

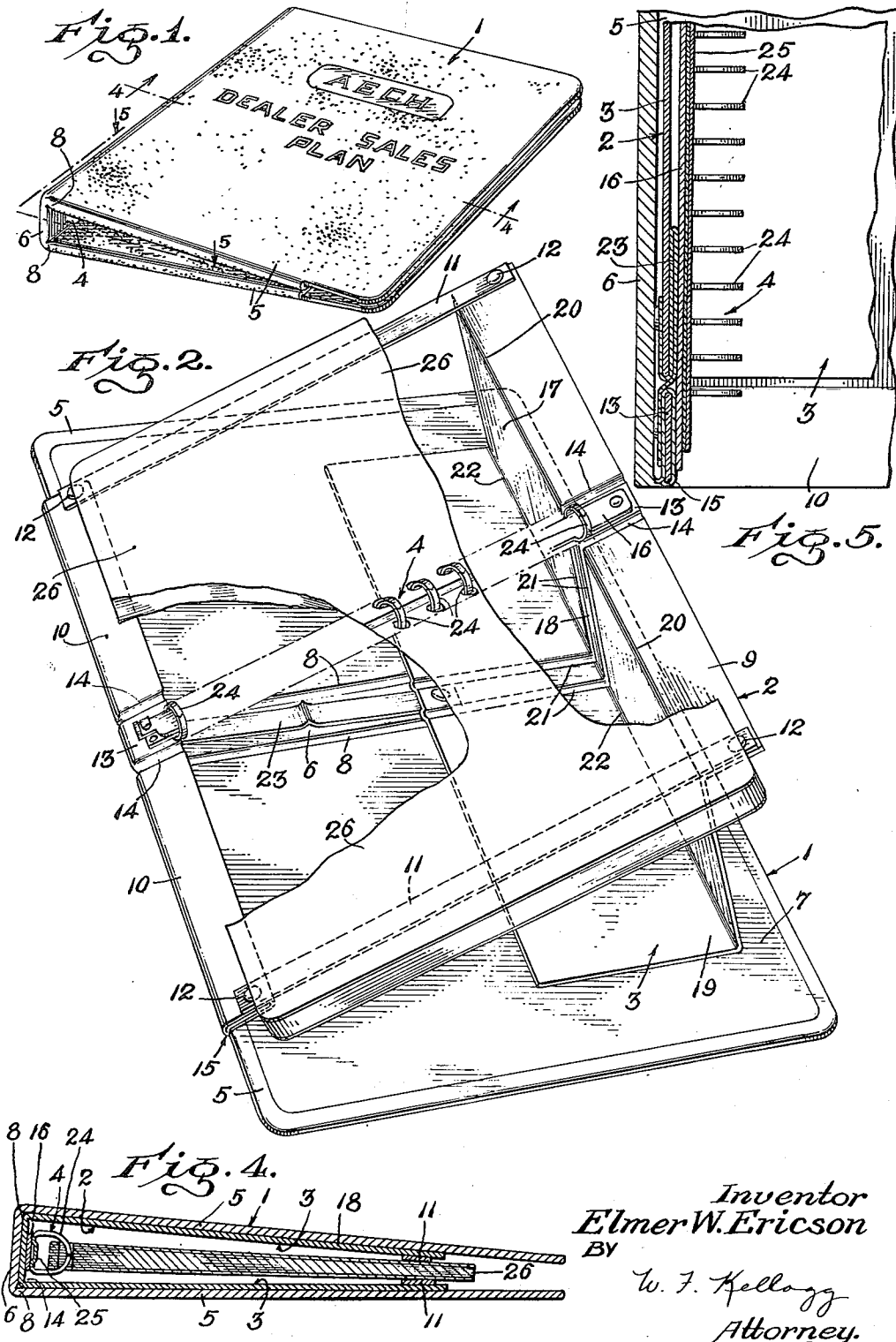
April 29, 1952

E. W. ERICSON
DISPLAY BINDER

2,595,064

Filed March 19, 1948

3 Sheets-Sheet 1



Inventor
Elmer W. Ericson
BY
W. F. Kellogg
Attorney.

