Aug. 25, 1942. J. V. HORR 2,293,900

CARDBOARD DISPLAY DEVICE

Filed Dec. 21, 1940

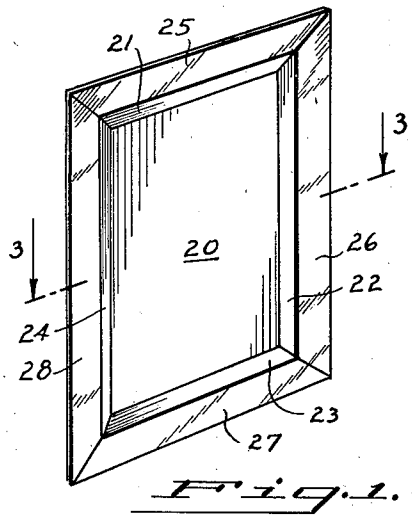


Fig. 1.

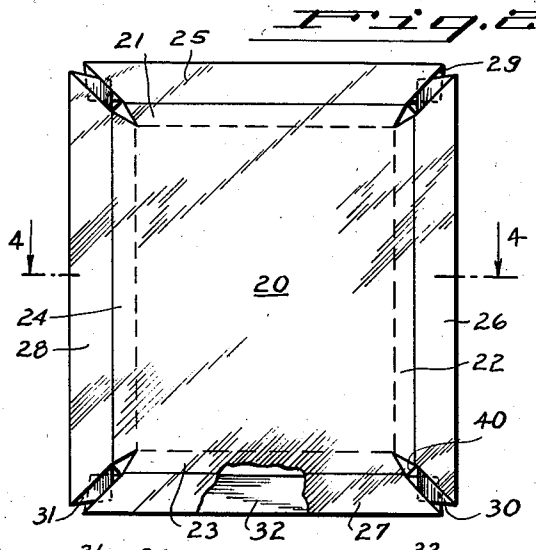


Fig. 2.

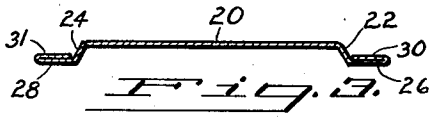


Fig. 3.

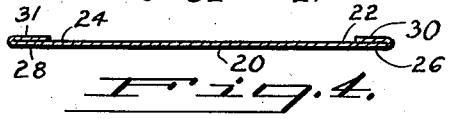


Fig. 4.

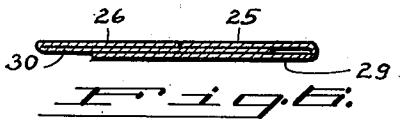


Fig. 6.

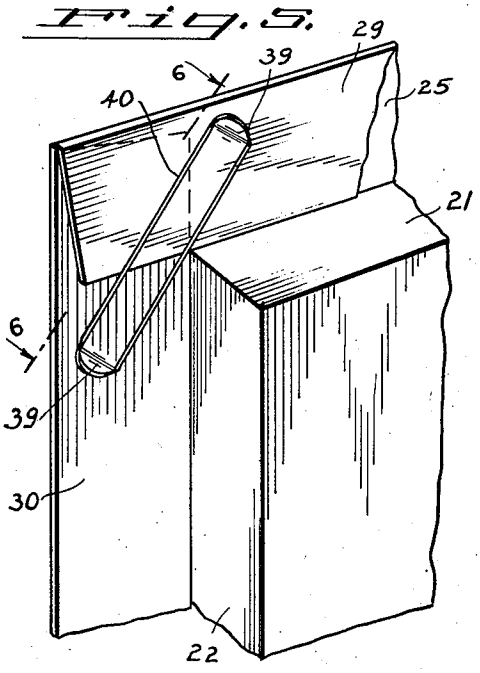


Fig. 5.

