Jan. 1, 1957 E. W. ERICSON 2,776,150

DISPLAY BINDER

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Fig. 1.

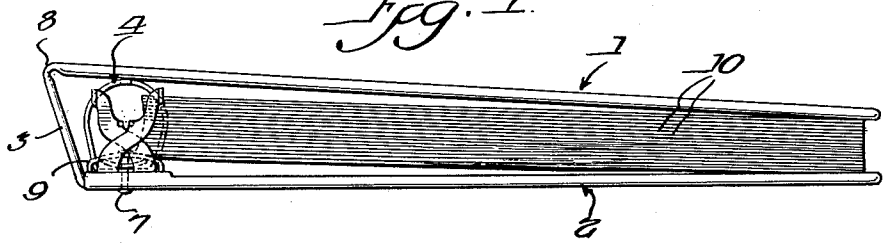
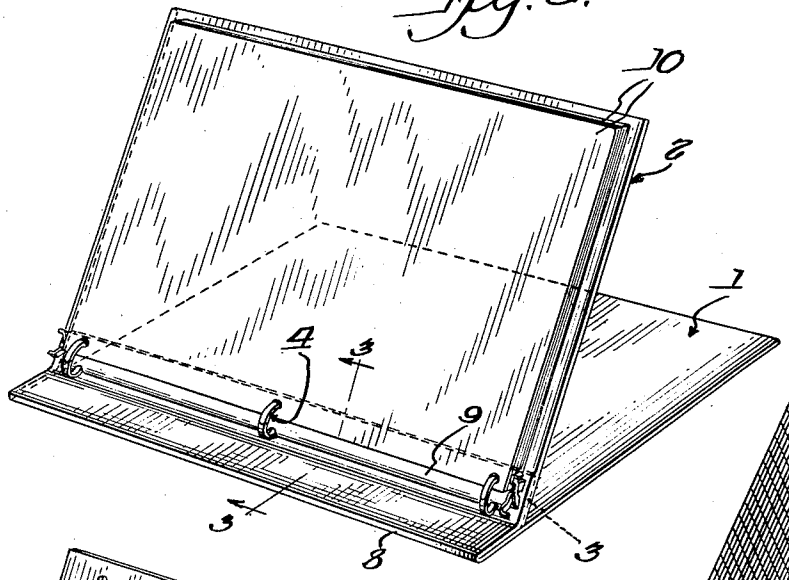


Fig. 2.



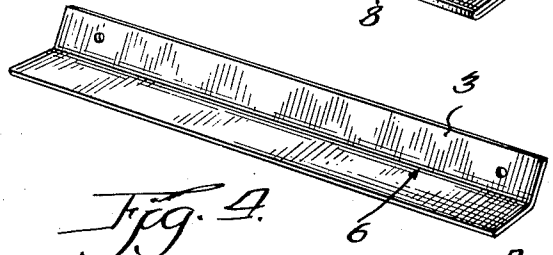


Fig. 4.

