April 3, 1945. H. ZIEMMERMAN 2,373,074

HANGING DISPLAY

Filed Aug. 20, 1941

Fig. 1

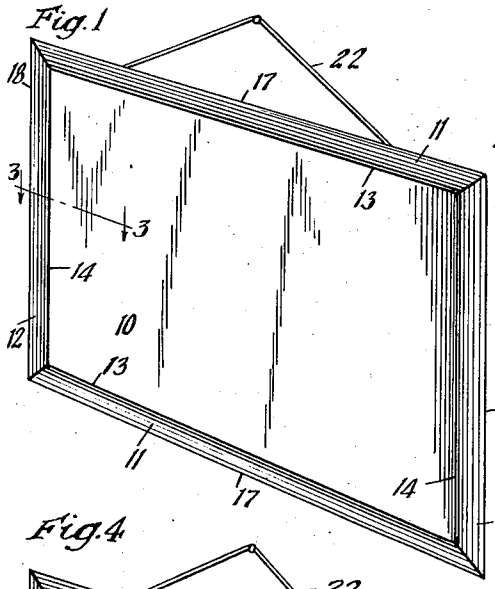


Fig. 2

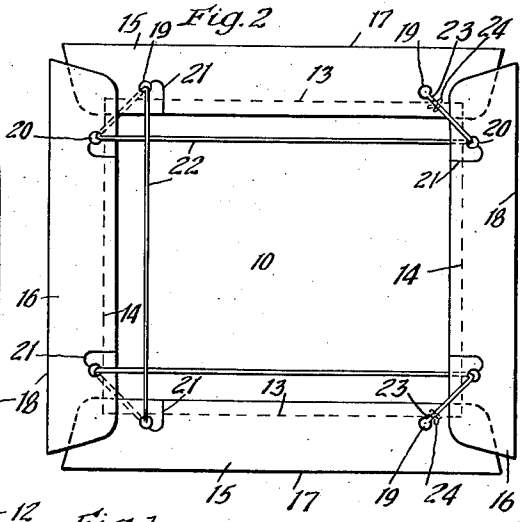


Fig. 3

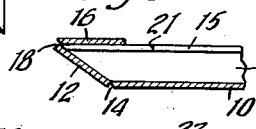


Fig. 5

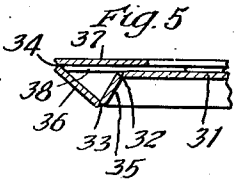


Fig. 4

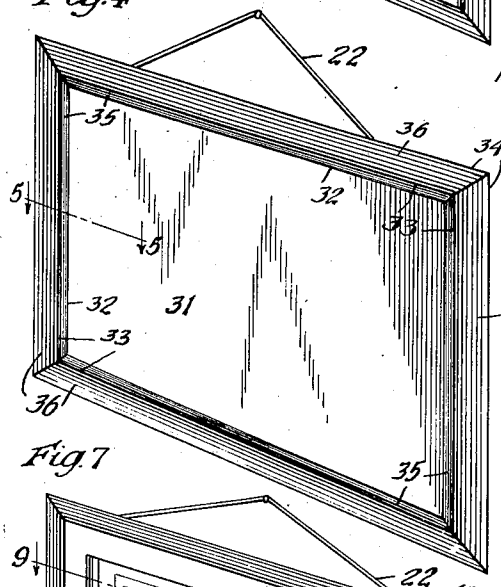


Fig. 6

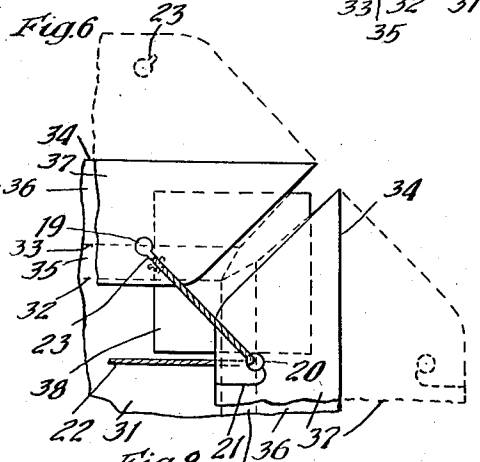


Fig. 7

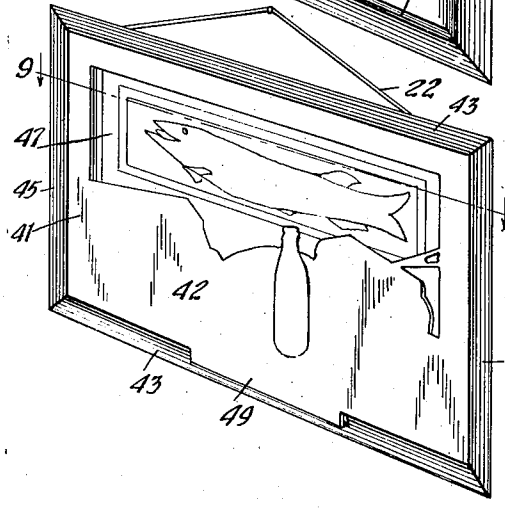


Fig. 8

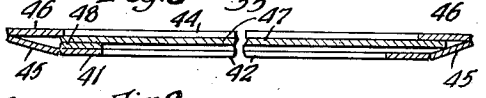
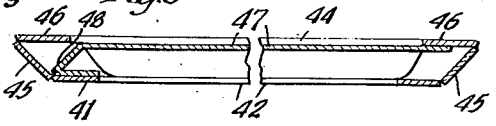


Fig. 9



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Patented Apr. 3, 1945

2,373,074

UNITED STATES PATENT OFFICE

2,373,074

HANGING DISPLAY

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Application August 20, 1941, Serial No. 407,597

1 Claim. (Cl. 40—154)

This invention relates in general to a folding display made of cardboard or other similar material adapted to collapse into a relatively flat package or condition and to be extensible and held in extended position by a cord which provides means for holding it when suspended. The invention is more particularly described in connection with several different forms of folding frame displays although it may be applied to other suspended and collapsing displays.

An important object of the invention is in the provision of a folding display in which portions or parts of the display are connected by a cord or cords attached to and loosely threaded to the parts, allowing them to collapse in substantially flat or compact relation and adapted when suspended by the cord to assume a distended position and to maintain that position as long as supported by the cord.

A further object of the invention is in the provision of a folding display in which the opposite edges represent portions of a frame made of the same piece of material cut and scored to collapse flatly in compact form and extensible to form a framed display, the various portions being held in extended position by a suspending cord which allows them to collapse into relatively flat relation when not suspended.