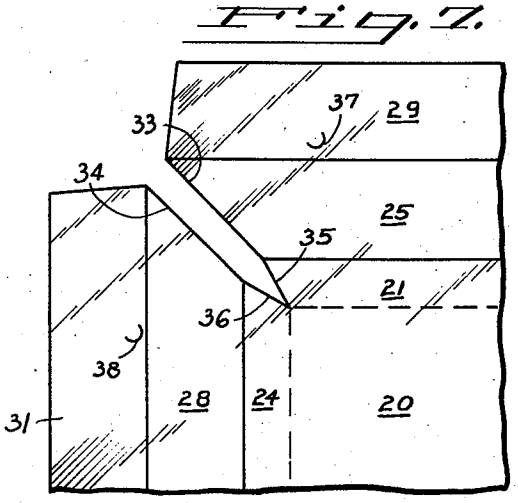


Fig. 7.

JOHN V. HORR
INVENTOR.

BY Gluck & Breitenfeld
ATTORNEYS

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UNITED STATES PATENT OFFICE

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CARDBOARD DISPLAY DEVICE

John V. Horr, Hastings on Hudson, N. Y., assignor to Einson-Freeman Co., Inc., Long Island City, N. Y., a corporation of Delaware

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5 Claims. (Cl. 40—154)

My present invention relates generally to display devices, and has particular reference to a cardboard display device of the type which is primarily adapted to be used in store windows and on counters.

A general object of the invention is to provide an improved display device, which is adapted to be inexpensively manufactured from flat cardboard stock or its equivalent, and which is of such a character that it may be shipped and stored in a substantially flat condition, and may be readily adjusted into set-up condition when it is to be used. In a preferred embodiment of the invention, the device is provided with means whereby it will spring automatically into set-up condition.

A more specific object of my invention is to provide certain improvements in a display device of the character in which there is a main display area surrounded by a beveled border portion. The border may be beveled rearwardly in substantially the manner illustrated and described in U. S. Patent No. 2,055,201, in which case a pleasing three-dimensional effect is produced; or the border may be inclined forwardly to produce a frame-like effect. In either case, the device consists essentially of a main display area and panels hinged to the edges of said area and conjointly adapted to define a border for the device.

In accordance with my present invention, there are two sets of panels associated with the main display area. One set is adapted to define a beveled border for the display area, and the second set is adapted to form an outer border surrounding said beveled border. In the preferred embodiment of my invention, the outer border lies in a plane substantially parallel to the main display area.

A particular feature of my invention lies in so designing the parts that the main display area and the panels are integral portions of a single blank of cardboard or the like.

The advantages of the present construction lie not only in its simplicity, and in an enhanced attractiveness of the entire unit, but also in its unusual staunchness and rigidity.

In the preferred construction, a special elastic means is arranged behind the border panels, serving yieldably to urge them into border-forming relations. This elastic means may take the form of one or more ordinary rubber bands, and the structure and assembly are of such a character that the device may be optionally pressed into a substantially flat condition or allowed to spring automatically into a set-up condition.

Another feature of my invention lies in providing a means for assuring proper relative disposition of the parts at all times, and, more particularly, for guiding the panels into proper border-forming positions when the device is to be set up for use.

I achieve the foregoing objects, and such other objects as may hereinafter appear or be pointed out, in the manner illustratively exemplified in the accompanying drawing, in which:

Figure 1 is a perspective view, from the front, of a display device constructed in accordance with the present invention;

Figure 2 is a plan view of the device of Figure 1, viewed from the front, when it is in collapsed or flattened condition;

Figure 3 is a cross-sectional view taken substantially along the line 3—3 of Figure 1;

Figure 4 is a cross-sectional view taken substantially along the line 4—4 of Figure 2;

Figure 5 is an enlarged prospective view, from the rear, of one of the corners of the device of Figure 1;

Figure 6 is a cross-sectional view taken substantially along the line 6—6 of Figure 5; and

Figure 7 is a fragmentary plan view of the corner portion shown in Figure 5, with the parts completely flattened out to show their formation from a single blank of material.

The device I have chosen to illustrate has a main display area of substantially rectangular shape. I have omitted from the present drawings the disclosure of any easel or prop for supporting the device in substantially upright condition, although it will be understood that any suitable supporting structure may be associated with the device, where desired.

