

April 1, 1941.

A. M. BARRETT

2,236,591

DISPLAY BINDER

Filed Dec. 21, 1939

2 Sheets-Sheet 1

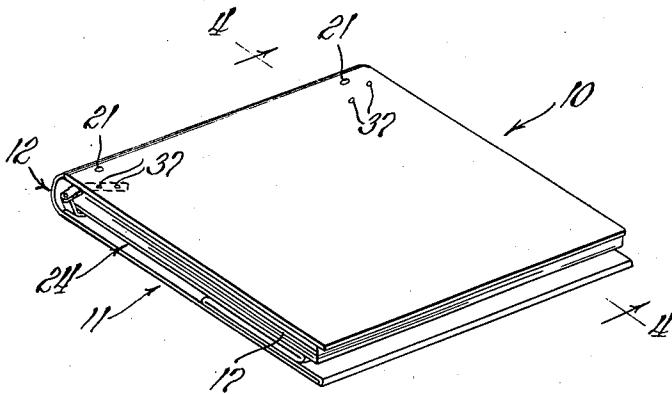


Fig. 1.

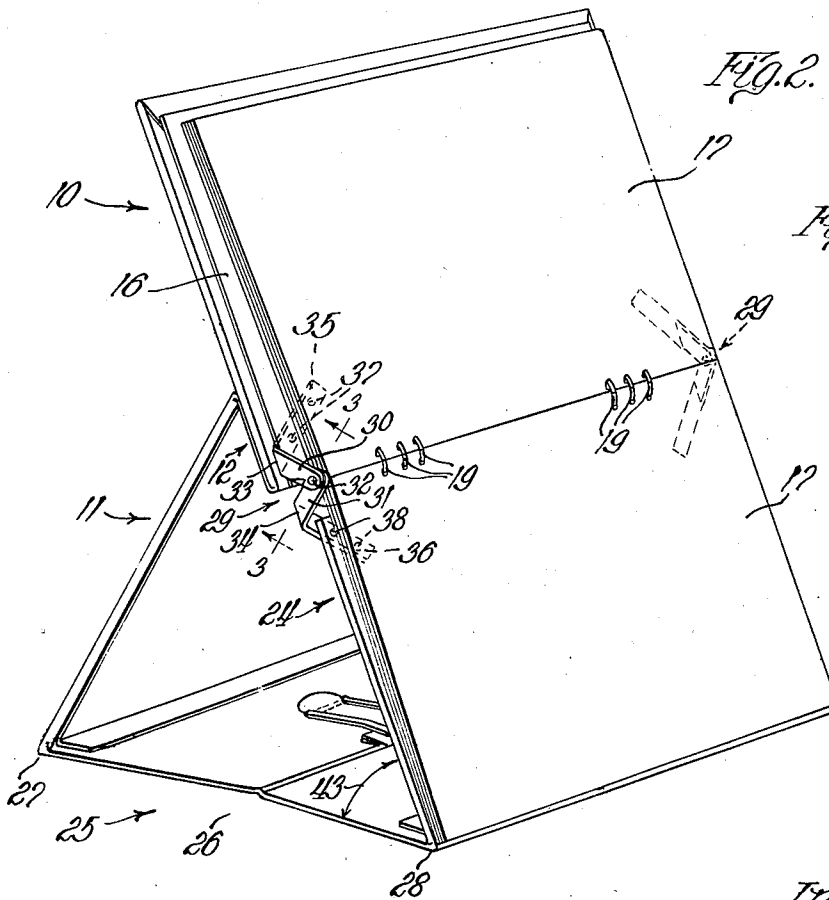
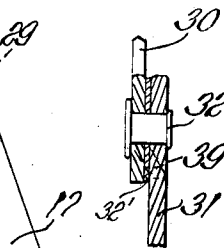


Fig. 2.

Fig. 3.



