

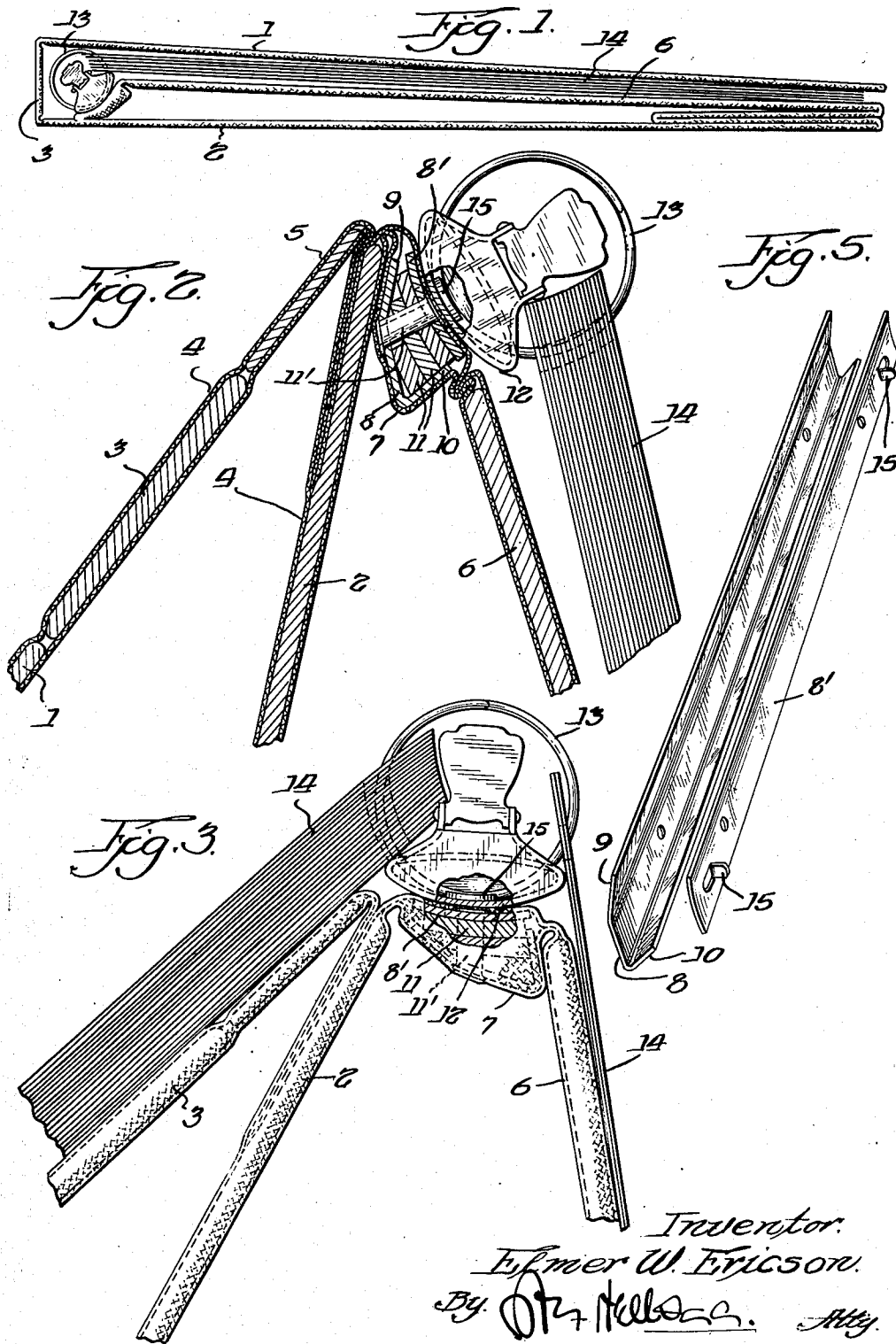
Nov. 11, 1952

E. W. ERICSON
DISPLAY BINDER

2,617,665

Filed Oct. 6, 1950

2 SHEETS—SHEET 1



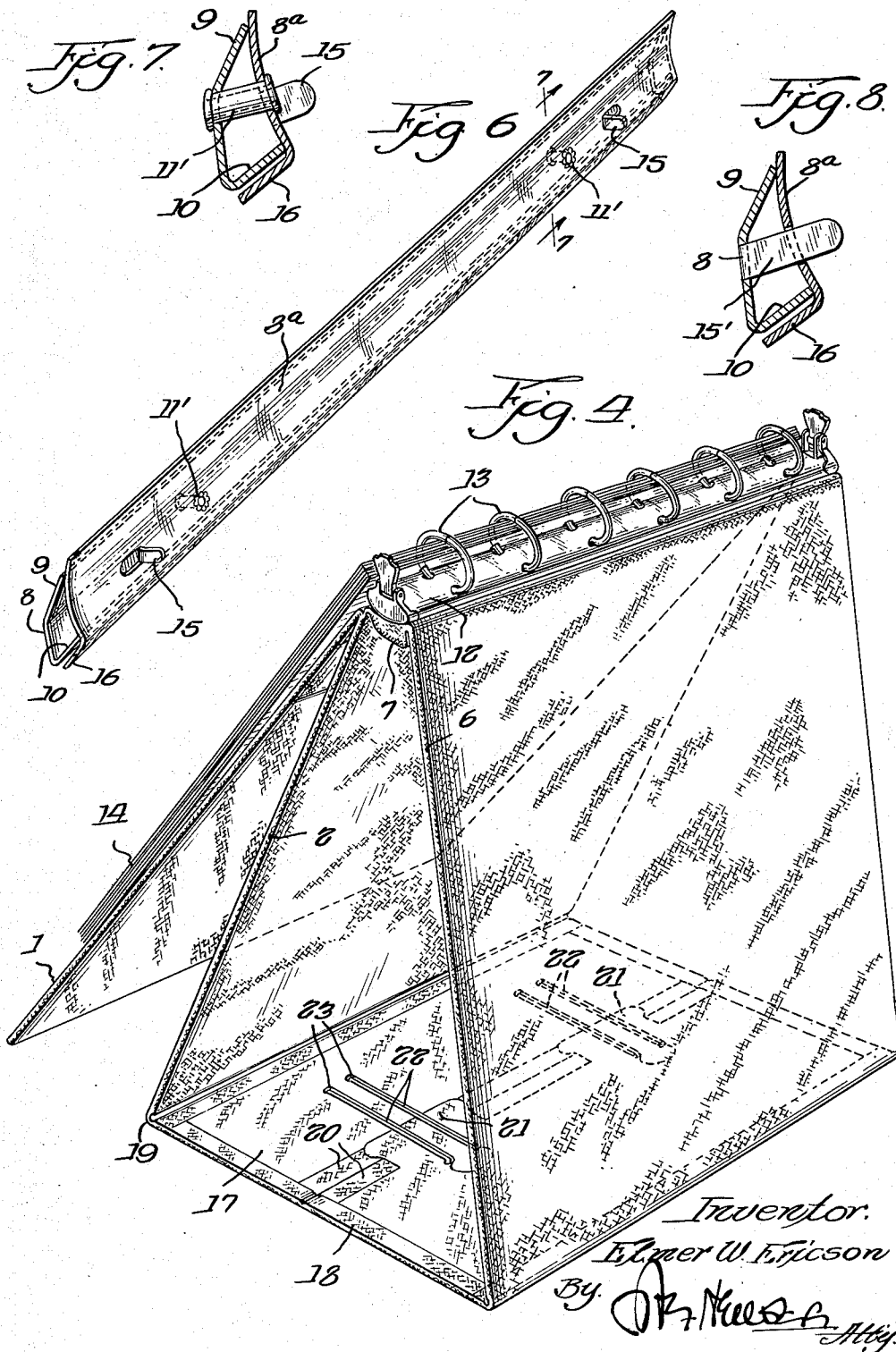
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2 SHEETS—SHEET 2



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DISPLAY BINDER

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5 Claims. (Cl. 281—33)

1

This invention relates to improvements in display binders of the types which can be conveniently and quickly set-up in easel-like form whereby sheets hingedly retained within the same can be displayed in flat and pendant positions, and after display, turned back to second stage or out-of-the-way positions as in the successive displaying of other sheets until all thereof have been displayed.

