Aug. 20, 1957 M. J. VIGLIETTA 2,803,076

DISPLAY DEVICE

Filed Feb. 14, 1955

Fig. 1

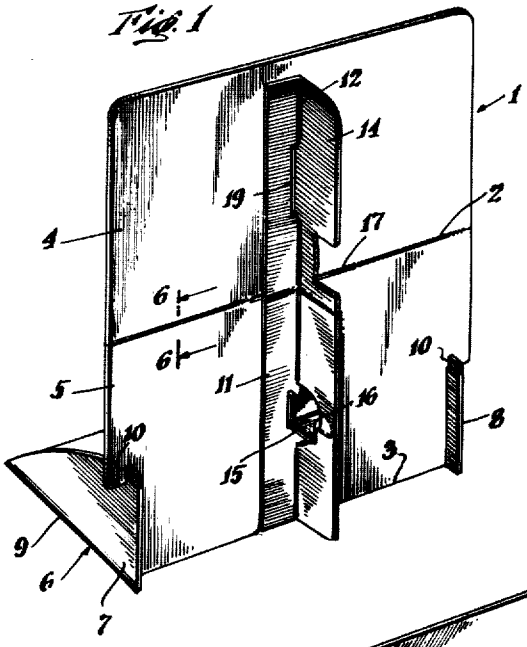


Fig. 3

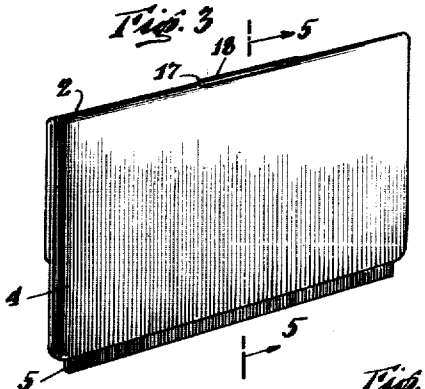


Fig. 5

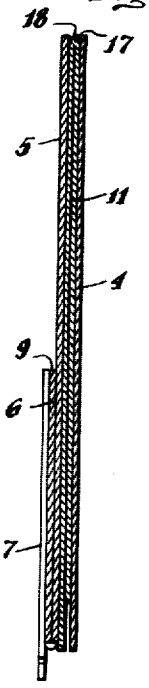


Fig. 2

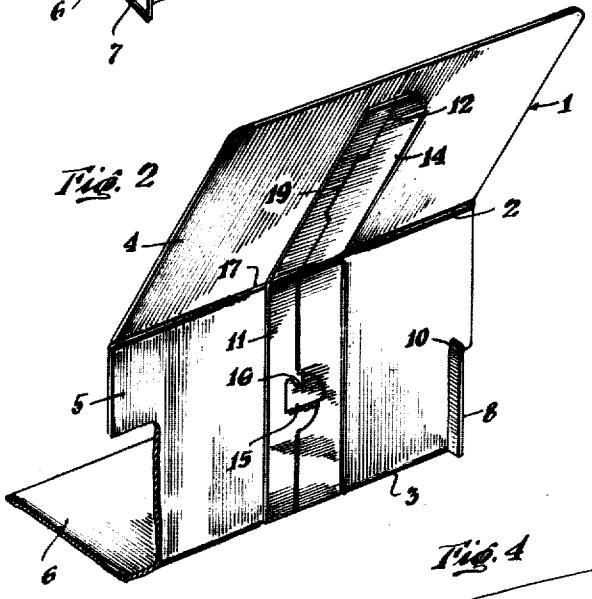
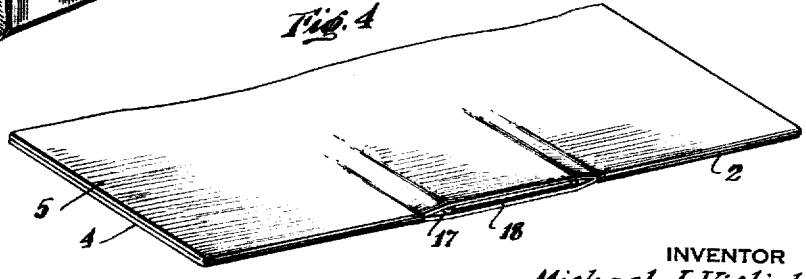


