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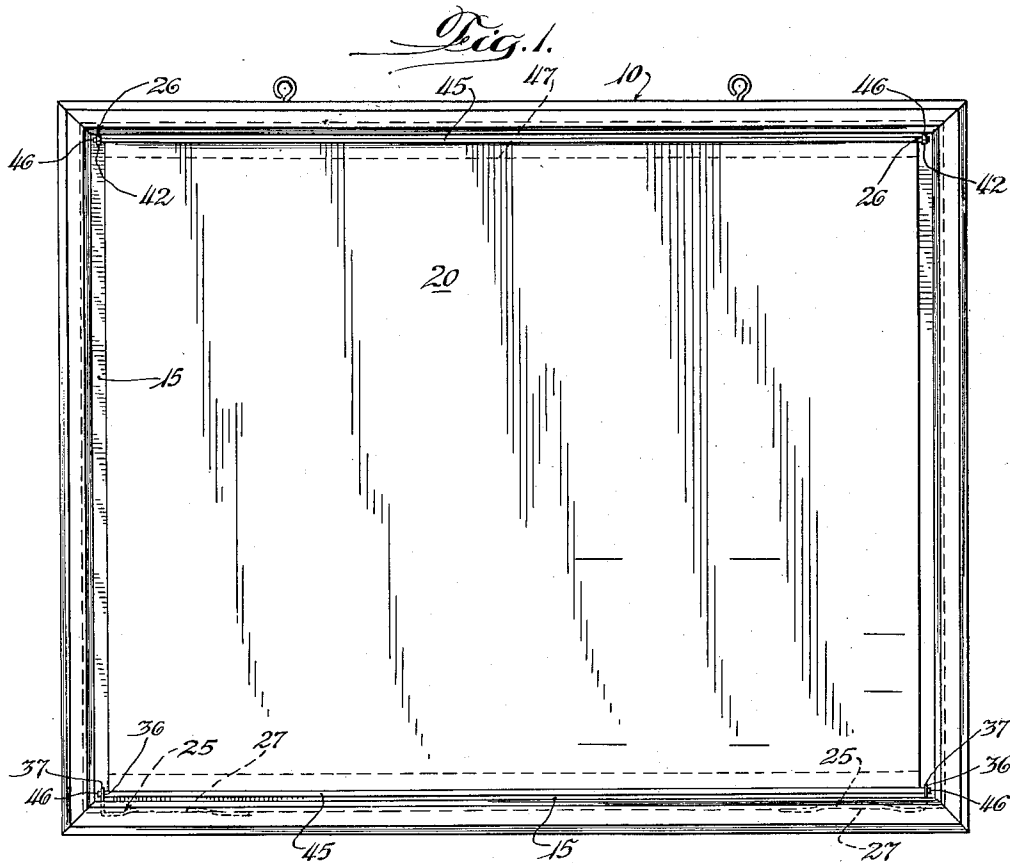
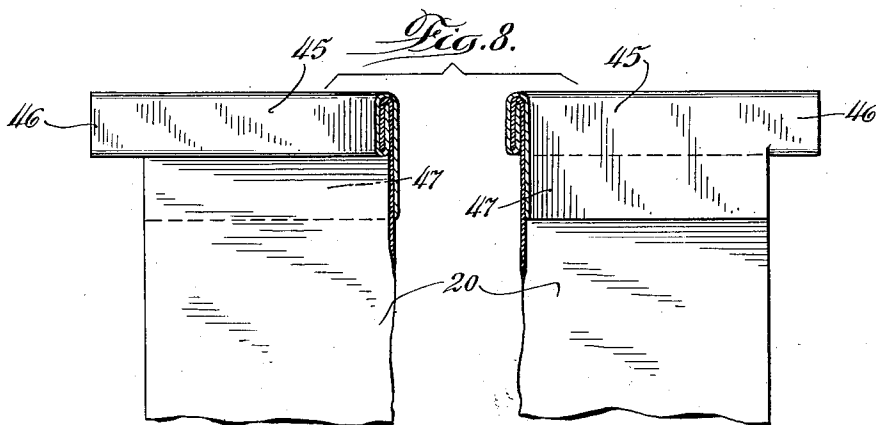
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2,533,565