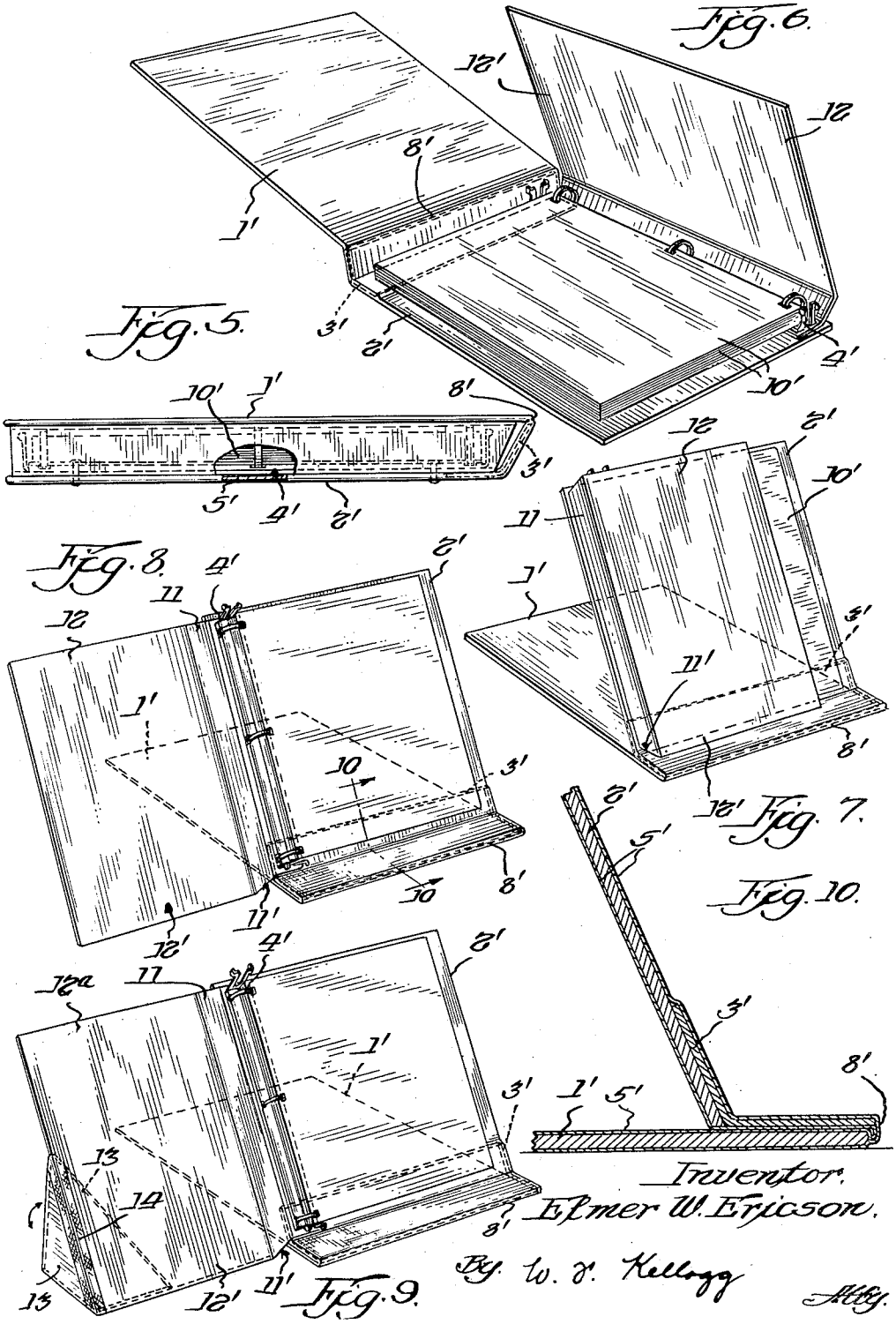
Fig. 3.

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DISPLAY BINDER

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DISPLAY BINDER

Elmer W. Ericson, Chicago, Ill.

Application June 11, 1953, Serial No. 360,900

2 Claims. (Cl. 281—33)

This invention relates to improvements in display binders, having for an object to provide a binder of the so-called loose-leaf type which by quick and simple adjustment, can be converted into a most advantageous and satisfactory easel whereon the leaf contents of the binder can be successively, selectively, or otherwise individually displayed and moreover, retained in substantially flat and near upright or inclined position whereby to materially improve such display.

Another and equally important object of the invention is to provide a device of the above indicated character whose cover panels are so constructed and mounted that they can be easily moved into a relationship where one of the same will constitute a supporting base and the other, an easel onto or against which the leaf contents of the binder may be turned and bearingly engaged for substantially flat display, and the thus relationed and use converted cover panels securely retained in their said positions until it is desired to return them to their original relationship, whereupon they can be easily and instantly swung into the usual substantially parallel relation as binder covers.

It is also an object of the invention to provide a display binder of simple and sturdy construction, in which the number of parts are comparatively few, are uncostly, and can be assembled with and in a minimum of labor and time; the cover panels and the back being so formed and interconnected that they may be advantageously arranged in substantially flat and contiguous relation, capable of being covered or sheathed in a continuous operation and thereafter, effectually and readily bent or relatively disposed in product finished form.

The invention also aims to provide a display binder whose primary constructional members are substantially complete, fully assembled, and interconnected in flat, contiguous or extended relation in a single and continuous production operation, thus, permitting its fabrication to such a point at a very low cost, following which, certain of said constructional members is formed to function as a back for the binder and as a stop-support means when said binder is converted into a display easel.

An equally important object of the invention resides in the provision of a novel and highly meritorious method of forming, covering and producing my improved display binder, whereby the component parts of the same will be contiguous with relation to each other, will be substantially flat throughout their bodily areas and can, while in flat contiguous form, be most economically covered or sheathed and bound in a suitable finishing material, whereupon the parts forming of the binder, particularly its back, will be effected to complete the production method.

