May 11, 1954 L. D. YOUNG 2,678,182

DISPLAY DEVICE

Filed Jan. 3, 1952

3 Sheets-Sheet 1

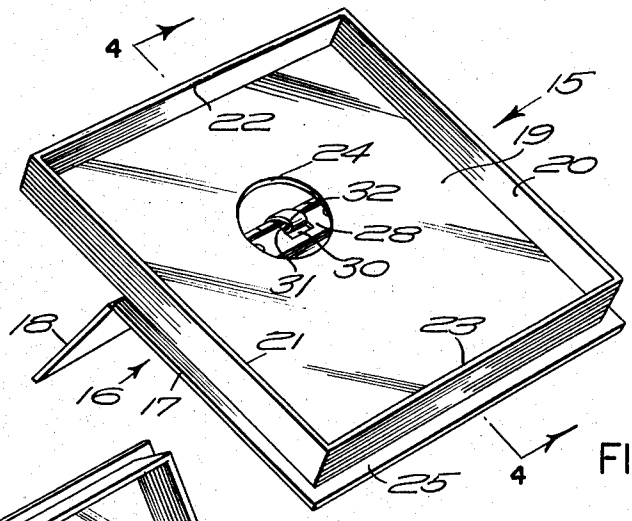


FIG. 1

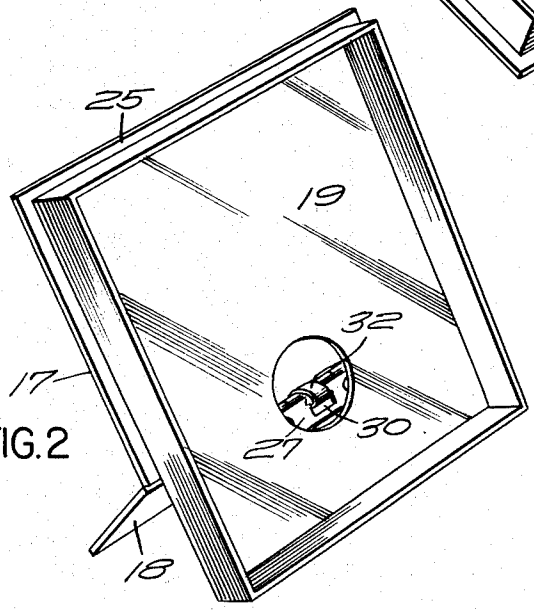
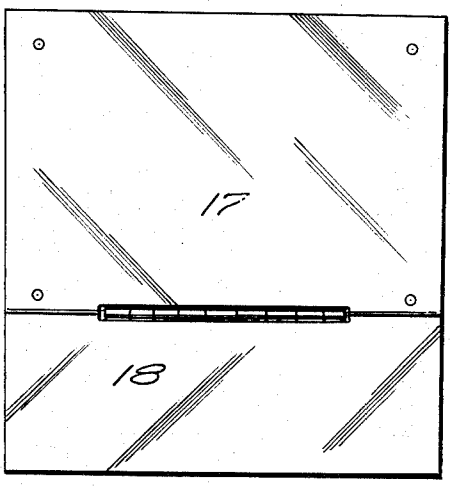


FIG. 2

FIG. 3



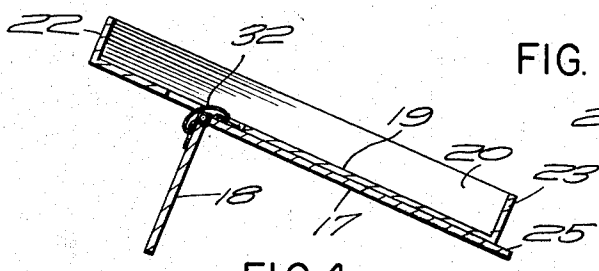


FIG. 4

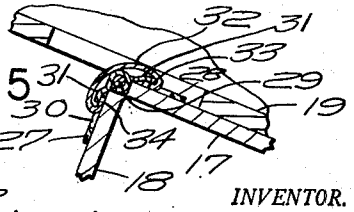


FIG. 5

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May 11, 1954 L. D. YOUNG 2,678,182