Fig. 6

Fig. 4



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2,803,076

DISPLAY DEVICE

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2 Claims. (Cl. 40—124.1)

The present invention relates to a display device and more particularly to a foldable or collapsible display having multiple thicknesses of materials at a portion of the fold line.

Displays made of lithographed cardboard are used extensively for advertising products. Generally the displays are stored and shipped in a folded or collapsed state and have to be set up by the user. Many of the displays utilize an easel for retaining a card or surface upright. Generally, the easel comprises an elongated strip of material secured at one edge to the back of a display panel with a fold line permitting one side to swing out with the fold line as a hinge. A suitable backing device holds it in its outer position. The folded portion when perpendicular to the surface of the panel serves as an easel to hold the panel upright and also serves as an effective stiffening member for the panel. Such easel type display panels are well known and are sold in large quantities.

In order to minimize shipping costs and storage space it becomes necessary to fold larger panels across the easel or stiffening member where a sheet of cardboard and a stiffening member are bonded together any attempts to fold across them after the bonding tends to tear them apart or otherwise impair the display.

Attempts have been made to overcome the problem. For example, the stiffening member which in the present embodiment serves in addition as an easel, has been provided with a transverse fold line on each side of the line on which the main display is folded. The space between these two added fold lines has been left unattached, that is, it has not been adhered to the back of the display panel so that when the display panel is folded transversely into collapsed position, the central fold line will bulge outwardly with the two additional fold lines as hinges. In other words, it will be bent down into a V with two additional thicknesses of material near the fold line. The additional thicknesses of material increases the thickness of the folded display and prevents it from laying flat in folded position. In addition, the reinforcing strip or part requires careful application of the adhesive so that the portion between the two added fold lines receives no adhesive and is left unattached to the back of the display card.

Another object of the invention is to facilitate folding a display card along a line which crosses a bonded reinforcing strip, thereon. A further object is to simplify the construction and operation of a foldable easel type display.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described or will be indicated in the appended claims and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and

is shown in the accompanying drawing, forming a part of the specification wherein:

Fig. 1 is a perspective view of a preferred embodiment of the invention taken from the back of the display showing the reinforcing strip in the form of an easel and also showing a folded base part locked in position.

Fig. 2 is a perspective view similar to Fig. 1 in which the display card is partially folded along its transverse fold line.

Fig. 3 is a preferred perspective view in which the display is completely folded.

Fig. 4 is a detailed perspective illustrating the projection of the folded part of the reinforcing strip through the slit in the display card.

Fig. 5 is a sectional view along the lines 5—5 of Fig. 3.

Fig. 6 is a sectional view along the lines 6—6 of Fig. 1, illustrating the score line provided for facilitating the folded operation.

Referring again to the drawings and more particularly to Fig. 1 illustrating a preferred embodiment, there is shown a display card **1** with transverse fold lines **2** and **3**, which form three foldable sections **4**, **5**, and **6**. The section **4** forms the upper part—section **5** the middle part—and section **6** a foldable base. The base has locking flaps **7** and **8** which may be folded along the lines **9** and snapped into the notches **10** for locking the base at a suitable angle to the main portion of the display. Articles may be seated on the base as a part of the display. The parts of the display described thus far are in common use and are not claimed to be new per se. The present invention is shown applied to the display thus far described. Referring again to Fig. 1, there is shown a stiffening member **11** adhered to the backs of the panels **4** and **5**. The stiffening member extends across the transverse fold line **2** in the display. The stiffening member **11** has a longitudinal fold line **12** permitting one side to be swung outwardly about the fold line as a hinge. This outwardly hinged part when held edgewise against the back of the display, serves as an effective stiffening or reinforcing member and prevents the display sections **4** and **5** from folding along the fold line **2**. In other words, with the portion **14** perpendicular to the display, it is held in upright position. The usual type of locking means **15** with a notch **16** therein may be cut out of the strip **11** to hold the hinged part **14** in perpendicular position.