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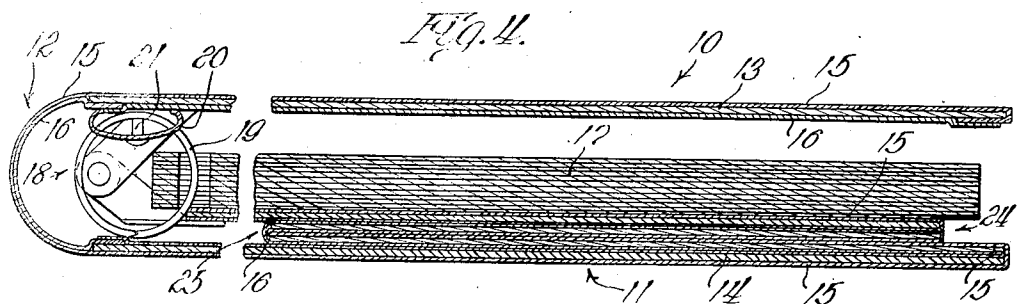
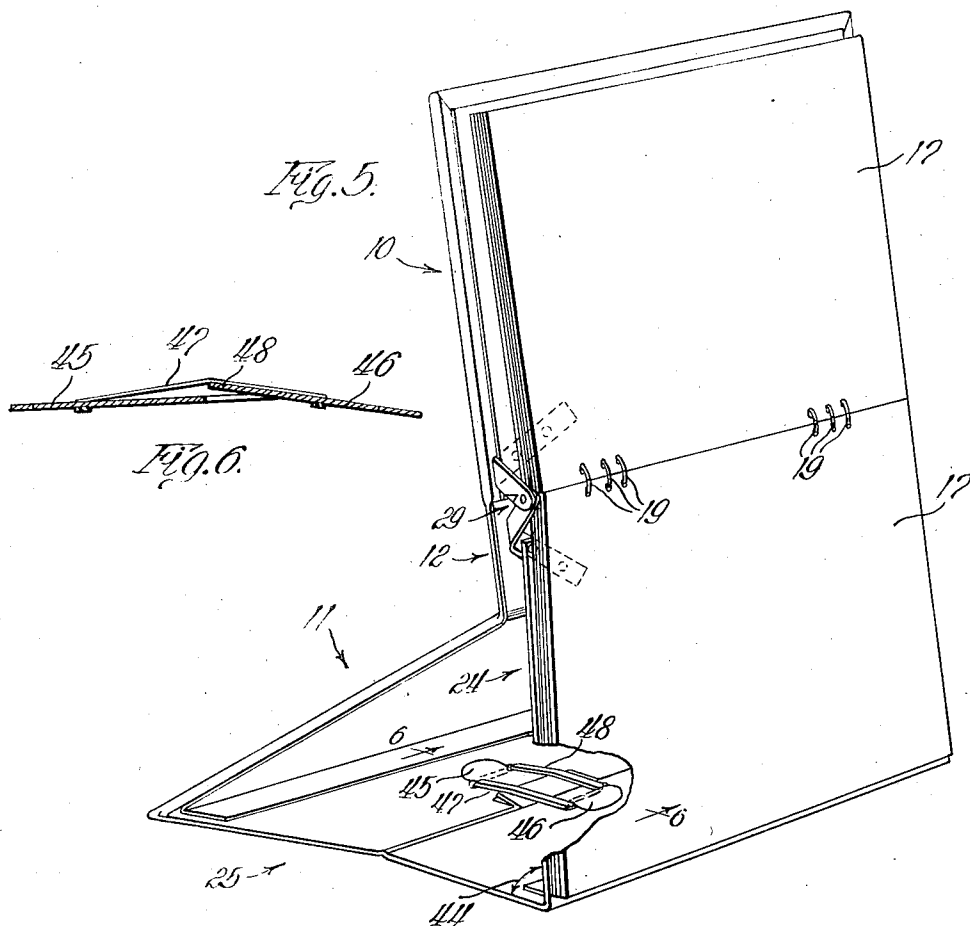
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DISPLAY BINDER

Filed Dec. 21, 1939

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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DISPLAY BINDER

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18 Claims. (Cl. 281—33)

My invention relates generally to display devices such as are employed by salesmen, lecturers, etc., for illustrating their wares or talks, and it has particular relation to display binders.

An object of the invention is to facilitate the setting up of a display binder in operative position for display purposes.

Another object is to maintain in a new and improved manner a rigid relationship between the parts of the display binder which support the sheets or leaves of the binder in the open or display position.

A further object is to provide for automatically opening a display binder and extending its easel merely by grasping the front cover and allowing the remaining parts to swing downwardly.

