made of a variety of shapes. Thus in Figs. 10 to 13 inclusive an embodiment of the invention is illustrated wherein the body members 66 and 68 cooperate to produce a semi-circular construction, but are provided at their mid-portion with a thickened portion providing horizontal, inclined and vertical supporting surfaces 70, 72 and 74 respectively. The operation of the parts is the same as in the embodiments of the invention previously described. In this form of construction, as will be seen in Fig. 11, frame faces 76 and 78 of increased width are provided at the center portion of the construction, upon which suitable ornamentation or advertising indicia may be placed.

In Figs. 14 to 17 inclusive a still further form of the invention is illustrated. In this instance the body sections 80 and 82 pivoted for rotation about hinge axis 84 are relatively short as compared with their radial dimensions whereas, in the embodiments previously described, the body sections are of greater length than of radial extent. When the body members are moved from closed to open position, as in Fig. 15, the display platform 86 is exposed. As illustrated, the display platform in this instance is of semi-circular shape, cooperating with the body sections 80 and 82 to produce a generally circular construction when the container is in open position.

The container may be constructed of any suitable material such, for example, as cardboard, wood, metal, plastics, or other material, and it is obvious that various changes may be made in the embodiments of the invention specifically set forth for purposes of illustration, without departing from the spirit of the invention. Accordingly the invention is not to be limited to the precise embodiments shown and described but only as indicated in the following claims.

The invention is hereby claimed as follows:

1. A display container comprising a pair of similar body members each having wall portions

defining an enclosure open on one side, each opening being arranged in a plane bounded by the margins of said wall portions, means pivotally connecting said members about an axis located adjacent said margins for arcuate movement between closed position where the openings are in overlying relation and in the same plane for providing a common interior enclosure, and an open position wherein the openings are located in adjacent relationship in substantially the same plane, a display member comprising a wall mounted in the container with its medial bottom portion secured substantially at said axis of rotation, said last named wall having a dimension transverse to said axis of rotation equal to substantially twice the width of one of said openings, said display wall being substantially coextensive with both openings when disposed in open position and in a common plane and being operative to dispose itself across both of said openings in overlying relation when the members are shifted to open position.

2. A display container as defined in claim 1 wherein said body members have wall portions extending at generally right angles from the planes of said openings and adapted to engage each other for limiting rotational movement of the members at said open position.

3. A display container as defined in claim 1 wherein the interior wall surfaces of said body members are shaped to clear the margins of said display wall as they are rotationally moved between open and closed positions.

4. A display container as defined in claim 1 wherein said display member includes a display platform projecting laterally outwardly from said wall and receivable within the interior of said body members when in closed position.

5. A display container comprising a pair of similar body members each having wall portions, including bottom, top and side wall portions defining an enclosure open on one side, each said opening being arranged in a plane extending upwardly from the bottom wall portions and being bounded by the margins of the bottom, side and top wall portions, means pivotally connecting said members about an axis located adjacent the said margins of said bottom wall portions for arcuate movement between closed position where the openings are in coextensive abutting relation and in the same upwardly extending plane for providing a common interior enclosure and an open position wherein the openings are located in spaced adjacent relationship in substantially the same plane, a display member comprising a wall mounted in the container with its medial bottom portion secured substantially at said axis of rotation, said last named wall having a dimension transverse to said axis of rotation equal to substantially twice the vertical dimension of one of said openings, said display wall being substantially coextensive with both openings when disposed in open position and in a common plane and being operative to dispose itself across both of said openings in overlying relation when the members are shifted to open position.

6. A display container comprising a pair of similar body members each having wall portions, including bottom, top and side wall portions defining an enclosure open on one side, each said opening being arranged in a plane extending upwardly from the bottom wall portions and being bounded by the margins of the bottom, side and top wall portions, means pivotally connecting said members about an axis located adjacent the said margins of said bottom wall portions for arcuate movement between closed position where the openings are in coextensive abutting relation and in the same upwardly extending plane and said bottom wall portions are spaced in substantially the same horizontal plane for providing a common interior enclosure and an open position wherein the openings are located in spaced adjacent relationship in substantially the same plane and said bottom wall portions are in overlying relationship in the same plane, a display member comprising a wall mounted in the container with its medial bottom portion secured substantially at said axis of rotation, said last named wall having a dimension transverse to said axis of rotation equal to substantially twice the vertical dimension of one of said openings, said display wall being substantially coextensive with both openings when disposed in open position and in a common plane and being operative to dispose itself across both of said openings in overlying relation when the members are shifted to open position.

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