A further object of the invention is in the provision of a folding display of this kind in which cut and scored cardboard and similar material is extensible upon a supporting card, the heavier the display, the more firmly the parts are held in distended position, the weight of the display furnishing the tension which holds the parts together.

Other objects of the invention will be pointed out in the specification and will be apparent from the accompanying drawing, in which

Fig. 1 is a front perspective of a simple form of frame in extended position;

Fig. 2 is a view of the back of the display in collapsed form;

Fig. 3 is a sectional view of the display when extended;

Fig. 4 is a front perspective of another framed display in which the frame projects outwardly;

Fig. 5 is a sectional view of the frame shown in Fig. 4;

Fig. 6 shows a portion of one corner of the blank for the display in Fig. 4 before a suspending cord is applied thereto;

Figure 7 is a front perspective of a display frame having a background different from the front display plane of the frame;

Fig. 8 is a sectional view of the frame of Fig. 7 in flat or collapsed condition; and

Fig. 9 is a sectional view of the frame of Fig. 6 in extended position.

Folding displays which collapse flatly and are extended to display position are usually provided with locking means to hold them in either or both positions, and some displays are provided with rubber bands which automatically extend or contract them as soon as they are released from compact or extended position. The present invention relates to a type of display which may be made of one or more pieces and has foldably related parts to form a display when extended, the parts being connected by a cord or cords in such a manner that by suspending the display by means of the cord between opposite engaging points, the display will be distended by its own weight, the parts assuming an open or extended display position, the weight on the suspending cord furnishing the tension which holds the display together and the cord being loosely connected so that the heavier the display the more secure its shape will be, and no matter how long the display is collapsed, the cord will not deteriorate like rubber as a means for holding the display in distended position.