More particularly, it is an object of the invention to provide an easel type of display binder embracing in its construction a novel and highly advantageous means for mounting the binding rings or similar mechanism with relation to the combined panel cover supports of the display binder whereby and without the use of fabric strip hinges or other flexible connections between the sheets and their points of hinging to the binding mechanism, the to-be-displayed and/or displayed bound sheets directly connected thereto will, with setting-up of said display binder into easel form, hang flatly and evenly from said binding mechanism for effective display; the mounting being auto-adjustable during the turning of the sheets from front to back (display and post-display) positions so that pendant, flat display of the binder forwardly positioned sheets and pendant substantially flat arrangement of the displayed and turned rearwardly positioned sheets will be maintained, in the one instance, assuring full and satisfactory flat display and in the second instance, facilitating turning of the sheets from the front to back and their retention in turned positions.

As above inferred, it is essential in the production of easel types of display binders that when they are arranged in easel fashion for display of sheets retained thereby, said sheets shall be hung flatly from the binding rings or other kindred mechanism in both their display and non-display or post-display positions. To effect this, it is common practice to secure to the normally inner edges of the sheets fabric hinge strips or stubs and to directly, though loosely, engage the latter with the binding rings. The lengths of these fabric hinges are sufficient to space the display sheets from the binding rings at a distance from where they are hung flatly therefrom, and only the fabric hinges will be curved or flexed before and after turning of the sheets.

While hinged constructions, as above, are operatively satisfactory to some degree, they are not generally so; furthermore, those costs associated with their production are high and hence, undesirable.

2

By means of my invention, display sheets of a binder constructed according thereto can be directly hingedly engaged with the sheet binding mechanism and when so engaged, will hang flatly therefrom in their respective display or post-display positions. Thus, the aforesaid prohibitive production costs incident to the use of fabric hinge strips or stubs is eliminated without sacrifice of the merits of the flatly hanging display sheets and/or their durability.

Other objects of the invention will be in part obvious and in part pointed out hereafter.

In order that the invention and its mode of operation may be readily understood by those skilled in the art to which it appertains, I have in the accompanying drawings and in the detailed descriptions based thereupon, set out certain embodiments of my invention.

In the drawings:

Figure 1 is an end elevation of the improved display binder in its closed position.

Figure 2 is an enlarged fragmentary vertical, transverse section through the display binder, showing the same in its easel or display position with leaves attached to the rings of the loose-leaf binder and in displaying position.

Figure 3 is a view similar to Figure 2, but wherein the leaves have been moved or swung to non-displaying or post-display position, the loose-leaf binding device having been adjusted or moved to a compensating position by the turning of the leaves to their non-displaying or post-displayed positions.

Figure 4 is a perspective view of the display binder in leaf displaying position with the leaves in post-display positions, such as shown in Figure 3, and with the loose-leaf binding device shown moved to the aforesaid compensating position.

Figure 5 is a detail in perspective showing certain of the component parts of the mounting strip assembly in disassembled relation.

Figure 6 is a detail in perspective of a slightly modified form of mounting strip assembly with the component members thereof in assembled relation.

Figure 7 is an enlarged detail in transverse section taken on the line 7—7 of Figure 6, looking in the direction in which the arrows point, and,

Figure 8 is a view similar to Figure 7 showing another modified means for connecting the component members of the mounting strip assembly and the base plate of the loose-leaf binding device in interconnected or assembled relation.

Referring in detail to the accompanying drawings, the improved binder comprises a pair of sub-

stantially stiff and flat rectangular cover panels 1 and 2. Said panels, preferably, are of corresponding widths, the panel 1 being somewhat longer than the panel 2, as appears from Figure 1 of the accompanying drawings. Certain of the marginal sides of the panels are hingedly connected by arranging therebetween a flat and stiff back-piece 3, covering the same with a fabric 4 or other flexible sheet material and extending said fabric from and beyond the sides thereof onto and over the cover panels 1 and 2 in the manner shown in Figure 2.