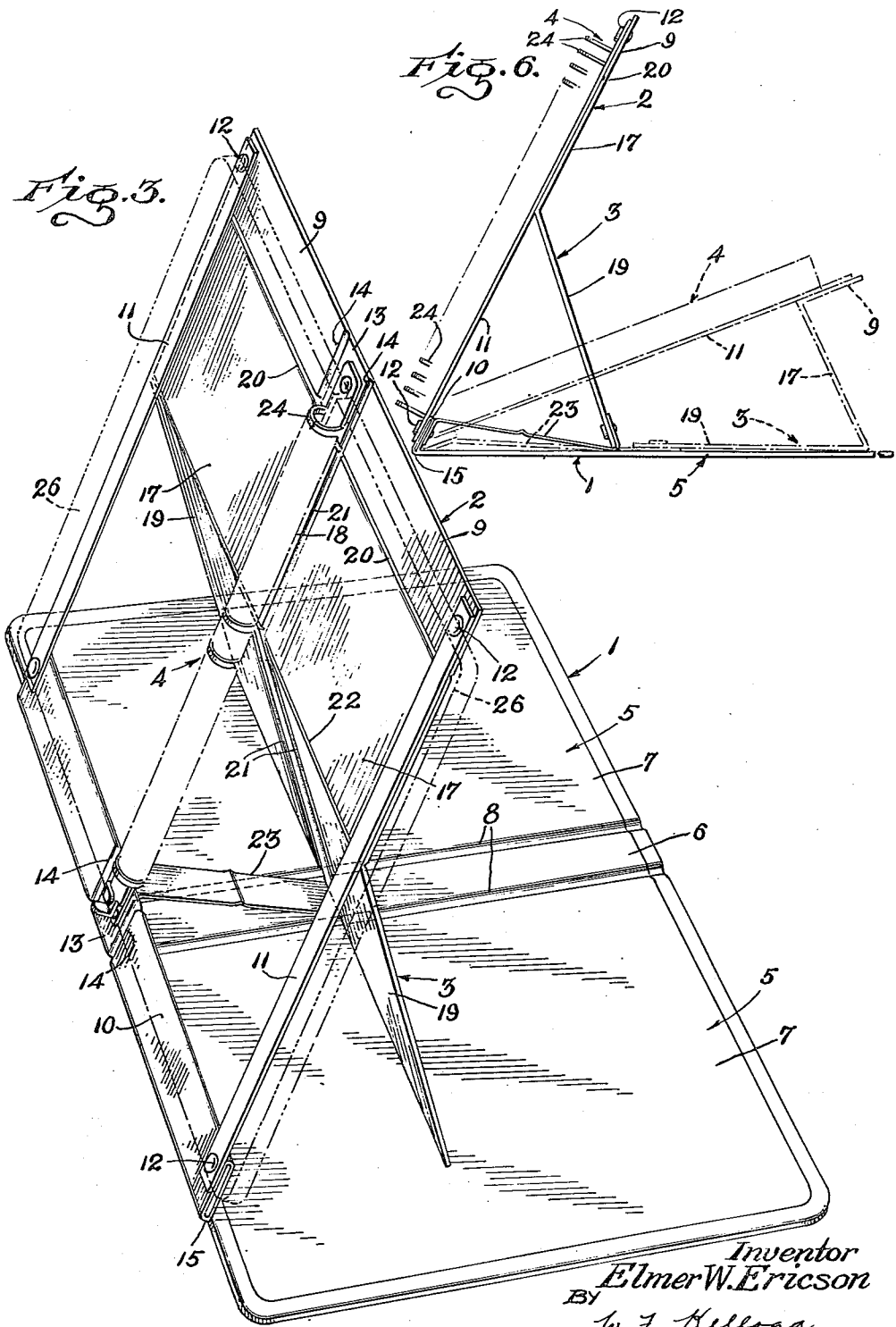
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By *W. F. Kellogg*
Attorney.