Still another object is to hingedly interconnect the front cover and rigid panel of a display binder and to independently mount on one of the covers binding means for holding the sheets or leaves to be displayed.

A still further object is to provide for mounting the display binder in either of two open positions merely by changing the position of the rear cover.

Other objects of my invention will, in part, be obvious, and, in part, appear hereinafter.

My invention, accordingly, is disclosed in the embodiment thereof shown in the accompanying drawings, and comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of my invention, reference may be had to the following detailed description taken in connection with the accompanying drawings, in which:

Figure 1 is a perspective view of my novel display device in the closed position;

Figure 2 is a perspective view of the display device in one open position;

Figure 3 is a detail sectional view taken along the line 3—3 of Figure 2;

Figure 4 is a detail sectional view taken along the line 4—4 of Figure 1;

Figure 5 is a perspective view of another open position of the display device; and

Figure 6 is a detail sectional view taken along the line 6—6 of Figure 5.

Referring now particularly to Figures 1, 2 and 4 of the drawings, it will be observed that the reference characters 10 and 11 designate, gen-

erally and respectively, front and rear covers of a display device which are interconnected along their adjacent sides by a connecting portion or section shown generally at 12. The front and rear covers 10 and 11 are substantially rigid and are suitably formed to this end. For example, they may be provided with stiffening members 13 and 14, respectively, which are formed of relatively stiff material such as cardboard, fiber board, thin layers of wood, etc. Any suitable means may also be provided for covering the stiffening members. For example, outer and inner layers 15 and 16 of binding material, such as leather, imitation leather, cloth, etc., are provided on opposite sides of the stiffening members 13 and 14 and suitably secured thereto as by an adhesive or the like. It will be noted that the connecting portion or section 12 is formed entirely by the layers 15 and 16 of binding material.

With a view to detachably holding sheets or pages 17 of display material binding means, shown generally at 18, can be employed. The binding means 18 may comprise any suitable form of fastening means known to those skilled in the art. For example, it may comprise a plurality of divided snap rings 19 secured in a backbone 20 which in turn is secured by means of rivets 21 to the front cover 10 along its lower edge. Obviously, other forms of sheet holding means than the one shown and described may be used without departing from the scope of this invention.

In order to support the sheets or pages 17 of display material in a position where they may be conveniently viewed a substantially rigid rear panel 24 is provided, which, as will be presently described, is so arranged that when the display binder is in the open position it constitutes substantially a rigid extension of the front cover 10. The rigid panel 24 forms a part of an easel, another part of which is formed by the rear cover 11 which is interconnected with the rigid panel 24 by means of a foldable connecting panel, shown generally at 25, which comprises sections 25a and 25b.

It will be observed that the connecting panel 25 is made up into two parts or links that are hingedly connected together by the binding material on their inner and outer faces so that they will fold, as indicated at 26, inwardly between the rear cover 11 and the rigid panel 24 when the display binder is closed. It will also be observed that the outer edges of the connecting panel 25 are hingedly connected as indicated at

27 and 28 by the binding material to the outermost edges of the rear cover 11 and rigid panel 24, respectively. It will be apparent that the connecting panel 25 limits the movement apart of the rear cover 11 and rigid panel 24 when the display device is opened.

It is desirable to rigidly hinge the front cover 10 and the rigid panel 24. For this purpose hinges, illustrated generally at 29, are provided at the ends of these members as illustrated. The hinges 29 each comprise a pair of plate-like metal members 30 and 31 which are preferably formed of stainless steel or are plated with nickel or the like to prevent them from corroding. They are pinned together as indicated at 32 with a spring washer 32' therebetween. The pin 32 is riveted fairly tightly so that there will be considerable friction between the spring washer 32' and the juxtaposed faces of the hinge members 30 and 31. The metal hinge members 30 and 31 are bent on diagonals, as indicated at 33 and 34, so that the pinned ends are disposed in a plane that is substantially at right angles to the plane of the flat end portions 35 and 36. As shown, the end portions 35 and 36 are secured by any suitable means, such as rivets 37 and 38, to the front cover 10 and the rigid panel 24. It will be observed that the flat portion 35 is fastened to the inside of the front cover and is positioned underneath the layer 16 of binding material. The flat portion 36 is fastened on the under surface of the rigid panel 24 thereby positioning this under surface and the inner surface of the front cover 10 in coplanar relation when the display device is opened.