To compensate for the shorter length of the cover panel 2, whereby, when it and the cover panel 1 are juxtaposed, as when the binder is closed, their free sides and ends will substantially align, the span of the fabric 4 between the back-piece 3 and the panel 1 is shorter than that between the back-piece and panel 2, indicated at 5. Consequently, with closing and juxtapositioning of the binder cover panels, the binder back-piece 3 will be arranged at substantially right angles to and between said panels and so, provide an effective back for the binder. (See Figure 1.)

A substantially stiff, flat, rectangular support panel 6 is arranged between the relatively closed cover panels 1 and 2 and is hingedly connected to an end of the latter, as presently described. Said support panel is similar in width to the panels 1 and 2, but as shown in Figure 1, is shorter. The inner side portion of the support panel, or if desired, all thereof, is covered by sheets of fabric 7 or other flexible covering. The covering is extended from and beyond the inner side marginal portion of said panel and is connected to or engaged with and over the inner side marginal portion of the cover panel 2 adjacent the engagement of the spanning part 5 of the fabric 4 therewith.

A stiff mounting strip 8 is arranged immediately of the inner marginal sides of the cover and support panels 2 and 6, being inserted and snugly received between the extended portions of the fabric sheet covering 7. Preferably, said mounting strip is made of metal, the length of which corresponds to the widths of the cover and support panels, while its width is less than that of the binder back-piece 3. Flat shoulders 9 and 10 are formed on the opposite sides of the mounting strip by bending portions of the same therefrom at or to predetermined angles. The shoulder 9, adjacent the support panel 6 is disposed at an obtuse angle with relation to the body of the strip, i. e., an angle of approximately 155°, while the shoulder 10, adjacent the cover panel 2 is disposed at an acute angle thereto, i. e., approximately 25°.

Bedding or supporting strips 11 are arranged in and longitudinally of the mounting strip 8. A secondary stiff mounting strip 8', preferably having a concaved outer face, is seated on and longitudinally of the outermost of the bedding strips inwardly of the adjacent fabric covering 4. Rivets 11' are engaged through the mounting strip 8, the bedding strips 11 and the secondary mounting strip 8' and fixedly interconnect the same. The length of said secondary mounting strip substantially corresponds to that of the mounting strip 3 and spans the same between the outer sides of its angularly disposed shoulders 9 and 10.

In some instances, use of the bedding strips 11 in or on the stiff mounting strip 8 and under the strip 8' may be dispensed with. At such

a time, the stiff secondary mounting strip 8' will seat directly on the adjacent free sides of the shoulders 9 and 10 over the mounting strip 8, i. e., in the manner in which the secondary mounting strip 8^a is seated (see Figures 6 and 7).

Mounted on the normally inner side of the fabric covered secondary mounting strip 8' and disposed longitudinally thereover and of the mounting strip 8, is a loose-leaf binding device. This binding device can be of any suitable known type and, generally, includes a transversely curved base plate 12 and sectional leaf engaging-retaining rings 13 thereon adapted to be opened and engaged through appropriate openings in sheets 14, and then closed. Fixed mounting of the base plate 12 on the mounting strip assembly 8-11-8' can be effected in different ways, one of which is the striking of the tongues 15 from the secondary mounting strip 8' for engagement through suitable openings in the plate and then clinching the same thereover, as shown in Figures 2 and 5 of the drawings.

In Figures 6 and 7 of the drawings, I have shown a slightly modified form of mounting strip assembly in which the secondary stiff mounting strip 8^a has a flange 16 on one side thereof. With assembly of the mounting strips 8 and 8^a, the latter seats on and over the angular shoulders 9 and 10 of the former, and the flange 16 has overlapping relation to the adjacent shoulder 10. The mounting strips are interconnected in their assembled relation by engaging rivets 11' therethrough, while tongues 15 are struck from the strip 8^a for securing engagement through and with the binding device base plate 12, as above described.

Should it be desired, the use of rivets 11' to interconnect the mounting strip 8 and secondary mounting strips 8' and 8^a (see Figures 5, 6 and 7) may be eliminated. In lieu thereof, tongues 15' of sufficient lengths are struck from the body of the mounting strip 8 in proximity to its opposite ends. These tongues are engaged through appropriate openings in the secondary mounting strip 8^a or 8' and like openings in the base plate 12 of the loose-leaf binder device, then clinched thereover to securely interconnect the assembly components.