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Filed Jan. 3, 1952 3 Sheets-Sheet 2

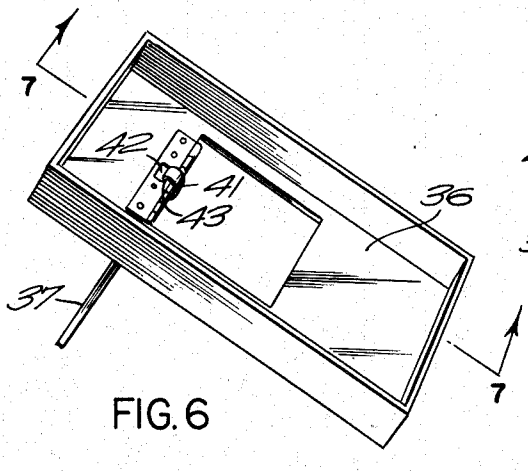


FIG. 6

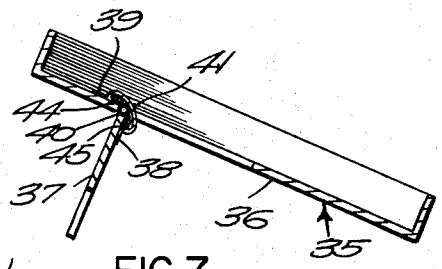


FIG. 7

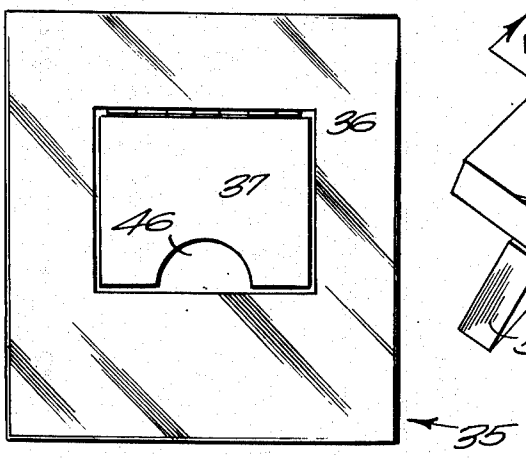


FIG. 8

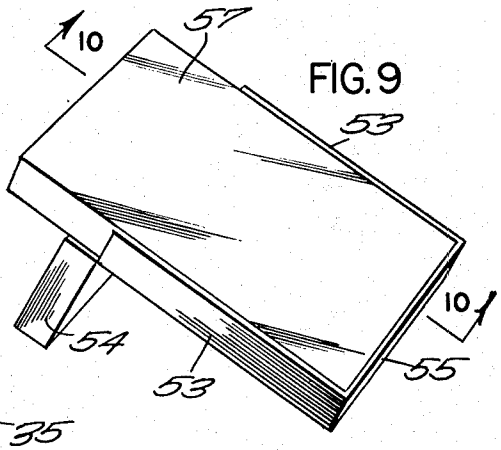


FIG. 9

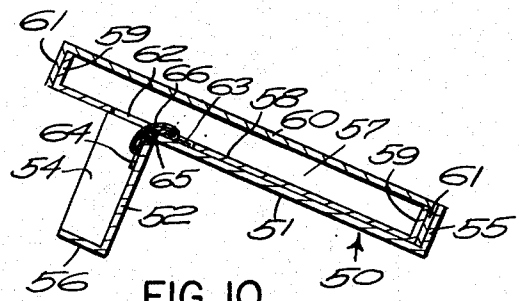


FIG. 10

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May 11, 1954 L. D. YOUNG 2,678,182