The foregoing, as well as other objects, advantages and meritorious teachings of my invention, will be in part obvious and in part pointed out in the following detailed disclosure thereof, when taken in conjunction with the accompanying drawings, it being understood that the forms of my invention presented herein are precise and what are now considered to be the better modes of embodying its principles, but that other modifications and changes may be made in specific embodiment without departing from its essential features.

In the drawings:

Figure 1 is an end view of the binder in its closed position.

Figure 2 is a perspective of the same in its converted position, that is, in its easel display position.

Figure 3 is an enlarged fragmental vertical section, taken on the line 3—3 of Figure 2, looking in the direction in which the arrows point.

Figure 4 is a detail in perspective of the panel carried substantially stiff angle member.

Figure 5 is an end view of a modified form of the display binder with a portion broken away to show the positioning of the leaf binder and the leaves in closed position.

Figure 6 is a perspective view of the modified form of binder in a partially open position preparatory to converting or adjusting the same into its display position.

Figure 7 is a similar view showing the binder in a second step conversion or adjustment stage, wherein one of the panels serves as a supporting base and the other and angle member carrying panel is in its displaying position with relation to said first panel.

Figure 8 is a view like Figure 7, but wherein a secondary panel has been swung to a position coextensive with relation to the first panel and serves to receive and support the turned horizontally swingable leaves engaged by the binder mechanism carried on the latter panel.

Figure 9 is a view similar to Figure 8, but in which the free or outer side of the aforesaid secondary panel is provided with a hingedly mounted leg support, and

Figure 10 is an enlarged fragmentary section taken on the line 10—10 of Figure 8, looking in the direction in which the arrows point.

Referring in detail to the drawings and particularly to that form of the invention illustrated by Figures 1–4 inclusive, said invention, generally, comprises flat and substantially stiff panels 1 and 2, a substantially stiff and flat cross-sectionally angularly formed member secured to one side portion of the panel 2, as hereinafter more fully described, and a suitable form or type of loose leaf binder 4, plus a binding or finishing covering of fabric, leather or other sheet-like material 5 which sheaths the panels 1 and 2 and the angle member 3 and hingedly connects the flange and its carrying panel 2 to an adjacent side of the panel 1.

At this point, it is timely to note that whereas the flat and substantially stiff panels 1 and 2 are of a generally similar (rectangular) shape and length (see Figure 2), the width of the panel 2 is less than that of the panel 1 (see Figure 1).

The panels 1 and 2 can be made of various materials such as are commonly used in the art, though in the present embodiment, they are of a sufficiently heavy card or like composition board, primarily for purposes of economy.

The angle member 3, which can be made of stiff or substantially stiff metal, such as aluminum, is bent longitudinally of and medially throughout its length, as at 6, so that it is of an obtuse angular cross-sectional formation. The length of the member approximates that of the panels 1 and 2 and one of its angular sides engages flatly over the inner face of the adjacent side of the panel 2 in the manner clearly shown in Figure 3 of the accompanying drawings. It is fixedly connected to said panel and immovably retained in such position thereon by engaging rivets 7 or other fastening devices or means, such as manufacturing conditions or preference may dictate.

The longitudinal bend 6 in the angle member is positioned adjacent and parallel to the edge of the near side of the panel 2. Thus, as shown in Figure 3 of the draw-

ings, the remaining flat and angularly disposed side or portion thereof extends beyond the normally inner face of said panel 2, with its normally outer face substantially flush or coextensive with relation to said panel near side edge.

If desired, the width of the angularly extended side or portion of the member 3 may be less or greater than that herein shown, without departing from the spirit or the scope of the invention.

The straight outer and now free edge of the member 3 is positioned in proximity and parallel relation to the straight edge inner side of the panel 1, i. e., it is spaced slightly therefrom.

With the components 1, 2 and 3 in the above described relation, the sheet-like binding material 5 is smoothly engaged over and about the panels 1 and 2 and the member 3 thereby providing finishing encasement or sheathing therefor, and also, hingedly or swingably connecting said straight outer edge of the member to and adjacent the similar edge of the panel 1, as indicated at 8. It is essential to proper relationing between the member 3 and the panel 1, at times, that the width of the hinge portion 8 of the material 5 substantially corresponds to the thickness of the board panel 1. Thereby, the extended side of the cross-sectionally angle member 3 will be allowed flush and/or flat contact with the adjacent portion of said panel when swung to its converted easel display position, as clearly shown in Figure 3.

