Sept. 21, 1937. H. A. ZIEMMERMAN 2,093,972

FRAMED DISPLAY

Filed April 15, 1935

Fig. 1.

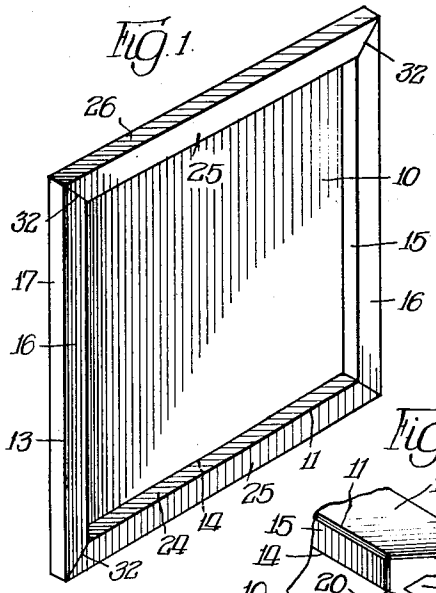


Fig. 2.

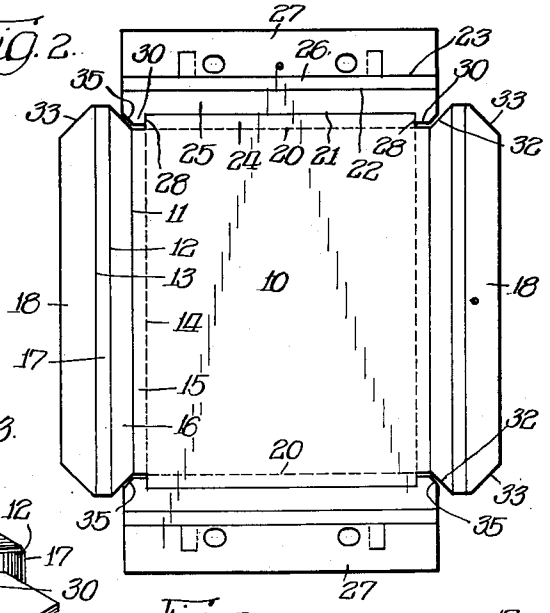


Fig. 3.

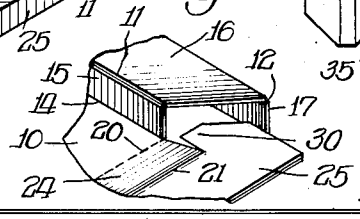


Fig. 4.

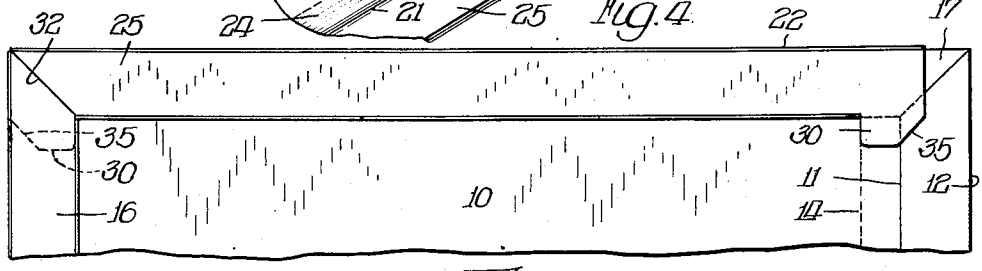


Fig. 5.

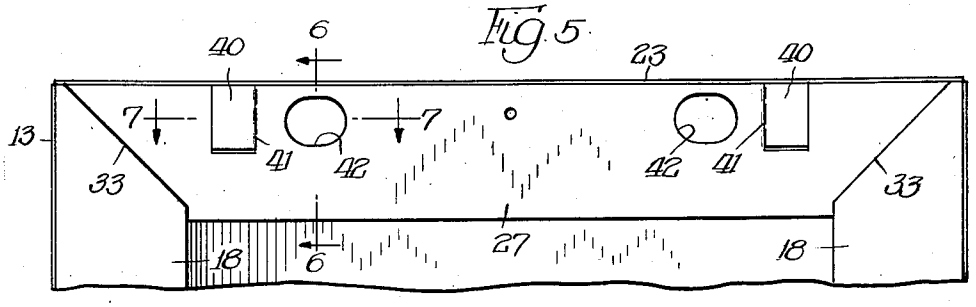


Fig. 6.