The main display area 20 is hingedly connected at its edges to the panels 21, 22, 23, and 24. When inclined to the plane of the area 20, these panels are adapted conjointly to define a beveled border. In the construction which I have shown in the present drawing, these panels are intended to be inclined forwardly with respect to the area 20 so as to form a beveled border flaring forwardly from said area. The panels 21—24 are preferably trapezoidal in shape, the end edges being at suitable inclinations so that they will be brought into substantial abutment when the beveled border is formed. Preferably, the end edges of the trapezoidal panels are all made of equal length, so that the beveled border

is continuous and of substantially uniform width throughout its extent.

In accordance with my present invention, an additional set of panels is hinged to the panels 21—24, and these additional panels are adapted conjointly to form an outer border surrounding the beveled border defined by the panels 21—24. I have designated these outer panels by the reference numerals 25, 26, 27, and 28, and it will be observed that they are also preferably of trapezoidal shape with their end edges of uniform length and inclinations, so that these end edges are brought into abutting relations when the device is set up.

In the device which I have chosen to illustrate, the panels 25—28 are so designed that they will form a continuous outer border which lies in a single plane substantially parallel to the plane of the main display area 20.

Secured to each of the last-named panels, and lying behind it, is a flap which has a stiffening effect and which also fulfills other functions presently to be described. Thus, there is a flap 29 arranged behind the panel 25, flaps 30 and 31 arranged behind the panels 26 and 28 respectively, and a flap 32 arranged behind the panel 27. These flaps may be secured to their respective panels in any suitable manner, and I prefer to use adhesive means. The extreme end portions of the flaps, however, are left unattached.

The main display area 20, and the panels 21—28 constitute integral parts of a single blank of cardboard or the like, as shown most clearly in Figure 7. If desired, the flaps 29—32 may also be formed as integral parts of this same blank. To accomplish this, they may be hingedly connected to the outer edges of the panels 25—28, as shown.

It will be observed that the flaps 29—32 are shaped at their ends so as to provide projecting portions which overlap. For example, referring to Figures 5 and 6, it will be observed that the end portion of the flap 29 overlaps the end portion of the adjacent flap 30. As a result, the end portion of the flap 30 extends into sandwiched relation between the adjacent flap and panel, i. e., betwen the flap 29 and the panel 25. As a result, these flaps serve as a means for retaining the parts in predetermined proper relationship at all times, and for guiding the panels into proper border-forming relations whenever the device is to be used. More particularly, the inclined end edges of the outer panels, such as those designated by the reference numeral 33 and 34 in Figure 7, are accurately guided into mutual abutment when the border is formed. This guidance, in turn, assures proper mutual abutment of the end edges of the inner set of panels, such as the inclined edges indicated at 35 and 36 in Figure 7.

In the construction illustrated, each of the flaps 29—32 has projecting end portions which overlap the end portions of the adjacent flaps, but under certain circumstances only certain of the flaps need to have projecting portions to effect the desired guidance. For example, the flaps 29 and 32 could be constructed without any projecting end portions, while each of the lateral flaps 30 and 31 could have end portions, as illustrated, projecting into sandwiched relation with the adjacent flaps and panels for guiding purposes.

To bring about an automatic adjustment of the device into set up condition, whenever it is ready for use, I provide an elastic means arranged behind the border panels for yieldably urging the panels into border-forming relations. Preferably, the elastic means takes the form of ordinary elastic bands. I have shown such a band, 40, in Figures 5 and 7, in association with one of the corners of the device, and it is to be understood that this is illustrative of similar arrangements of parts at the other corners.

One convenient way of accomplishing the desired object is to provide slits 37 and 38 in the flaps 29 and 31, respectively, these slits defining tabs 39 which serve as convenient anchorages for the ends of the elastic band 40. It will be observed that the elastic band extends diagonally across the corner portion of the device, and is completely concealed from view when the device is observed from the front. This elastic means allows the entire device to be pressed into flat condition, as indicated in Figures 3 and 4, when it is to be packaged, shipped, or stored. Whenever the pressure is released, however, the elastic means brings about an automatic adjustment of the parts into the set-up condition of Figures 1, 3, and 5.

The flaps 29—32 are thus useful not only for stiffening purposes, but also as guiding means to hold the parts in proper relationship at all times, and as convenient anchorages for the resilient means for bringing about automatic operation.