Referring now more particularly to the drawing, this invention is explained in connection with a framed type of display which may be formed of a single sheet of material such as cardboard having a display face 10 with opposite sides 11 and ends 12 formed by cut out corners and scores 13 and 14 respectively. Corresponding back sections 15 and 16 are provided as extensions of the sides and ends to which they are hinged by scores 17 and 18 respectively.

In the back sections 15 and 16 near the ends are perforations 19 and 20 some of which are connected with the adjacent edge by a curved slit 21 which extends from the rear edge of the opening at the side opposite the end of the section and is normally closed due to the resilience and thickness of the material of which the display is made, but may be flexed for inserting a cord 22 into the opening. Other openings are formed with a short, straight slit 23 into which the end of the cord may be secured as by means of a knot 24 at or near the end of the cord. The cord or cords are inserted through the openings 19 and 20 so that the opposite sides or ends will be directly connected thereby and the length of the cord being sufficient to allow the front sections 11 and 12 to fold flatly in the plane of the face 10 and the back sections 15 and 16 to

fold flatly against the back of the display with the corners slightly overlapping.

To distend the display, it is supported by the cord between any opposite pair of openings 19 or 20 depending upon whether the display is to be held with the sides or ends in vertical position. The portions at the corner are cut out so that the sides and ends incline rearwardly from the front face thereof, but meet accurately at the corners, thus forming a pleasing display of this type.

In the form shown by Figs. 4 to 6, the frame extends outwardly from a central plane 31 because of scores 32, 33, and 34 at each of the sides and ends, forming connected portions 35, 36, and 37, the corners being correspondingly cut and omitted to insure that the portions will fit tightly together at the corners and the rear sections 37 being provided with openings 19 and 20 and corresponding slits 21 and 23 to which a suspending cord 22 may be applied as shown in connection with Figs. 2 and 3.

In the form shown by Figs. 4 to 6, particularly for heavy displays, it may be desirable to provide a projection comprising a separate angular piece 38 attached at each corner of the picture plane 31 secured at the rear thereof and extending between the sections 36 and 37 to limit their inward movement by the cord 22. This will insure that the frame will not be drawn inwardly beyond its intended position even though the display is a heavy one.

In the form of the invention shown in Figs. 7, 8, and 9, a sheet display is cut and scored to fold similarly to Fig. 1 having an outer frame 41 in the plane of a display 42 and rearwardly inclined frame sections 43 and 44, 45 and 46 respectively. These sections 43 to 46 are provided with openings connected by a suspending cord 22 as described in connection with Figs. 1 and 2 by which the display is extended when it is supported. Secured to the under side of the frame section 41 at one side thereof, is a separate rear picture plane 47 having a hinged side 48, and attached at the opposite side only to the inside of one of the back frame ends 46. The operation of this form of the invention is that the back display 47 is extended and moves with the extension of the frame itself separating the back plane 47 from a position in contact with the rear of the plane 42 in collapsed position (as in Fig. 8) to a position spaced therefrom and giving added depth and perspective to the picture and the display. In this manner, a more novel and attractive illustration may be presented. In this form, a title tab or extension 49 may be provided at one side or at the bottom, cut out of the corresponding frame extension 43 or 44.

In all of these forms and in the invention as contemplated, the parts of the display are so connected that they will fold compactly for storage or shipping and may be extended simply by opening up the display or by supporting the display by means of the suspending cord, the act of suspending the display by means of the cord causing it to open, unfold, or distend to its full display position.

I claim:

In a folding display, sheet material cut, scored and foldable to provide an apertured display picture plane and opposite hinged side and end frame portions at the marginal edges, a rear foldable picture plane having an offsetting hinged connection with one side of the other picture plane and visible through the other picture plane and bearing display material which supplements that of the first plane, the said hinged portions having perforations at adjacent ends, and suspension means comprising a cord inserted through the perforations and connecting opposite side and end hinged frame portions only for drawing them inwardly and together at the corners and for separating the picture planes when the display is distended and supported by said means.

HENRY ZIEMMERMAN.