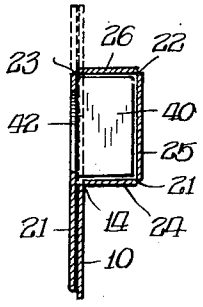
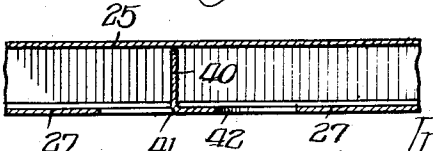


Fig. 7.



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UNITED STATES PATENT OFFICE

2,093,972

FRAMED DISPLAY

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Application April 15, 1935, Serial No. 16,291

12 Claims. (Cl. 40—154)

This invention relates in general to a foldable display preferably made of cardboard or similar material which is foldable to simulate a frame surrounding a picture.

An important object of the invention is in the provision of a collapsible display made from a single sheet of material which is foldable to provide a picture plane and a self-retaining raised frame surrounding the picture plane.

A further object of the invention is in the provision of a display of this kind in which the picture plane and the frame are made up of sheet material printed on one side only thereof.

A further object of the invention is in the provision of new and improved locking means for a framed display of this kind.

Other objects of the invention will appear hereinafter, the accompanying drawing illustrating a preferred embodiment of the invention.

In the drawing, Fig. 1 is a perspective of a display frame in accordance with this invention;

Fig. 2 shows a blank of the material from which the display is formed;

Fig. 3 is a perspective of one of the locking corners in partially locked position;

Fig. 4 is an elevation of one end of the display in folded or distended condition;

Fig. 5 is a rear view of one end of the display in folded position;

Fig. 6 is a detail of the locking mechanism taken on the line 6—6 of Fig. 5; and

Fig. 7 is a transverse section of the locking mechanism taken on the line 7—7 of Fig. 5.

In the present form of frame display which is made from a single piece of flexible material such as cardboard and the like, a rectangular frame having closely fitted corners extending from the picture plane at the back thereof, is provided, and improved locking means are located in the frame and operated from the back thereof so that no obstruction is provided either at the front or back of the marginal frame, and still the frame is easily folded, unfolded and locked in position so that the frame is easily and quickly set up and collapsed when desired.

Referring more particularly to the drawing, a single blank of sheet material as shown in Fig. 2 is cut and scored to provide a central plate or picture plane 10 of rectangular dimensions, the edges of which are cut and scored to form a marginal frame projecting from the picture plane as shown in Fig. 1.

To produce the marginal frame, opposite sides of the sheet are provided with parallel front score lines 11, 12 and 13, and a rear score line 14 which form a riser 15, a front face 16, marginal edge 17, and an attaching flap 18 at each side of the picture plane. At the ends, between and separate from the side scores, are rear score lines 20 and parallel front score lines 21, 22 and 23 forming a riser 24, a rim face 25, a marginal edge 26, and a rear pasting extension 27 with a notch 28 at each end of the riser 24 and the rim face 25 forming a locking lug 30. The flaps 18 and rear pieces 27 are secured to the back of the main plate 10 by a suitable adhesive so that the parallel portions between the outer edge of the picture plate 10 and the outer edge of the attached portions which project beyond the picture plate may be collapsed or folded flatly in a substantially common plane.

In order to set up this display the two side frame portions 11, 12 and 13 are pressed forwardly in rectangular cross section but will not remain in this position unless supported. The end sections 24, 25 and 26 are thereafter raised and pressed together, the locking lugs 30 engaging the raised ends of the sections 11, 12 and 13 and holding them in raised and distended position.

In order that the parts may fit neatly together and that they may be cut from a single sheet of material, the ends 32 of the side portions 16 are beveled outwardly and the ends 33 of the attaching flaps 18 are beveled inwardly. The projecting corners 35 of the locking projections 30 are also angularly cut so that they will engage more readily in the side frame portions as shown more clearly by Fig. 3.

When constructed and attached in this manner the front beveled ends 32 will extend tightly over the end frame portions 25 providing a neat angular corner joint line, and the ends 33 of the rear flaps 18 extend over the attached end flaps 27 presenting a neat joint extending angularly to the corners of the frame.

In order to hold the locking lugs 30 in place by holding the end sections in rectangular position and thereby holding the side frame sections in corresponding angular position, there are a number of rectangular locking lugs 40 having a hinge 41 at one side and cut from the material on the other three sides so that these lugs may be bent inwardly in right angular engaging position to hold the end frame sections in transverse rectangular open position. To disengage these lugs for collapsing the display, a finger opening 42 is provided adjacent the hinge side of each lug so that the finger of an operator or any desired implement may be inserted through the openings 42

pressing the locking lug 40 out of its rectangular engaging position and folding it flatly in the plane of the attaching flap 27 from which it is cut.