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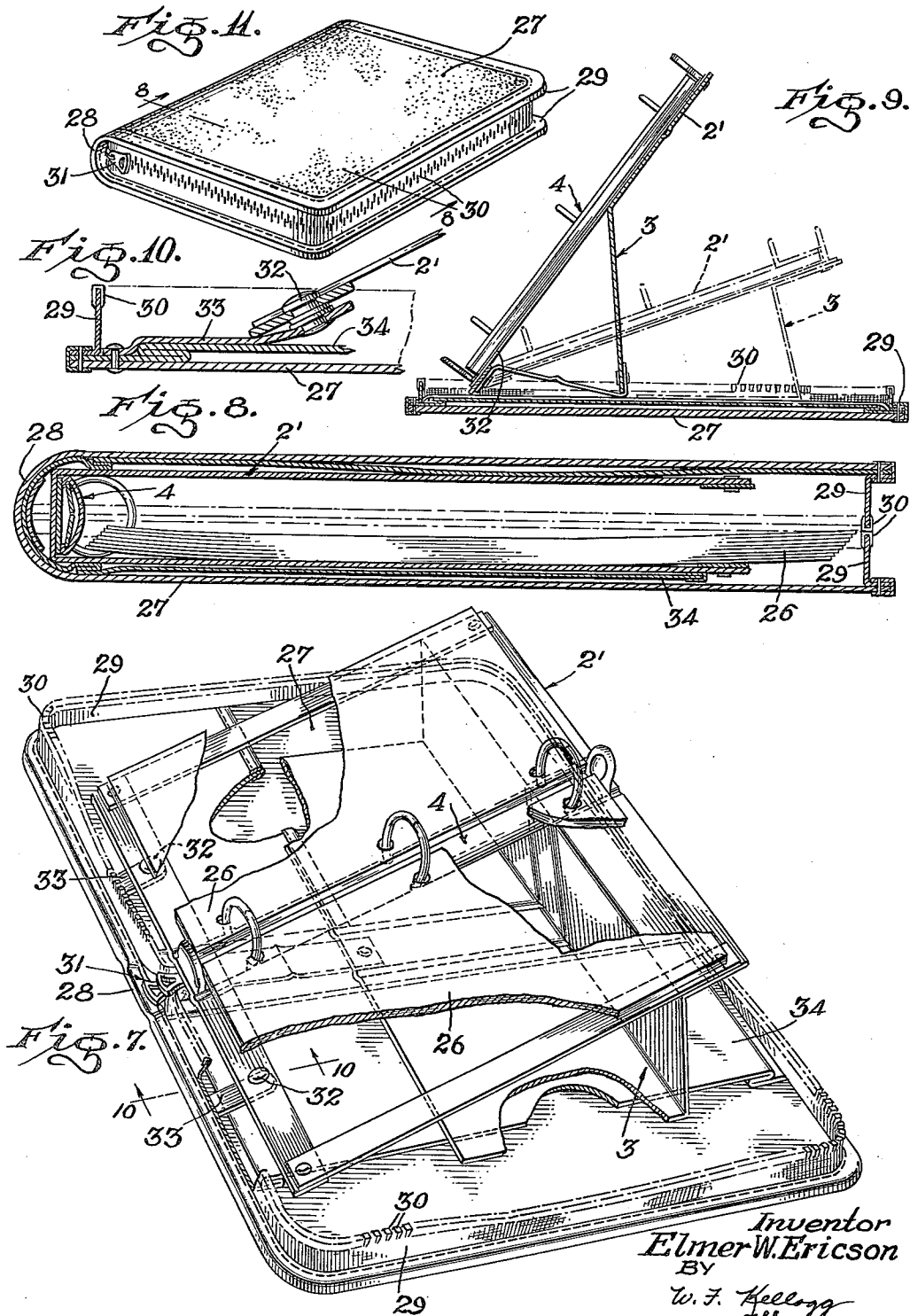
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UNITED STATES PATENT OFFICE

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DISPLAY BINDER

Elmer W. Ericson, Chicago, Ill.