DISPLAY DEVICE

Filed Jan. 3, 1952 3 Sheets-Sheet 3

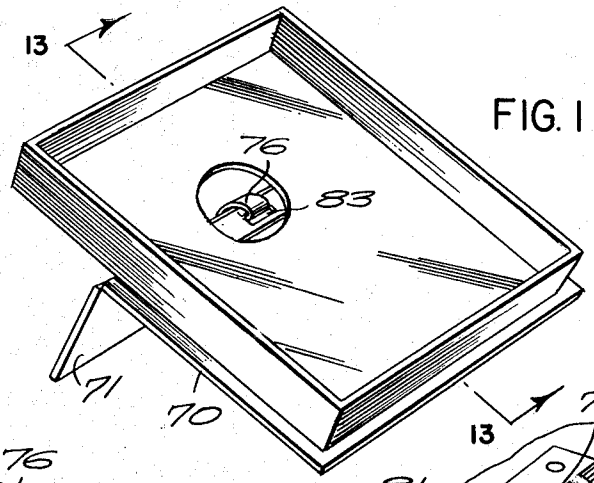


FIG. 11

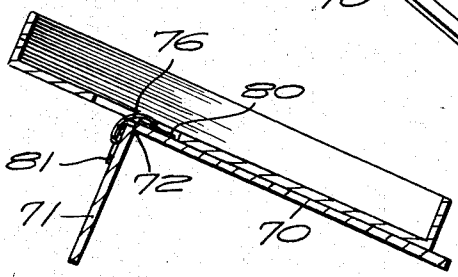


FIG. 13

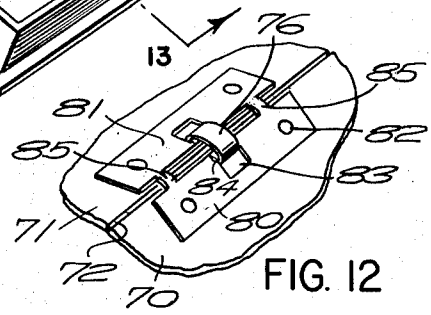


FIG. 12

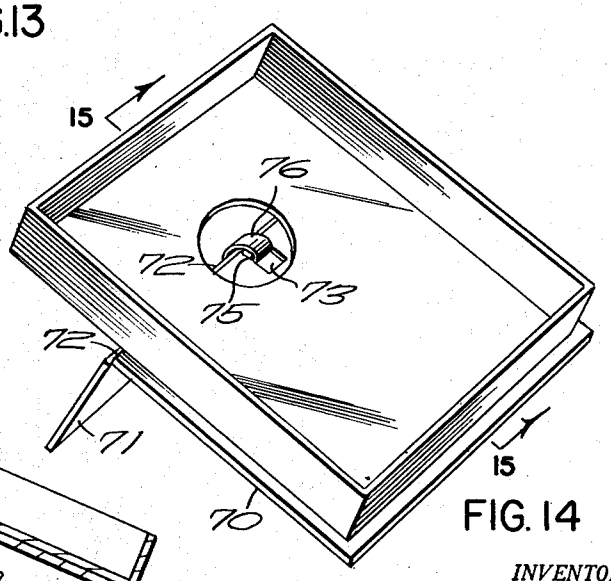


FIG. 14

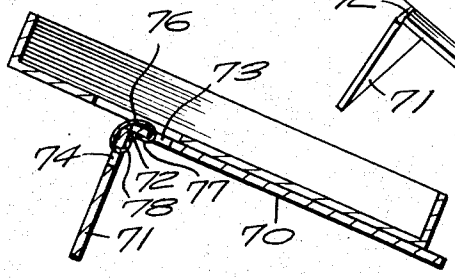


FIG. 15

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Patented May 11, 1954

2,678,182

UNITED STATES PATENT OFFICE

2,678,182

DISPLAY DEVICE

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Application January 3, 1952, Serial No. 264,817

2 Claims. (Cl. 248—198)

1

This invention relates to a display device which may be in the form of a box or pad, or may take various other forms, in and upon which articles of merchandise are assembled.

Various ways have been attempted for tilting containers or mountings for merchandise, which usually take the form of some sort of a leg supported at an angle for tilting the box in which the merchandise is contained, as an easel with some means of holding the leg of the easel fixedly related to the box.

One of the objects of this invention is to provide a simple means of providing a support for a box or pad to arrange it in easel-like fashion for the display of merchandise.

Another object of the invention is to provide an arrangement which may be easily moved to a position for shipment of the merchandise within a box or for display of the merchandise in easel-like form.