To collapse the frame it is necessary only to disengage the lugs 40 to fold the end sections flatly, thereby drawing the locking lugs 30 out of engagement with the side frame portions so that they also may be collapsed or unfolded.

With this construction the entire surface of the picture plane and the front faces of the frame and the rim thereof are all made from the same face of the sheet material so that one printed surface is all that is required to make the complete display and to coordinate the picture and the rim sections. Thus it is easier and less expensive to provide a printed surface which will accurately register with the picture plate and the rim portions so far as coloring and the lines thereof are concerned.

I claim:

1. A display frame made of a single sheet with a central picture plate and parallel edge portions with the outer one attached to the plate to form a hollow marginal edge foldable from collapsed flat condition to rectangular cross section, comprising separate side and end portions, and means on the end portions engaging the side portions for holding them in extended position.

2. A foldable display comprising a single sheet with a central picture plane and parallel score lines in the edges forming connected portions with the outermost permanently secured to one face of the picture plane and the intermediate portions being sufficient in number to fold flatly together and extensible to provide a hollow rectangular marginal frame raised from the picture plane, and means comprising a locking flap bendable inwardly from the back portion of the marginal frame to engage the inside of the front portion of that frame for distending it and holding the frame portions in distended position.

3. A foldable display comprising a sheet of foldable material cut apart at the corners and having parallel score lines in the edges to form connected portions foldable to form a hollow angular rim with the outer scored portion of each side permanently attached to the back of the sheet, the rim comprising a sufficient number of portions to fold flatly together when not distended, and means to distend the rim portions comprising the extremities of alternate connected edge portions having projecting lugs to engage in the ends of adjacent angular rim portions to hold them in distended position.

4. A foldable display comprising foldable sheet material having a central plate cut apart at the corners and score lines in the edges to form flatly foldable but extensible hollow separate connected angular frame portions, each outer portion being permanently attached to the central plate, and means to distend the frames comprising the extremities of opposite frame portions having projections to engage in the open hollow ends of the adjacent frame portions to support all of them in extended condition raised from the plane of the central plate to resemble a picture frame.

5. In a foldable display frame, a sheet cut at the corners and scored at the sides to form hollow angular frame sections each having its outer portions secured to the back of the sheet to collapse flatly therewith, the alternate sections having end projections to engage in the open ends of the sections between them to hold them in extended position, and the said alternate sections having locking means for holding them in distended position.

6. In a foldable display, a sheet cut at the corners and scored at the sides to form hollow angular frame sections, the ends of opposite sides having beveled portions to overlap the ends of adjacent sections, and the said overlapped ends having projections to engage in and hold the said opposite frame sections in distended position, and locking means within some of the sections to hold them separately in extended position.

7. In a foldable frame display, sheet material cut and scored to provide collapsible hollow angular frame sections with the outer portions forming each frame portion secured together, and a locking flap bendable inwardly from one portion to engage the other portions and hold the frame portion distended in its angular position.

8. A structure in accordance with claim 7 in which a finger aperture is provided in the portion adjacent the locking flap through which a finger may be inserted for disengaging the locking flap.

9. A foldable display frame comprising a sheet cut at the corners and scored at the sides to form separate foldable sections, the outer portion of each section being turned inwardly and its outer edge secured to the rear face of the sheet, leaving the intermediate portions collapsible together in double thickness and extensible to angular hollow cross-section, means at the ends of opposite sections to engage the other sections at the corners for holding them distended, and locking means located in the said opposite sections for holding them distended.

10. A display resembling a framed picture, comprising a foldable sheet printed on one side, cut at the corners, and scored at the sides to form separate sections; each section having a portion extending forwardly from the central part, a front face portion, a marginal rim portion, and a back portion extending inwardly at the back of and permanently attached to the central part; the sections being collapsible flatly and extensible to rectangular hollow cross-section; means engaging the sections to hold them together and in distended position; the folding of the sheet requiring printing on one face only to include the decoration of the central part and the rim thereof.

11. In a folding display, a sheet cut at the corners and scored at the sides to form separate frame sections, each having its outer member turned inwardly and permanently attached at the rear of the sheet and having sufficient sections to provide collapsible angular hollow frame portions, opposite sections having end projections extending at right angles to the score lines and adapted to engage in the hollow ends of the adjacent sections for holding them upright in distended position.

12. In a folding display, a sheet cut at the corners and scored at the sides to provide a plurality of sections each having its outer member turned inwardly and permanently secured at the free edge to the back of the sheet leaving three intermediate connected sections which are collapsed flatly together in double sheet thickness and are extensible in hollow rectangular cross section to simulate a frame raised from the plane of the sheet, and means to interconnect adjacent frame sections and hold them in distended position.

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