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-3 Claims. (Cl. 281-33)

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This invention relates to improvements in sheet retaining and display devices, generally characterized in the trade as display-binders.

The invention has for one of its objects the provision of a display-binder of compact, durable and operationally simplified form embodying sheet retaining and supporting means which can be selectively adjusted to more than one angular position for effecting the most advantageous, beneficial and convenient supporting and/or display of sheets attached thereto.

Another and equally important object of the invention is to provide a display-binder in which the binding means thereof, as well as sheets or other devices attached to such means, can be conveniently and positively moved into substantially parallelism to the binder cover panels, and the latter, along with said sheets or other devices, then juxtaposed or superimposed in book-like form for handling facility and contents protection.

It is also an object of the invention to provide a display-binder whose cover panels or sides are so constructed as to be without surface break, whereby the same may be clearly and effectively imprinted or similarly treated or surface ornamented for advertising, identification or other purposes, and which serve, at times, as basal and supporting means for leaves or other sheet-like bodies attaching and displaying means.

Yet another object of the invention resides in the provision of a display-binder whose cover panels or sides are equipped with relatively movable means which may be simply and surely adjusted to one of a plurality of available selective and predetermined angular positions whereby to constitute an easel-like support for bodies or devices connected thereto, and so, materially improve their mode of display or use.

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

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 the detailed description based thereupon, set out two embodiments of my invention.

In the drawings:

Figure 1 is a perspective view of my improved display-binder when in its closed or book-like form.

Figure 2 is an enlarged perspective view of the same in its display position.

Figure 3 is a similar view of the display-binder with the sheet supporting means or frame member in a different angular position from that shown in Figure 2.

Figure 4 is a somewhat enlarged transverse section taken along the line 4-4 of Figure 1, looking in the direction in which the arrows point.

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Figure 5 is an enlarged fragmentary detail in section, taken along the line 5-5 of Figure 1, looking in the direction in which the arrows point, and illustrating the connection of the sheet or device attaching means or rings.

Figure 6 is an end elevation of the display-binder with the sheet supporting means or frame member in one of its angular displaying positions, and with said member shown in dotted lines, in a second angular displaying position.

Figure 7 is a perspective view of a slightly modified form of my improved display binder in open position; a portfolio-like casing or housing being provided to the supporting frame, parts thereof being broken away and being shown in section to better illustrate the device.

Figure 8 is an enlarged transverse section through the device, when closed.

Figure 9 is an end elevation of the modified form of display binder with the frame member shown in full lines in one of its angular displaying position, and in dotted lines, in a second angular displaying position.

Figure 10 is an enlarged detail in transverse section taken on the line 10-10 of Figure 7, looking in the direction in which the arrows point, and

Figure 11 is a perspective view of the modified form of display binder in its closed or book-like form.

Referring in detail to the accompanying drawings, my improved binder, generally, comprises a cover 1, a frame member 2, hinged at its normally lower and transverse edges to corresponding portions of the cover, leg members 3 hinged at their normally upper edges to corresponding inner edge portions of the frame member upper side, and a binding means 4, preferably of the known ring type, fixedly mounted, at opposite ends, to intermediate or medial portions of the transverse and normally upper and lower sides of the frame member 2 substantially adjacent and parallel to the inner face of the center panel of the cover 1, all as hereinafter more specifically described.

The cover 1 consists of a pair of stiff side panels 5 and a stiff center panel 6. The sides panels 5 are of greater widths than the center panel 6, but are of approximately the same length. Said panels 5 and 6 are interconnected, in transversely aligned assembled relation, with the longitudinal sides of the panels 5 adjacent though somewhat spaced from and substantially parallel to the corresponding opposite sides of the panel 6, by means of a suitable covering fabric, etc., 7 applied to and over their opposite faces and secured thereto by adhesive or other means. Thus, the panels 5 and 6 will be hingedly interconnected in book-like arrangement, as at 8, the former providing effectual side covers and the latter, an effectual back.