In order to facilitate the folding operation, there is provided a slit **17** along the middle of the fold line **2**. Preferably, the slit extends slightly beyond the edges of the reinforcing strip when it lays flat against the back of the display. When it is desired to ship or store the display, it may be folded into knock-down position by unlocking the easel portion **14** and permitting it to lie flat against the back of the strip. In this position, the sections **4** and **5** may be folded together about the fold line **2**. The folded edge **18** of the reinforcing member **11** will project through the slit **17** as shown more particularly in Figs. 3, 4 and 5. In this way, the slit in the main display card permits the bonded reinforcing strip to fold without stresses between the bonded surfaces and without impairing the bonding of the parts together. When the parts are opened into display position, the slit closes and is held closed by the reinforcing strip. Hence, the operation and appearance of the display are not impaired in any way.

The base portion **6** may be unlocked and folded in the usual manner.

In the preferred embodiment, the reinforcing strip **11** terminates at the fold line **3** defining the base portion **6** of the display so that the hinged portion **14** of the reinforcing strip serves as an easel for holding the display

upright in addition to its reinforcing and stiffening function. A slit or tongue **19** may also be formed if desired to increase the reinforcing operation by having a portion fitting edgewise against the back of the display panel.

While the fold lines in the preferred embodiment have been illustrated as scores, grooves, perforations, any other weakening means may be utilized, if desired.

In operations, the display as set up in Fig. 1 may be folded into knock-down position by unlocking at **16** the easel portion **14** and swinging it about its fold line or hinge **12** against the back of the display as illustrated more particularly in Fig. 2. The upper section **4** may then be folded backwardly against the middle section **5**. The edge formed by the folding of the reinforcing strip **11** across its middle will project into the slit **17** as shown more particularly in Figs. 3, 4 and 5 to avoid any tendency of the bonded surfaces to pull apart due to surface stress occasioned by the folding of the two stiff bonded parts. This is a simple means of facilitating the bonding operation without increasing the thickness of the folded display and without increasing the cost of the display. The strip **11** may be bonded with the usual type of machinery without complications and the slit **17** may be made at the time the score line is made across the display card. The base part of the display may be unlocked at **10** and the side flaps **7** and **8** turned inwardly and the base parts of section **6** folded against the front of the display as shown in Fig. 5.

It will be observed from the above that the invention provides a display panel which may be folded flat and which may be easily assembled and inexpensively manufactured. It will also be observed from the above that the invention provides a display panel with a stiffening member which is attached throughout its entire length to all portions of the display panel and at the same time will permit the sections of the display panel to be folded flat in an overlapping position without causing bulges

or breaks in the surface of the display panel. In addition, this invention reduces the cost of labor needed to accomplish this purpose since the attachment of the stiffening member to the display panel can now be done in one single operation on a machine instead of the more costly hand operations.

As various changes may be made in the form, construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. In a foldable display device, a foldable display panel having a weakened fold line therein to permit the panel to be folded along said line, a portion of said weakened line having a slit therein, a supporting strip secured to said panel and extending across the slitted portion of said weakened fold line, said strip having a fold line aligned with said slit to permit the strip to be folded with said panel, said strip being fastened to said display panel adjacent said slit, and said strip being adapted to project into the slit in the panel when the strip and panel are folded to facilitate the folding operation and permit the folded strip and panel to lie flat.

2. A display device as claimed in claim 1, in which said strip is in the fom of an easel foldable outwardly from the display panel to support it in display position.

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