To limit the extent of relative outward swinging movement of the cover and support panels 2 and 6, paired rather stiff thin spacer panels 17 and 18 of substantially corresponding shape and size are hinged at their opposite sides to the outer and free marginal portions of said cover and support panels, as at 19. The inner sides of the spacer panels are hingedly interconnected, at 20 and portions of one have tongues 21 thereon and extended therefrom for snug engagement in pockets formed in adjacent portions of the other when said paired spacer panels are in that extended relation shown in Figure 4 of the drawings. To movably maintain the spacer panels in their extended and motion limiting positions, and to normally urge the same to such positions, as when the cover and support panels 2 and 6 are swung apart from the position shown in Figure 1 of the drawings, elastic strips 22, anchored at their opposite ends to appropriate portions of the spacer panels, as at 23, transversely overlie or span the tongues 21 and their receiving pockets.

At this point, attention is directed to the fact that the width of the transversely curved base plate 12 and the diameters of the rings 13 of the loose-leaf binding device are greater

5

than the width of the mounting strip assembly therefor. Consequently, the rings 13 overlie the outer faces of the cover and support panels 1 and 6 when they are arranged in easel-like display position, as shown in Figures 2 and 3 of the drawings. As the result of this, the sheets 14 engaged with and retained by said rings will be permitted to hang more or less flatly, though obliquely, therefrom and to similarly bear or rest, respectively, upon said cover and support panels.

In use, my improved device will serve as a book-like binder for receiving and retaining therein a desired number of juxtaposed leaves or sheets 14. The binder may be opened to expose the sheets and permit their successive or other turning, by swinging the cover panel 1 away from the cover panel 2 in the usual manner.

When it shall be desired to use the binder as a display device, per se, for advantageously exhibiting the sheets 14, the cover panel 1 is swung outwardly of and beyond the cover panel 2. Immediately following this, or substantially concurrently therewith, the cover panel 2 and support panel 6 are swung, on their respective hinged mountings, away from each other, causing the spacer panels 17 and 18 to move into approximately co-planer relationship and limit or stay the extent of such movement. The component members of the display binder will now be relatively positioned in the manner shown in Figure 4 of the drawings, i. e., the cover panels 1 and 2 and support panel 6 will be in an easel-like relation.

The sheets 14 engaged with and swingably retained on the binding device rings 13 will now be collectively positioned in the manner shown in Figure 2 of the drawings. They will be in display or displaying positions, hanging or resting substantially flatly against and over the adjacent face of the support panel. In this position, the pendant weights of the ring engaged sheets will be entirely sufficient to pivot or swing the loose-leaf binding device and its mounting assembly 8-8'-11, encased in the fabric covering 7, to that position shown in Figure 2. Thus, the binder rings 13 will overhang or overlie the now outer face of the support panel 6. In consequence, the engaged and retained sheets 14 would be caused to flatly hang adjacent to panel 6 in effective display form or position.

In the above-described position, the obtusely angled shoulder 9 of the mounting strip 8 will be more or less flushly contacted with or bearing on the adjacent portion of the inner side of the cover panel 2. Thereby, firm and adequate support will be accorded the swingably mounted loose-leaf binding device; moreover, a definite and beneficial degree of supporting stability will be imparted to the easel-positioned panels 1, 2 and 6 of the display binder.

Assuming now that the sheets 14 are successively swung about and over the binding device rings 13 from the position shown in Figure 2 to the position shown in Figure 3 of the drawings, i. e., swung from front to back, the shifting and/or shifted weights of said sheets will act on the swingably mounted loose-leaf binder means to progressively swing the same between its hinged mountings on the cover panel 2 and support panel 6 until ultimately, said loose-leaf binding mechanism assumes that position shown in the Figure 3. With the rings 13 of the binding device so positioned, the sheets 14 in their post-display positions, will lie substantially flatly on

6

and over the now outer side of the cover panel and the contiguous back-piece 3.