With a view to limiting the movement apart of the front cover 10 and the rigid panel 24, each of the hinge members 30 is provided with an upstruck lug portion 39 which is more clearly shown in Figure 3 of the drawings. This lug portion 39 is formed by means of a suitable die and merely involves the tearing of a small portion of the hinge member 30 and moving it to such position that it will engage the adjacent surface of the hinge member 31 to provide a stop when the front cover 10 has been moved through the desired distance from the rigid panel 24. It will be apparent that in the construction shown in the drawings this movement is through substantially 180 degrees for obvious reasons.

In the position of the display device shown in Figure 2 of the drawings it will be observed that the upper edge of the rear cover 11 engages and directly supports the front cover 10. The angle 43 between the rigid panel 24 and the connecting panel 25 or the angle at which the sheets 17 of display material are held relative to the horizontal is substantially more acute than is the case when the rear cover 11 is positioned as shown in Figure 5 of the drawings. As shown in this latter figure, the rear cover 11 is so positioned that its upper edge abuts and directly supports the rigid panel 24. In this case the angle 44 between the rigid panel 24 and the connecting panel 25 is substantially greater than the angle 43, Figure 2. This difference in angular positioning of the sheets of display material 17 is permitted by virtue of the connecting portion or section 12 which obviously permits positioning of the rear cover 11 in either of the two alternate positions. The connecting portion or section 12, while somewhat flexible, possesses a sufficient degree of rigidity to prevent collapse

of the same when in the position shown in Figure 5. Further, the front cover 10 and the rigid panel 24 react against the rear cover 11 in such manner as to produce a limited force in the direction which would cause a collapse of the portion or section 12.

It is desirable that the easel formed by the rear cover 11 and the rigid and connecting panels 24 and 25 be quickly moved to a supporting position by merely grasping the front cover 10 and permitting the remainder of the display binder to fall freely to assume the desired position. This action may be insured by interconnecting the portions of the foldable connecting panel 25 by resilient means which tends to urge them to assume an approximately flat or unfolded position as shown in Figures 2 and 5 of the drawings. For example, the sections forming the connecting panel 25 may be provided with flaps 45 and 46, Figures 5 and 6, which may be interconnected by a rubber band 47. One of the sections or links forming the connecting panel 25 is provided with an extension or flap 48 which forms a lever with which the rubber band 48 may co-operate in urging the connecting panel to the unfolded position. The extension or flap 48 may be integrally formed with one of the sections of the panel 25 and may be cut out of the other section or be provided in addition thereto so that it overlies the other section. The construction is such that, in the open upright position of the binder as shown in Figures 2 and 5, the sections forming the panel 25 are angularly positioned. Because these sections or links are slightly out of alignment in this position, they readily fold when the binder is closed.

It will now be obvious that the display device can be quickly placed in the open position by merely grasping the front cover 10 and leaving the remainder to swing downwardly to automatically form the easel. The position of the rear cover 11 can then be adjusted to place the sheets 17 of display material at the desired angle. It will be apparent that the sheets of display material 17 and 18 can be turned from one position to the other freely and that an illustration instead of being confined to one of them may be extended from the back of one to the front of the adjacent one.

Since certain further changes may be made in the above construction and different embodiments of the invention may be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting said front cover and said rigid panel, flexible connector means interconnecting said back cover and said rigid panel for limiting movement apart thereof through predetermined angles, means for limiting movement apart of said front cover and said rigid panel through a predetermined angle, and binding means carried by said front cover for receiving sheets and the like.

2. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially

rigid panel, hinge means interconnecting said front cover and said rigid panel, means cooperating with said hinge means for limiting movement apart of said front cover and said rigid panel, and folding connector means interconnecting said back cover and said rigid panel for limiting movement apart thereof through predetermined angles.

3. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting said front cover and said rigid panel, means cooperating with said hinge means for limiting the opening movement thereof to permit said rigid panel to form substantially an endwise extension of said front cover when the binder is in the open position, and foldable connector means interconnecting said back cover and said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position.

4. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting said front cover and said rigid panel, means cooperating with said hinge means for limiting the opening movement thereof to permit said rigid panel to form substantially an endwise extension of said front cover when the binder is in the open position, foldable connector means interconnecting said back cover and said rigid panel for limiting movement apart thereof through a predetermined angle when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, and binding means carried by said front cover for receiving sheets and the like.

5. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting said front cover and said rigid panel, foldable connector means interconnecting said rear cover and said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, and resilient means cooperating with said foldable connector and acting to thereby bias the same to the unfolded position and thereby bias said back cover and rigid panel apart to form an easel.

6. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting the inner side of said front cover and the outer side of said rigid panel, stop means cooperating with said hinge means for limiting the opening movement thereof to permit the outer surface of said rigid panel to form substantially a coplanar extension of the inner surface of said front cover when the binder is in the open position, and means interconnecting said rear cover and said rigid panel for limiting movement apart thereof to form an easel when the binder is in the open position.

7. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said

covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting the inner side of said front cover and the outer side of said rigid panel, stop means cooperating with said hinge means for limiting the opening movement thereof to permit the outer surface of said rigid panel to form substantially a coplanar extension of the inner surface of said front cover when the binder is in the open position, foldable connector means interconnecting said rear cover and said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, and resilient means cooperating with said foldable connector and acting to thereby bias the same to the unfolded position and thereby bias said back cover and rigid panel apart to form an easel.

8. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel; a pair of hinges interconnecting said front cover and said rigid panel, each including a pair of elongated hinge members pinned together at one end with the other ends being fastened to said front cover and rigid panel respectively, spring washer means between said hinge members at the pinned end thereof, and means cooperating with said hinge members for limiting their opening movement; and means interconnecting said rear cover and said rigid panel for limiting movement apart thereof.

9. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel; a pair of hinges interconnecting said front cover and said rigid panel each including a pair of elongated members rotatably pinned together at one end and bent along opposite diagonals such that the pinned together ends occupy a plane substantially at right angles to the other ends which extend angularly away from each other, and a lug extending from one of each pair of members cooperating with the other member for limiting their opening movement; and means interconnecting said rear cover and said rigid panel for limiting movement apart thereof to form an easel when the binder is in the open position.

10. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, a pair of hinges interconnecting said front cover and said rigid panel each including a pair of elongated members rotatably pinned together at one end and bent along opposite diagonals such that the pinned together ends occupy a plane substantially at right angles to the other ends which extend angularly away from each other, foldable connector means interconnecting said rear cover and said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, and resilient means cooperating with said foldable connector and acting to thereby bias the same to the unfolded position and said back cover and rigid panel apart to form an easel.

11. A display binder comprising, in combination, substantially rigid front and back covers,

means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel, hinge means interconnecting said front cover and said rigid panel, a pair of substantially rigid hingedly interconnected panels hingedly connected to said rear cover and to said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, flap means projecting from one of said pair of panels over the other, and resilient means interconnecting said pair of panels and extending over said projecting means for thereby biasing said pair of panels to the unfolded position and said back cover and rigid panel apart to form an easel.

12. A display binder comprising, in combination, substantially rigid front and back covers, means interconnecting adjacent edges of said covers in spaced apart relation, a substantially rigid panel; a pair of hinges interconnecting said front cover and said rigid panel each including a pair of elongated members rotatably pinned together at one end and bent along opposite diagonals such that the pinned together ends occupy a plane substantially at right angles to the other ends which extend angularly away from each other, and a lug extending from one of each pair of members cooperating with the other member for limiting their opening movement; a pair of substantially rigid hingedly interconnected panels hingedly connected to said rear cover and to said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, flap means projecting from one of said pair of panels over the other, and resilient means interconnecting said pair of panels and extending over said projecting means for thereby biasing said pair of panels to the unfolded position and said back cover and rigid panel apart to form an easel.

13. A display binder comprising, in combination, substantially rigid front and back covers, a substantially rigid panel between and substantially coextensive with said covers when the same are closed, means hingedly interconnecting said front cover and said rigid panel in such manner that the latter is substantially a rigid extension of the former when the binder is in the open position, means interconnecting said rear cover and said rigid panel for limiting movement thereof apart, and means interconnecting adjacent edges of said covers in spaced apart relation and permitting said rear cover to occupy either of two positions when the binder is in the open upright position, one position being such that the rear cover reacts against said front cover and the other position being such that the rear cover reacts against said rigid panel whereby said front cover and rigid panel occupy respectively a lesser and a greater angular position with respect to the horizontal.