At this point, particular attention is called to the fact that the surfaces or faces of the side panels 5 and the center panel 6 are each plane and free of breaks. In consequence, imprinting or other surface applied intelligence or ornamentation can be advantageously and effectually placed on any desired portions of such surfaces, and when done, will be displayed in a most satisfactory manner. These stated advantages and/or results are in sharp contradistinction to those disadvantages and undesirable features incident to effecting similar surface applications to covers and backs whose surfaces are broken, as by complete disjuncture or by hinged and similar joints occurring therein. Such disjunctures or jointures, obviously, produce an uneven surface and render the imprinting or other surface applications thereon highly unsatisfactory, and more often, impractical. Furthermore, inasmuch as the panels 5 and 6 are solid or of one piece throughout their respective areas, greater strength and greater usage performance is assured.

The frame member 2 comprises a pair of complementally formed panel frames, each consisting of top and bottom flat, stiff strips 9 and 10, and outer side and opposed flat stiff strips 11. The outer side strips 11 are, preferably, made of metal of suitable gauge or body and are riveted or otherwise permanently secured, at 12, to adjacent outer end portions of their respective top and bottom strips 9 and 10. All of said strips are arranged in parallel planes, and hence, constitute substantially flat frames. Flat pieces or backs 13, each of widths substantially corresponding to that of the center panel or back 6, are interposed between the adjacent and inner ends of the top and bottom strips 9 and 10 of the panel frames and are hingedly or swingably connected thereto, as at 14. Thus, said frame member 2, when in its open or co-planar display and set-up position, will be of rectangular formation. Its length substantially corresponds to that of the cover 1, while its width, at such times, is less than that of said cover, as shown in Figures 2 and 3. Therefore, the frame member will be effectually housed and protected by the cover 1, particularly, when the device is folded to its closed and book-like form, as shown in Figure 4.

The bottom strips 10 of the frame member 2 panel frames, and the adjacent piece 13, are positioned in closely spaced and parallel relation to the lower marginal portions of the cover panels 5 and 6 and are hingedly or swingably connected to the same, preferably, throughout their respective widths, as at 15. It will be thus seen and understood that the frame member, with unfolding or opening of the cover 1, as shown in Figures 2 and 3, may be swung away therefrom into one of a plurality of different angular positions.

A medially arranged and longitudinally disposed stiff bed strip 16 is riveted or otherwise joined to adjacent portions of the longitudinally opposed flat back pieces 13 and, as will be noted, overlies and is parallel to the cover panel back 6. In addition to serving as an effectual connection and brace for the inner open sides of the panel frames of the frame member 2, it provides a mounting for the binding means 4, hereinafter described.

In order that the frame member 2, when in its open or co-planar display and set-up position (see Figures 2 and 3), may be firmly supported in an upwardly swung and angular position with relation to the co-extensive and co-planar panels 5 and 6 of the cover 1, I provide leg or support-

ing panels 17, 18 and 19, hingedly connecting the same at and entirely along their upper transverse edges to adjacent edge portions of the panel frame top strips 9 and back piece 13, as at 20.

Said panels are arranged in transversely aligned assembled relation with the panel 18 intermediately of the panels 17 and 19 and substantially parallel to the cover panels. The inner longitudinal sides of the panels 17 and 19 are swingably connected to adjacent sides of the panel 18, preferably, throughout their respective lengths, as at 21. The points of hinging, at 21, longitudinally align with the hinging, at 14, of the flat pieces 13 to adjacent ends of the top and bottom strips 9 and 10 of the panel frames of the frame member 2. In consequence, with closing or inward swinging of the cover 1 panels 5 into book-like arrangement (see Figure 4), the panels 17 and 19 likewise are arranged in juxtaposed relation.