Various modes of securing the binding material 5 to the panels and member can be employed, though for manufacturing expediency and economy, I prefer to use an adhesive, especially since joinder between the material and panels and flange can be effected by engaging and passing the same between suitable pressure applying rolls, thus, smoothly and evenly disposing the material over and in adhesive connection with said panels and flange.

The binding mechanism 4 can be of any suitable type, as for example, the ring form shown in the accompanying drawings. Said mechanism includes a base 9 mounting a sufficient number of rings thereon. The mechanism is disposed longitudinally of and over the normally inner face of the panel 2 adjacent and parallel to its normally inner and, at times, lower edge and the bend 6 in the member 3. The rivets 7, and if desired, additional rivets (not shown) are engaged through and with the base 9 and, of course, the panel 2 and member 3. Thereby, said binding mechanism is fixedly mounted.

The heights of the rings of the binding mechanism are less than the width of the angularly extended side of the member 3, thus, allowing the same to be contained within or between the binder panels 1 and 2 when in closed relation (see Figure 1).

Because of the flat formation of the extended portion of the member 3 and its width, as above indicated, the same provides an effectual and satisfactory back for the binder.

The greater width of the panel 1 is such as to equal the overall width of the panel 2 and member 3 mounted thereon. Therefore, when said panels are in closed relation, the outer or free sides of the same will be substantially vertically aligned, as shown in Figure 1 of the drawings.

Leaves or other sheet-like bodies 10, preferably of a shape and size to be contained between and/or within the panels 1 and 2, are provided. Suitable openings are formed in appropriate portions thereof and, as will be understood, have the rings of the binding mechanism 4 engaged therethrough.

In use of my improved convertible binder the bodies 10 are retained substantially flat between its panels 1 and 2 when in closed position. When it is desired to convert said binder into an easel for displaying said bodies or matter thereon present or therein contained, the panels 1 and 2 are swung away from each other along the hinge portion 8 until the normally flat face of the angularly extended side of the angle member 3 overlies and abuttingly contacts with an adjacent portion of the normally outer face of the panel 1 and binding material 5, in the manner shown in Figures 2 and 3. The immovable mounting of the member on the panel 2 and the stiffness thereof will, obviously, cause said panel to be supported in angular or inclined relation to the now base panel 1, and in such position, the former will provide an effective and satisfactory easel support for the sheet-like bodies 10 swingably mounted on the binding mechanism 4.

The bodies 10 can be vertically swung, individually, selectively or otherwise, to and/or from positions of display adjacent and resting on the inclined easel support panel 2.

At the conclusion of an easel display usage of the invention, the panel 2 and bodies 10 can be reversely swung to positions adjacent and more or less parallel to the panel 1, as shown in Figure 1, thus, closing the binder and containing and protecting its contents or bodies 10 between the panels 1 and 2 thereof.

In Figures 5–8 and 10 of the accompanying drawings, I have shown a slightly modified form of the invention. Therein, the convertible binder consists of panels 1' and 2'. The panel 2' fixedly mounts a flat substantially stiff cross-sectionally angularly shaped member 3' on and adjacent one of its ends. Sheet-like binding material 5' is engaged over, about and with the panels 1' and 2' and member 3', forming a hinge connection 8' between the adjacent straight edge sides of said panels whereby to permit hinging or swinging movement therebetween for those purposes or reasons hereinbefore fully described.

In this modified form of the convertible binder, a suitable type of loose leaf binding mechanism 4' is fixedly mounted, through its base on the normally inner face of the panel 2' adjacent and parallel to one side thereof, in the manner shown in Figures 5, 6 and 8.

When the panel 2 is adjusted to and arranged in its inclined easel display position, it will be observed that the binding mechanism 4' is substantially vertically disposed. Therefore, when leaves or bodies 10' are mounted on said binding mechanism they will be substantially horizontally swingable, rather than vertically swingable, as in the instance of the preceding form of my invention.

To provide a firm and effectual support for the horizontally turnable bodies 10', i. e., when the convertible binder is set-up in its easel display position, whereby they will be flatly position retained and displayed, I arranged a flat substantially stiff rectangularly shaped strip 11 adjacent and along that side of the panel 2' carrying the binding mechanism 4', and a rectangularly shaped auxiliary panel 12 adjacent and along its free and outer side. The binding material 5' is extended over, about and joined to this strip and panel, forming hinge joints between said strip and panel 2' and between the strip and panel 12 for an obvious purpose.