Another object of the invention is to provide a device which may be snapped from one position to the other position and be positively held in either of its two positions as may be desired.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a perspective view of the body part of the box equipped with this invention and showing the parts of the box in one position;

Fig. 2 shows an alternate position that the box may assume;

Fig. 3 is a plan view of the back of the box;

Fig. 4 is a sectional view on line 4—4 of Fig. 1;

Fig. 5 is a sectional view of the hinge connection on a larger scale;

Fig. 6 is a perspective view showing a box with a modified form of the invention;

Fig. 7 is a sectional view on line 7—7 of Fig. 6;

Fig. 8 is a rear view of the box shown in Figs. 6 and 7 with the section of the box swung to its collapsed position;

Fig. 9 is a perspective view of a box of a different form shown in easel position;

Fig. 10 is a sectional view on line 10—10 of Fig. 9;

Fig. 11 is a perspective view of a box similar to the box shown in Fig. 1 illustrating a modified form of hinge;

Fig. 12 is a perspective view showing fragmentally the hinge structure of Fig. 11;

Fig. 13 is a sectional view on line 13—13 of Fig. 11:

2

Fig. 14 is a perspective view similar to Fig. 11 but illustrating a hinge of a modified structure; and

Fig. 15 is a sectional view on line 15—15 of Fig. 14.

In proceeding with this invention the bottom wall of a display device, which may be the lower containing portion of a box or may be some pad mounting, is formed in two sections, and I have hinged these sections together so that they may be swung through substantially 90°, thus permitting of the section being used in a single plane for ordinary box purposes or swung to right angular relation so that the device may be stood up as an easel along either one of two different edges. The sections are swung about the hinge to locate the sections in either one of these two relative positions as they approach these positions, and yet the sections are limited to definite positions, to which positions they will be snapped by a spring as they approach either position.

With reference to the drawings, I have omitted the cover of the units herein shown. The lower part of a box which contains the invention I designate generally 15. This part is provided with a bottom wall 16 in two sections 17 and 18, while there is a second or inside wall 19 of one piece substantially of the size of the two sections 17, 18 and from which there extends upwardly opposite side walls 20 and 21 and opposite end walls 22 and 23. An opening 24 is formed in this second wall 19 at the location of the hinge spring. The bottom wall 16 extends out beyond the edges of the upstanding walls 21 and 23 providing a lip 25 surrounding the walls 20 to 23 when the sections 17 and 18 are in line with each other or in a single plane.

These sections 17 and 18 are hinged together in any suitable manner, such for instance as by the use of plates 27 and 28 (see Fig. 5) with eyes through which a hinge pintle 29 extends. The plates are each provided with an opening 30 with a part 31 between this opening and the pintle raised to provide a recess. A generally C-shaped spring 32 has hook ends 33 and 34 to extend into the recesses of the hinge plates 27 and 38 so as to grip the same under tension of the C-shaped spring. This spring relationship is such that when the section 18 is swung on its hinge with reference to the section 17, the spring will hold it in aligned relation as shown in Fig. 3, in which relationship it can not swing further because of engagement with the second wall 19 or the spring will act to swing the sections to the right angular position shown in Figs. 1, 2, and 4 as it ap-

proaches such position and hold it in this position by reason of the hook portions forming stops to prevent further swinging. The spring thus acts in one direction or the other, depending on which side of the mid point of the 90° arc the section 18 is swung to.

In some cases instead of providing a bottom wall and a second wall, such as shown in Figs. 1–5, I provide a bottom wall 35 as shown in Figs. 6, 7, and 8, which will also be in two sections, there being a main section 36 and a smaller section 37. This section 37 is hinged by means of plates 38 attached to the section 37 and 39 attached to the section 36, with a pintle 40 joining these plates by extending through hinge eyes. Each of these plates are similarly provided with an opening 42 and a recess 43 in which the hooks 44 and 45 of the C-shaped spring 41 engage. The action here is similar to that above explained, in that section 37 may be held either in the plane of the section 36, as shown in Fig. 8, or it may be swung at right angles to the section 36 as shown in Figs. 6 and 7. This swinging may take place by reason of engagement through the thumb hole 46 in section 37.