A hingedly connected continuous break-joint 22 is effected transversely of and entirely throughout intermediate portions of the hingedly assembled leg panels 17, 18 and 19. Thereby, said assembled leg panels, when in co-extensive or substantially co-planar and open relation, may have their lower and free portions swung either inwardly or outwardly whereby to effect an easel-like support for the also open frame member 2. It will be noted, in this connection, that the open frame member 2 can be optionally supported in either one of two angular positions, as shown in Figures 2 and 3 of the accompanying drawings. When supported in the lesser inclined position, shown in Figure 2, actual supporting engagement between the leg panels 17, 18 and 19 and the frame member is effected adjacent the free and upper end of the latter, while when supported in the greater inclined position, shown in Figure 3, actual supporting engagement is effected between the intermediately hinged portions 22 of said leg panels and intermediate portions of the frame member outer side strips 11 and bed strip 16. In each of such positions, it is seen that the lower ends of said leg panels rest on adjacent portions of the inner side of the cover 1.

Because of the multi-point contact between the leg panels 17, 18 and 19 and the frame panels of the frame member 2, as above described, a firm and solid support for the latter will be assured.

To limit the extent of movement of the free portions of the leg panels 17, 18 and 19, during their adjustment into operative or supporting positions, a tethering connection 23 is made between the lower and free edge of the intermediate panel 18 and the back piece 13 hingedly interconnecting the panel frame lower side strips 10.

Binding means, hereinbefore generally identified by the numeral 4, are fixedly mounted on and longitudinally of the bed strip 16 and comprise any approved type of sheet engaging and retaining rings 24 arranged in spaced relation on and along a base strip 25 which, in turn, is securely fastened to said bed strip 16. Thus, sheets 26, sheet-like bodies or other devices, may be hingedly or swingably mounted with relation to the panel frames of the frame member 2 and the side panels 5 of the cover 1.

The cover 1, the frame 2 and the leg panels 17, 18 and 19, may be and preferably are covered by a suitable material, as for example, a fabric, a sheet plastic, etc. By extending appropriate portions of said material, the hinged connections hereinbefore described, between the panels 5 and 6 of the cover 1; the lower edges of the cover 1

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panels and the panel frames of the frame member 2; the leg panels 17, 18 and 19, and said leg panels and the upper strips 9 and adjacent back piece 13 of the frame member 2, may be satisfactorily effected, according to well known trade practices.

The display-binder, when not in use, has its component parts arranged in book-like fashion, as illustrated in Figure 1 of the drawings. To permit such arrangement, the longitudinally foldable frame member 2 is moved into flat and substantially parallel and adjacent relation to the inner side of the open and substantially flat cover 1. At such time, the leg panels 17, 18 and 19 will begin their flat and substantially parallel and adjacent relation to the frame member 2 with the outer side portions of the panels 17 and 19 flushly contacting with adjacent portions of the side strips 11 of said frame member 2. With the identified parts in the explained relationship, the cover 1 and the frame member 2 are then folded longitudinally of themselves along their lines of hinged jointure 8, 14 and 18, causing the panels 5 of the cover 1 and the panel frames of the cover member 2 to be brought into juxtaposed or substantially overlying relation. The panel 6 of the cover 1 and the back pieces 13 of the frame member 2, obviously, constitute effectual backs for the thus effected book-like arrangement (see Figure 1).

Leaves, sheets or other suitable devices 26, of course, are swingably, though removably, connected to the binding means 4, particularly, they are engaged in the usual manner with the rings 24 of said binding means. Preferably, the size of the leaves, sheets or other devices connected to the binding means 4 are such that when the display-binder is moved to its closed or book-like arrangement, they will be effectually housed between its opposite and folded sides.

To arrange the display-binder in its displaying or set-up position, the cover 1 is moved to an open and substantially co-planar position, as is the frame member 2, constituted by the hereinbefore described panel frames. At this time, the cover 1 and the frame member 2 will be in substantially co-extended and parallel relation.

Assuming that it is desired to effect supporting of the frame member 2 in that angular position shown in Figure 2 of the accompanying drawings, the normally upper or free end portion of said frame member is engaged and moved upwardly or away from the cover 1, hence, effecting hinged movement of the same, at 15, with relation to said cover. Thereupon, the now relatively flat and co-extended panels 17, 18 and 19 are permitted or caused to swing downwardly along their respective points of hinging, at 22, immediately following which the lower and free portions of said panels 17, 18 and 19 are swung inwardly along their respective hinged points 22, so that said free portions are brought into flush and parallel engagement with adjacent portions of the panels 5 and 6 of the cover 1. Thus, the normally upper portions of the panels 17, 18 and 19 will provide effectual supporting legs to and for the now raised and normally upper end portion of the frame member 2.