The normally inner, and at times, lower end of the panel 12 extends beyond or below the adjacent end of the panel 2', as indicated at 12', while the normally inner or lower end of the strip 11 is diagonally formed, as at 11'. In consequence, it will be readily seen, upon reference to the Figure 8, that when the binder is set-up in easel display position and the panel 12 is swung horizontally outwardly of and from the panel 2 into coplanar or coextensive relation thereto, the extended portion 12' of said panel will be brought into motion arresting contact with the flat surface of a supporting object and so enable the panel 12 to afford a solid support for the bodies 10'.

The auxiliary panel 12, when not in use, is swung inwardly over the normally inner face of the binder panel 2 and the bodies 10' (see Figure 7). Therefore, when the improved binder is in its closed position, said auxiliary panel 12 will be contained between and within its panels 1 and 2.

In Figure 9 of the accompanying drawings, I have shown a still further modified form of the invention; particularly, an addition to the panel 12 of the modified form of the invention shown in Figures 5–8 and 10. In this further modified form of the invention, and if desired, the outer straight side edge of the auxiliary panel 12a can have a substantially triangularly shaped supporting leg 13 hinged to and along a portion of its length, as indicated at 14. The normally inner and, at times, lower straight edge portion of this hingedly mounted supporting leg 13 is contiguous with that of the panel 12a lower end. Consequently, when said panel 12a is swung to its coplanar or coextensive position, as shown in Figure 9 of the drawings, the leg 13 can be swung into a position at substantial right angles thereto providing an effectual solid support for the now outer and free side portion of the auxiliary panel 12a. When not in use, this supporting leg 13 may be swung inwardly into substantially parallel and adjacent relation to one side of the auxiliary panel 12a as shown in dotted lines in said Figure 9.

In manufacturing or producing my improved convertible binder, I desire to have it understood that a novel and most advantageous method of forming, covering and interconnecting the component parts thereof is practiced. That is to say, such method of producing, consists of arranging the various panels in substantially end-to-end flat and contiguous relation, then interposing the angle member 3 which, at the time, is an overall flat strip of bendable material, between the end-to-end relationed panels, then fixedly connecting a portion of the member to an adjacent end portion to one of the panels; then encasing the panels and the flange strip in a continuous covering material and joining this covering material to said panels and angle member by an adhesive, and thereupon subjecting the opposite sides of the encased panels and angle member to roll applied pressure over and throughout their respective areas. Following this assembly and interconnecting of component members, as above explained, the angle member is then bent longitudinally and intermediately of and throughout its length to assume an obtuse angular cross-sectional shape.

By assembling and interconnecting the panels and the flange strip in an overall contiguous and flat relation and form, it will be seen that the pressure sealing of the adhesive coated binding material to the panels and angle member can be readily and quickly effected by passing the same through suitable pressing applying rolls. Following this, the angle member, encased by the binding material, can be bent into the particularly desired cross-sectionally angular shape.

I claim:

1. A display device, consisting of a pair of stiff panels, a substantially inflexible angle member, one of the sides of said member being positioned on a side of one of said panels adjacent and parallel to one of its ends, the remaining side of the angle member being extended from and beyond said one end of said panel, binder means on that side of the angle member on said last mentioned panel positioned adjacent the point of angulation of said member and inwardly of its remaining side and free end, means fixedly interconnecting the angle member first mentioned side and the binder means to the last mentioned panel, and the corresponding end of the remaining panel being hinged to the free end of said remaining side of the angle member swingable in either of two directions with relation thereto, said remaining panel, when swung in one direction, having a portion thereof abuttingly engaged with said remaining side of the angle member and said first mentioned panel being disposed at an angle to and above the remaining panel.

2. A display device, consisting of a pair of stiff panels, a substantially inflexible angle member, one of the sides of said member being positioned on a side of one of said panels adjacent and parallel to one of its ends, the remaining side of the angle member being extended from and beyond said one end of said panel and being contiguous with said one end, the corresponding end of the remaining panel being hinged to the free end of said remaining side of the angle member swingable in either of two directions with relation thereto, said remaining panel, when swung in one position, having a portion thereof abuttingly engaged with said remaining side of the angle member and said first mentioned panel disposed at an angle to and above the remaining panel, a third stiff panel hingedly connected to one side of said first mentioned panel at substantially right angles to the remaining panel, and binder means carried by said first mentioned panel in proximity to the hinging of the third panel thereto.

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