In still another case, Figs. 9 and 10, a pad-like arrangement may be provided by means of a bottom wall 50 having a section 51 and another section 52, which sections have upwardly extending side walls 53 and 54 and upwardly extending end walls 55 and 56, which receive a closed container 57 of a size closely fitting within the side and end walls and of a height substantially the same as the side and end walls. This closed container has a bottom wall 58 with side and end walls 59, while it has a top wall 60 with depending side and end walls 61 which telescope the walls 59. An opening 62 is provided in the bottom wall 58 for accommodation of the spring between the bottom sections 51 and 52. There are hinge plates 63 and 64 secured to the sections 51 and 52 with a pintle 65 extending through the hinge eyes of these plates and a C-shaped spring 66 engaging recesses in these plates all the same as heretofore described.

In some cases instead of providing hinge plates with a pintle, sections such as 70 and 71, Figs. 11 to 15, will have a score line at 72 between them which will provide the hinge connection and in this case there will be an opening 73 in the section 70 and an opening 74 in the section 71. These openings will be placed with their edges such as 75 (Fig. 14) spaced from the hinge 72 and a C-shaped spring 76 will have its hook ends 77 and 78 engaging the edges of these openings 73 and 74 so as to swing the sections to the right angular position shown in Figs. 13 and 15, or to a position in line with each other and in the same plane as has heretofore been spoken of.

In some cases it may be desired to reinforce the portion along the hinge of the preceding paragraph with which the spring 76 engages and in such cases I may provide metal plates 80 and 81 (Fig. 12) which will be secured to the sections 70 and 71 as at 82, and which metal plates will have openings 83 and recesses at 84 adjacent these openings so that the hook ends of the spring may engage these metal reinforcements in their recesses rather than the paper or cardboard of the box itself. In order that these metal plates may be positioned the desired distance apart to fit the C-shaped spring 76, a narrow web of material 85 may be positioned to join these plates for securing purposes and will bend and break apart as flexing action occurs, the narrow neck being only used for the positioning of the plates initially on the sections.

I claim:

1. An easel display device comprising a wall divided into two sections having rectilinear abutting edges and means to hinge said edges together, one of said sections having fixed thereto a second wall which extends across said hinged edges and is engaged by the other section to limit its swinging movement about said hinge, said second wall having an opening therein at the location of said hinge between said sections, a C-shaped spring in said opening spanning said abutting edges and having hook ends fixed to said two sections, said spring holding said sections either in alignment or in an angular relation a line between the ends of said spring being on one side of the hinge axis when said sections are in substantially a single plane with one of the sections engaging said second wall and said line between the ends of the spring being on the other side of said hinge axis when said sections are at a generally right angular position to each other, means to limit the swinging movement of the sections when at substantially right angles, the edges of the sections distant from the hinge when at an angular position adapted to rest on a horizontal surface to incline one of the sections to the horizontal by the other section serving as a prop.

2. An easel display device comprising a wall divided into two sections having rectilinear abutting edges and means to hinge said edges together, one of said sections having fixed thereto a second wall which extends across said hinged edges and is engaged by the other section to limit its swinging movement about said hinge, said second wall having an opening therein at the location of said hinge between said sections, a C shaped spring in said opening spanning said abutting edges and having hook ends fixed to said two sections, said spring holding said sections in alignment or in an angular relation a line between the ends of said spring being on one side of the hinge axis when said sections are in substantially a single plane with one of the sections engaging said second wall and said line between the ends of the spring being on the other side of said hinge axis when said sections are at a generally right angular position to each other the mid point of said spring engaging said hinge and the hook ends serving to limit the swinging movement of the sections about the hinge when at substantially right angles, the edges of the sections distant from the hinge when at an angular position adapted to rest on a horizontal surface to incline one of the sections to the horizontal by the other section serving as a prop.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,917,349	Wilmarth	July 11, 1933
2,126,050	Shiffman et al.	Aug. 3, 1938
2,464,524	Nathan	Mar. 15, 1949
2,490,746	Carpenter	Dec. 6, 1949

FOREIGN PATENTS

Number	Country	Date
437,700	Great Britain	Nov. 4, 1935