The extent of movement of the free and normally lower end portions of the panels 17, 18 and 19, with relation to or away from the normally lower end of the cover 1 will be automatically effected by means of the flexible tethering connection 23, in the manner shown in Figure 2.

If it is desired to effect supported positioning

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of the frame member 2 in that inclined position shown in Figure 3 of the drawings, following an upward swinging of the normally upper and free portion of the frame member 2 to a position substantially corresponding to that shown in said Figure 3, the normally upper portions of the panels 17, 18 and 19 are caused to rest or bear upon adjacent portions of the frame member 2, in substantially parallel relation thereto, while the lower portions of said panels are swung outwardly along their respective hinging 22, to the illustrated inclined positions. Hinged movement of the normally lower portions of the panels 17, 18 and 19, with relation to the normally lower end of the cover 1, will be effectually limited by the tethering connection 23.

Return of the frame member 2 to its inoperative position is effected by merely bringing the leg panels 17, 18 and 19 into flat and substantially parallel relation to the frame member 2, whereupon said frame member and said leg panels may be then swung toward and into flush contact with and parallel relation to the inner side of the co-extended cover panels 5 and 6, after which, the device may be folded into the book-shape fashion or form, as shown in Figure 1.

At times, it is desirable that the frame member, hereinbefore generally identified by the reference numeral 2, shall be completely and securely encased or housed when it is in a closed or folded position, i. e., when the panel frames thereof are arranged in juxtaposed overlying relation, as indicated in Figure 1 of the accompanying drawings. By such encasing or housing, the panel frames of said frame member 2, as well as the leaves, sheets or other devices 26 connected to its binding means 4, will be most effectually safeguarded against damage or injury.

For accomplishing the foregoing, the cover 1 is replaced by a portfolio-like body 27 (see Figures 7 and 11) of flexible, partially flexible or inflexible construction, as may be desired. The shape of this housing or cover body 27 may, of course, vary, though it is now thought preferable that its shape shall generally conform to that of the frame member 2' (like the frame member 2 shown in Figure 2 of the drawings), while its size is somewhat greater than the size of said frame member. The housing or cover body 27 is longitudinally foldable, intermediately of its opposite ends, as at 28. Therefore, as and when desired, it can be folded or closed to the form shown in Figures 8 and 11, with the now also folded frame member 2' fully covered by the opposite and juxtaposed book-like sides of the same.

Relatively angularly disposed or positioned flanges 29, lips or their equivalents, are secured to or otherwise provided on the inner sides of the body 27 adjacent and about the top and bottom sides and opposite ends thereof. Said flanges 29, as shown in Figure 7, have their respective inner ends terminated in opposed relation and in proximity to the opposite ends of the longitudinally foldable intermediate portion 28 of the body 27. Fastener elements 30, of a suitable type of separable slide fastener, are connected to and arranged about the free marginal or substantially marginal portions of the flanges 29, and a companionate slide fastener element 31 is engaged therewith. Thus, when the body 27 and the frame member 2' are arranged in the aforesaid folded or closed form, the slide fastener element 31 can be drawn over and about the now juxtaposed fastener elements 30, thereby interconnecting the same throughout their lengths, and so,

forming a closure wall entirely about the folded panel frames of the frame member 2'. To open the wall and provide access to the interior of the portfolio-like body 27 and said frame member 2', the slide fastener element need only be drawn or retracted to its initial or starting position with relation to the fastener elements 30.

With opening of the portfolio-like cover 27, the same is flatly positioned, i. e., the opposite side portions thereof are arranged in coplanar relation. Thereupon, the panel frames of the frame member 2' may be opened and, likewise, flatly positioned.