DISPLAY DEVICE HAVING REMOVABLE NONRIGID PANEL

Filed July 3, 1948

3 Sheets-Sheet 1



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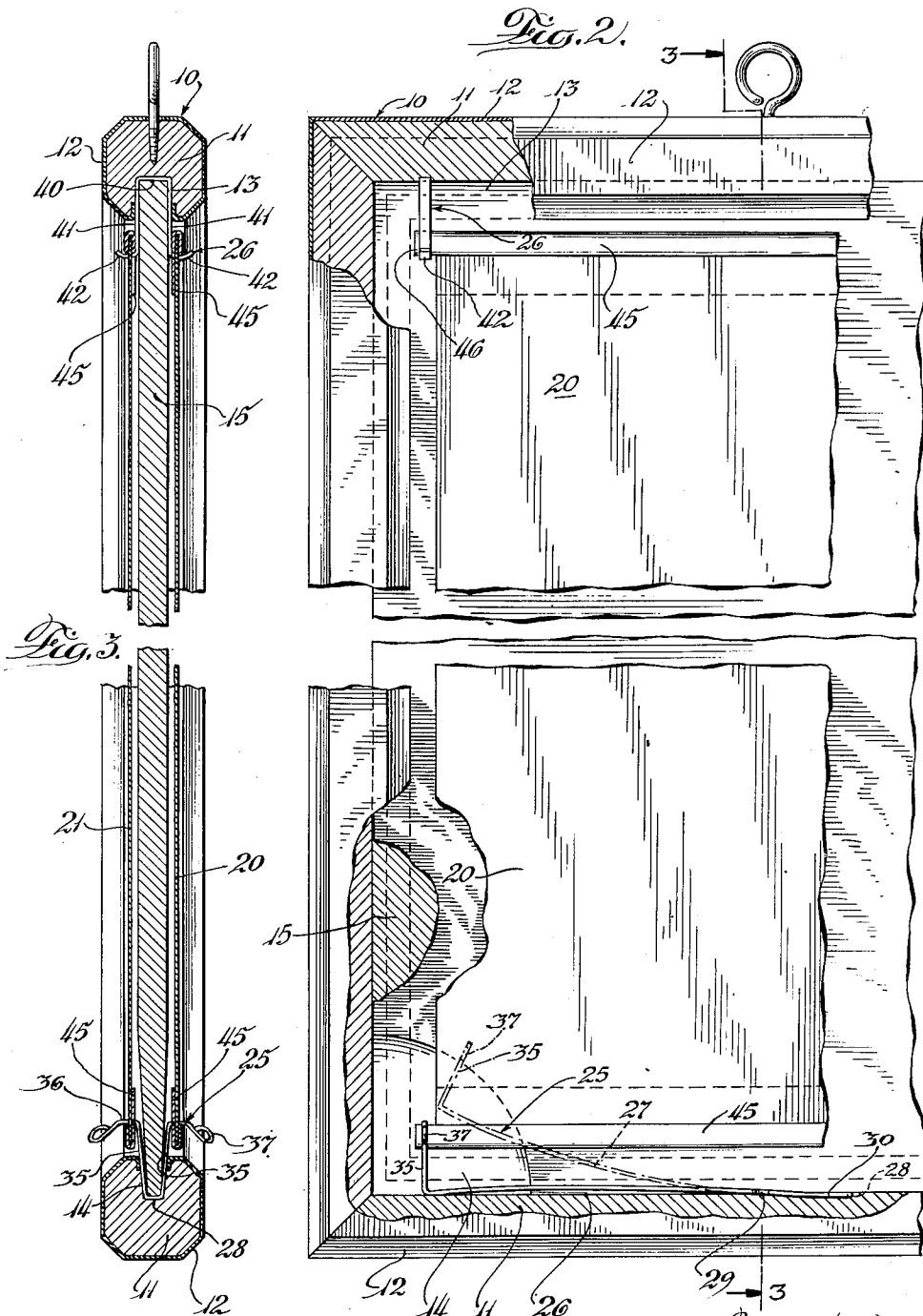
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DISPLAY DEVICE HAVING REMOVABLE NONRIGID PANEL

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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

Fig. 7.