14. A display binder comprising, in combination, substantially rigid front and back covers, a substantially rigid panel between and substantially coextensive with said covers when the same are closed; a pair of hinges interconnecting said front cover and said rigid panel each including a pair of elongated members rotatably pinned together at one end and bent along opposite diagonals such that the pinned together ends

occupy a plane substantially at right angles to the other ends which extend angularly away from each other, and a lug extending from one of each pair of members cooperating with the other member for limiting their opening movement; means interconnecting said rear cover and said rigid panel for limiting movement thereof apart, and means interconnecting adjacent edges of said covers in spaced apart relation and permitting said rear cover to occupy either of two positions when the binder is in the open upright position, one position being such that the rear cover reacts against said front cover and the other position being such that the rear cover reacts against said rigid panel whereby said front cover and rigid panel occupy respectively a lesser and a greater angular position with respect to the horizontal.

15. A display binder comprising, in combination, substantially rigid front and back covers, a substantially rigid panel between and substantially coextensive with said covers when the same are closed, means hingedly interconnecting said front cover and said rigid panel in such manner that the latter is substantially a rigid extension of the former when the binder is in the open position, foldable connector means interconnecting said rear cover and said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, resilient means cooperating with said foldable connector and acting to thereby bias the same to the unfolded position and said back cover and rigid panel apart to form an easel, and means interconnecting adjacent edges of said covers in spaced apart relation and permitting said rear cover to occupy either of two positions when the binder is in the open upright position, one position being such that the rear cover reacts against said front cover and the other position being such that the rear cover reacts against said rigid panel whereby said front cover and rigid panel occupy respectively a lesser and a greater angular position with respect to the horizontal.

16. A display binder comprising, in combination, substantially rigid front and back covers, a substantially rigid panel, means hingedly interconnecting said front cover and said rigid panel in such manner that the latter is substantially a rigid extension of the former when the binder is in the open position, a pair of substantially rigid hingedly interconnected panels hingedly connected to said rear cover and to said rigid panel for limiting movement apart thereof through predetermined angles when the binder is in the open position and adapted to fold therebetween when the binder is in the closed position, means projecting from one of said pair of panels over the other, resilient means interconnecting said pair of panels and extending over said projecting means for thereby biasing said pair of panels to the unfolded position and said back cover and rigid panel apart to form an easel, and means interconnecting adjacent edges of said covers in spaced apart relation and permitting said rear cover to occupy either of two positions when the binder is in the open upright position, one position being such that the rear cover reacts against said front cover and the other position being such that the rear cover reacts against said rigid panel whereby said front cover and rigid panel occupy respectively a lesser and a greater angular position with respect to the horizontal.

17. A display binder comprising, in combination, a substantially rigid cover, a substantially rigid display panel, means cooperating with said cover and panel for foldably connecting them together adjacent their upper edges and for supporting on the front of said panel sheets to be displayed, links hinged together at their inner edges with their outer edges respectively hinged to the lower portions of said cover and panel, said links being foldable downward for spacing the lower edges of said cover and panel a predetermined distance apart and foldable upward between said cover and panel, and an elastic tension member extending across the hinge connection between the inner edges of said links and acting to thereby bias the latter to unfolded position and thereby automatically spread said cover and panel apart to form an easel.

18. A display binder comprising, in combination, a substantially rigid cover, a substantially

rigid display panel, means cooperating with said cover and panel for foldably connecting them together adjacent their upper edges and for supporting on the front of said panel sheets to be displayed, links hinged together at their inner edges with their outer edges respectively hinged to the lower portions of said cover and panel, said links being foldable downward for spacing the lower edges of said cover and panel a predetermined distance apart and foldable upward between said cover and panel, and means for automatically folding said links downward while preventing downward movement thereof into positions with their inner edges below their outer edges, said last mentioned means comprising an extension at the inner edge of one of said links and an elastic tension member connecting said links extending across said extension.

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