In order to effect a particularly desired angular positioning or supporting of the now flat and opened frame member 2' by a predetermined adjustment of the leg or supporting panels 17—18—19, as hereinbefore explained, said frame member is detachably connected, at its normally lower side, by fastening devices 32 to the free ends of strap hinges 33, whose remaining ends are suitably secured to the inner side and normally lower portion of the body 27. It will, therefore, be seen that the normally lower side of the frame member is hinged to the body 27; hence, that it may be swung relatively upwardly or outwardly therefrom. Following such swinging, the frame member will be supported in a pre-selected angular position with relation to the body 27 by the supporting panels 17—18—19.

Should a user of the improved display device so elect, he may conveniently and quickly remove the frame member 2' from the body 27 by detaching the latter from the strap hinges 33 through the fastening devices 32.

The body 27 may, if desired, be provided with internal pockets 34, or their equivalents, for use in receiving and retaining various articles or matters.

I claim:

1. A display binder, including a cover consisting of a pair of side panels having their inner longitudinal portions swingably connected, endwise opposed and hingedly connected stiff bottom strips hingedly connected along their lower sides to lower side portions of said side panels, complementary stiff outer side strips fixed at their lower ends to the outer ends of each of said endwise opposed bottom strips and disposed at substantially right angles thereto inwardly of the outer and free sides of said side panels, endwise opposed and hingedly connected stiff top strips fixedly connected at their outer ends to the upper and free ends of the stiff outer side strips and disposed at substantially right angles thereto inwardly of the upper sides of said side panels, and a substantially flat and stiff leg panel hinged at its upper end to the endwise opposed top strips, said leg panel being foldable longitudinally of itself adjacent the swingably connected inner portions of the side panels, and the width thereof being greater than the distance between the stiff outer side strips whereby the same, in one position, lies flatly adjacent and over said outer side strips.

2. A display binder, including a cover consisting of a pair of side panels having their inner longitudinal portions swingably connected, endwise opposed stiff bottom strips hingedly connected at their lower sides to the lower side portions of said side panels, complementary stiff outer side strips fixed at their lower ends to the outer ends of each of said endwise opposed bottom

strips and disposed at substantially right angles thereto inwardly of the outer and free sides of said side panels, endwise opposed stiff top strips fixedly connected at their outer ends to the upper and free ends of the stiff outer side strips and disposed at substantially right angles thereto inwardly of the upper sides of said side panels, substantially stiff flat pieces hinged at their opposite sides to and between the inner ends of said endwise opposed bottom and top strips, a substantially flat leg panel transversely divided into swingably interconnected sections hinged at its upper end to the opposed top strips, the width of said leg panel being greater than the distance between the stiff outer side strips whereby the same, in one position, lies flatly adjacent and over said outer side strips, said leg member being foldable longitudinally of itself adjacent the swingably connected inner longitudinal portions of said side panels, and means connected to one of said flat pieces and the free end of said leg member limiting movement of the latter with relation to the former.

3. A display binder, including a pair of side panels having their inner longitudinal portions swingably connected, endwise opposed and hingedly connected stiff bottom strips hinged at their lower sides to lower side portions of said side panels, complementary stiff outer side strips fixed at their lower ends to the outer ends of each of said endwise opposed bottom strips and disposed at substantially right angles thereto inwardly of the outer and free sides of the side panels, endwise opposed and hingedly connected stiff top strips fixedly connected at their outer ends to the upper and free ends of the stiff outer side strips disposed inwardly of the upper sides of said side panels, a substantially flat and stiff leg panel hinged at its upper end to the endwise opposed top strips and normally lying flatly adjacent to said side, bottom and top strips, said leg panel being foldable longitudinally of itself adjacent the swingably connected inner longitudinal portions of the side panels and being divided transversely into sections, said sections being hingedly connected for swinging in either of two directions, the uppermost of the leg panel sections being swingable, at times, into a supporting position at substantially right angles to and between the stiff side, bottom and top strips and the opened side panels, and at other times, arrangeable adjacent and substantially parallel to portions of the stiff side and top strips, the lowermost and remaining leg panel section swung outwardly therefrom and at an angle thereto into supporting relation to said stiff side, bottom and top strips between the same and said side panels.

ELMER W. ERICSON.

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