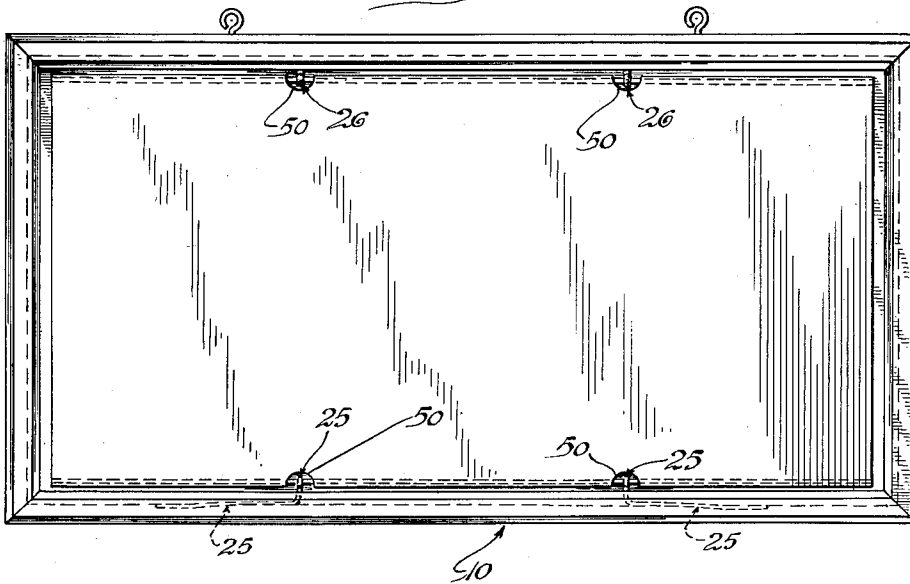


Fig. 4.

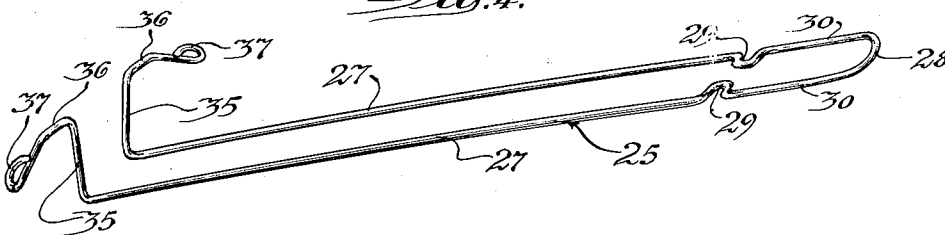


Fig. 5.

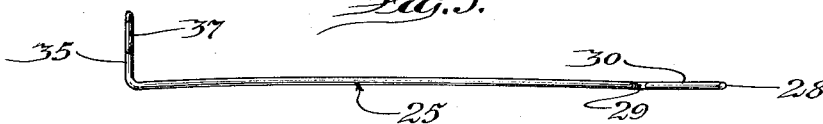
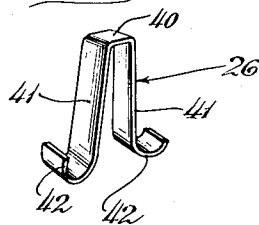


Fig. 6.



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UNITED STATES PATENT OFFICE

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DISPLAY DEVICE HAVING REMOVABLE
NONRIGID PANEL

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6 Claims. (Cl. 40—125)

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My invention relates to display devices.

More particularly it comprises a frame and a detachable flexible panel by which, for example, advertising, notices and the like may be attractively displayed.

An object of my invention is to provide an improved display device of the character mentioned.

Another object is to provide a display frame or border into which a flexible panel or placard may be quickly and easily applied and from which the panel may be quickly and easily removed for the purpose of replacement when changes are necessary or desirable.

Another object is to provide a frame which will hold a flexible panel or placard in taut condition.