One of the outstanding advantages of the structure, apart from its pleasing appearance and highly effective framing of a main display area (upon which an advertisement, for example, may appear), lies in the unusual rigidity of the entire structure. This rigidity is of particular value where the device, though made of relatively thin cardboard stock, is of substantial dimensions. The desired rigidity is brought about by virtue of the fact that the cardboard is bent in opposite directions along parallel lines. For example, the bending of the cardboard forwardly along the line between the area 20 and the panel 22, and the simultaneous bending of the cardboard in a relatively rearward direction along the line between the panels 22 and 26, imparts a highly desirable rigidity not only to the panel 22, but also to the structure as a whole.

Obviously, if desired, the display device may be of a shape other than rectangular. For example, it may be of substantially triangular shape, or it may be polygonal with more than four sides. In each case, of course, the end edges of the border panels are inclined at suitable angles to bring about the desired result.

Also, while I have shown a beveled border flaring forwardly from the main display area, it may, under certain circumstances, be desirable to construct the device in a manner whereby the bevel extends rearwardly from the main display area, thus elevating the display area above the surrounding frame.

In general, it will be understood that those skilled in the art may make changes in the details herein described and illustrated without departing from the spirit and scope of the invention as expressed in the appended claims. It is, therefore, intended that these details be interpreted as illustrative, and not in a limiting sense.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is:

1. In a cardboard display device, a main display area, panels hinged to the edges of said area and conjointly adapted, when inclined to

the plane of said area, to form a beveled border for said area, additional panels hinged to the first-named panels and conjointly adapted, when said beveled border is formed, to form an outer border surrounding said beveled border, flaps secured to and lying behind and flat against the panels forming said outer border, and elastic means carried by said flaps for yieldably holding the panels in border-forming relationships.

2. In a cardboard display device, a main display area, panels hinged to the edges of said area and conjointly adapted, when inclined to the plane of said area, to form a beveled border for said area, additional panels hinged to the first-named panels and conjointly adapted, when said beveled border is formed, to form an outer border surrounding said beveled border, flaps secured to and lying behind and flat against the panels forming said outer border, and elastic means carried by said flaps for yieldably holding the panels in border-forming relationships, said means comprising an elastic band interposed diagonally between each pair of adjacent flaps.

3. In a cardboard display device, a main display area, panels hinged to the edges of said area and conjointly adapted, when inclined to the plane of said area, to form a beveled border for said area, additional panels hinged to the first-named panels and conjointly adapted, when said beveled border is formed, to form an outer border surrounding said beveled border, and stiffening flaps secured to and lying behind and flat against the panels forming said outer border, each of certain of said flaps having an end portion extending into sandwiched relation with the adjacent flap and panel.

4. In a cardboard display device, a main display area, panels hinged to the edges of said area and conjointly adapted, when inclined to the plane of said area, to form a beveled border for said area, additional panels hinged to the first-named panels and conjointly adapted to form an outer border surrounding said beveled border, each of said panels having inclined end edges adapted to be brought into abutting relation to the end edges of the adjacent panels, and means for guiding said edges into said abutting relations, said means comprising flaps carried by and lying behind and flat against the panels forming said outer border, each of certain of said flaps having an end portion extending into sandwiched relation with the adjacent flap and panel.

5. In a cardboard display device, a main display area, panels hinged to the edges of said area and conjointly adapted, when inclined forwardly with respect to said area, to form a beveled border flaring forwardly from said area, additional panels hinged to the first-named panels and conjointly adapted, when inclined rearwardly with respect to said first-named panels, to form an outer border surrounding said beveled border and lying in a plane substantially parallel to said main display area, stiffening flaps secured to and lying behind and flat against the panels forming said outer border, each flap having a width no greater than that of the panel behind which it lies, each of certain of said flaps having an end portion extending into sandwiched relation with the adjacent flap and panel, and means yieldably interconnecting said flaps for holding the panels in border-forming relationships, said means allowing adjustment of the device into substantially flat condition with all of said panels and flaps arranged substantially in the plane of said display area.

JOHN V. HORR.