In this latter described position, it will be seen, upon reference to said Figure 3 of the drawings, that the acutely angled shoulder 10 of the mounting strip 8 is, more or less flushly contacted with or bearing on the adjacent portion of the near side of the support panel 6. Because of this, further swinging movement of the binding device will be prevented and by the same token, firm and adequate support will be provided to said binding device for imparting a definite degree of stability thereto.

To collapse or fold the display binder whereby to contain the sheets 14 therewithin, said sheets 14 are swung from the positions shown in Figure 3 of the drawings over and above the binder device rings 13. Thereupon, the cover panel 1 is swung upwardly over and about the rings 13 of the binding device and concurrently, or substantially concurrently with this, the support panel 6 is swung inwardly toward the cover panel 2 by inwardly and upwardly swinging the spacer panels 17 and 18. The cover panel 1, with the stiff back-piece 3, ultimately, are moved into the positions shown in Figure 1 of the drawings, wherein said stiff-back piece 3 is disposed between the cover panels 1 and 2 at substantially right angles thereto, with the cover panel 1 overlying the sheets 14, the support panel 6 and the cover panel 2. With the cover panels 1 and 2 thus closed into book-like form or position, it will be seen that the spacer panels 17 and 18 are flatly arranged between the cover panel 2 and the support panel 6.

I claim:

1. A display binder, including stiff cover panels and a support panel, a stiff mounting strip having shoulders on its opposite sides disposed at different angles hingedly connected to adjacent sides of one of the cover panels and the support panel, the shoulders on the mounting strip being individually abuttingly engageable with adjacent portions of said one cover panel and support panel, binding means carried by the stiff mounting strip, and means hingedly connecting the remaining cover panel at one of its sides to the adjacent side of said one cover panel and in spaced relation thereto.

2. A display binder, including a stiff cover panel, a support panel, a mounting device having abutment means on its opposite sides, said abutment means being disposed at different angles with relation to the mounting device, means hingedly connecting the mounting device to adjacent sides of said cover and support panels swingable in either direction and said abutment means being individually and selectively engageable with adjacent portions of the cover and support panels, a second stiff cover panel, and means swingably connecting the second cover panel to the first mentioned cover panel.

3. A display binder, including a stiff cover panel, a support panel, a stiff mounting device having flanged opposite sides disposed at relatively different angles, means hingedly connecting the mounting device to adjacent sides of said cover and support panels swingable in either direction and said flanged sides being individually and selectively engageable with adjacent portions of the cover and support panels, a second stiff cover panel, and means swingably connecting the second cover panel to the first mentioned cover panel.

4. A display binder, including stiff cover panels

7

and a stiff support panel, a back-piece swingably connected at its opposite sides to adjacent sides of said cover panels, a stiff mounting strip disposed between and substantially parallel to said opposite side of one of the cover panels and the corresponding side of the support panel and swingably connected to each thereof, the opposite sides of said mounting strip being plane and disposed at relatively different angles to each other, binding means on the normally inner side of the mounting strip, said cover panels, back-piece and support panel being reversely swingable with relation to said mounting strip into substantially V-shaped relation with the mounting strip disposed between one of said cover panels and said support panel and the differently angled sides of said mounting strip being individually abuttingly engageable with adjacent side portions of said one cover panel or said support panel upon swinging movement of the mounting strip between the same and in a predetermined direction.

5. A display binder, including stiff cover panels and a stiff support panel, a back-piece swingably connected at its opposite sides to adjacent sides of said cover panels, a stiff mounting strip of sheet material having flat plane shoulders on the opposite sides thereof disposed at different angles with relation to each other, a secondary strip fixedly seated on said mounting strip between the flat plane shoulders thereof, said mounting strip and secondary strip being dis-

8

posed between and substantially parallel to said opposite side of one of the cover panels and the corresponding side of the support panel and swingably connected to each thereof, and binding means seated on said secondary strip longitudinally of the same and connected thereto, said cover panels, back-piece and support panel being reversely swingable with relation to said mounting strip into substantially V-shaped relation with the mounting strip and secondary strip disposed between one of said cover panels and support panel, and the differently angled sides of said mounting strip being individually abuttingly engageable with adjacent side portions of said one cover panel or said support panel upon swinging movement of the mounting strip between the same and in a predetermined direction.

ELMER W. ERICSON.

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