Another object is to provide a display frame which prevents wind, water and the like from bulging or wrinkling or tearing the panels.

A further object is to provide a display frame which will properly hold a flexible display panel without accurate fitting.

A further object is to provide a frame which will protect a flexible and fragile placard panel, such as one made of paper, from serious injury such as puncturing.

Another object is to protect the panels from injury by the frame.

Other objects and advantages will hereinafter appear.

Preferred embodiments of my invention are illustrated by the accompanying drawings, wherein:

Fig. 1 is a front elevation of a complete display device assembly of frame and panel;

Fig. 2 is an enlarged front elevation and partial section of the assembly;

Fig. 3 is a vertical cross section on the line 3—3 of Fig. 2;

Fig. 4 is an enlarged perspective of one of the spring clips with which one side of a display panel is retained in the frame;

Fig. 5 is a side elevation of the spring clip shown in Fig. 4;

Fig. 6 is a perspective of a relatively rigid clip for anchoring an edge of a display panel opposite the spring clips;

Fig. 7 is a front elevation of a modified display device; and

Fig. 8 is a broken front elevation of a portion of a display panel or placard showing particularly its reinforcement where the spring retaining clips engage it.

The frame 10, which is an open rectangular

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framework to provide a border for the display panel, may be composed of metal, wood, plastic or any desired appropriate material of sufficient rigidity. Or as shown and preferred, the frame 10 may be of composite construction consisting of a core 11 of wood or other desired material, and a thin outer shell 12 of appropriate metal, such as stainless steel. The top side of frame 10 is provided with an inwardly opening groove 13; the opposite side of the frame is likewise provided with an inwardly opening groove 14 which, preferably, tapers slightly upwardly and outwardly. A rectangular backing board 15, composed of such material as wood, stiff cardboard, any of the well known composite fiber boards or even of metal, fits into grooves 13 and 14 at the top and bottom respectively and is cut to a size substantially to fill the opening within the frame 10.

Preferably the frame is arranged to hold two display panels or placards 20 and 21, one on each side of the backing board 15. These panels, upon which, for example advertising, notices and other forms of display may be painted, printed, lithographed or otherwise applied may be made of flexible fabric such as almost any desired type and quality of paper, cloth, cellophane or other material of like nature.

These flexible display panels or placards are retained in taut condition within the frame by spring clips 25 at one side (preferably the top) and relatively non-resilient or rigid clips 26 at the opposite side (preferably the bottom) of the frame. If the display panel or placard is narrow, only one retaining clip of each type may suffice, or if the panel or placard is of extreme width, more than two clips of each type may be required. Ordinarily, however, two clips of each type will be likely to produce the best results.

Referring especially to Figs. 2, 3, 4 and 5, the preferred construction and application of a spring clip 25 will be explained. This spring clip is made from a single piece of resilient wire, preferably a good grade of steel spring wire. The wire is bent at its middle to form two substantially parallel legs 27 in general resemblance to a hair pin. A short distance from the reverse curve 28 of the clip, the legs 27 are bent into rather sharp return curves 29 that define an anchoring portion 30 which, as shown most clearly in Figs. 2 and 3, lies within and against the bottom of frame groove 14 where it is held firmly in place by the backing board 15. The outer or free ends of legs 27 are bent upwardly to form risers 35 and then outwardly and downwardly to form

hooks 36 which may, if desired, project outside of the plane of the border frame. When these resilient clips are in place with their anchoring portions 30 in and held against the bottom of the frame groove 14 by the bottom edge of backing board 15, the risers 35 lie loosely on opposite sides of the backing board and the hooks 36 project outwardly and downwardly from opposite faces of the backing board, as shown most clearly in Fig. 3. Normally the legs 27, risers 35 and hooks 36 of the resilient clips are, because of the resiliency of the spring metal of which they are composed, biased to lie in a depressed position as shown by the full lines of Fig. 2. They may, however, be independently elevated against that spring bias to the position indicated by the dotted lines of Fig. 2. This elevated position is the one to which they are raised when a placard is to be hooked in place or unhooked for removal, as will be presently explained.

The relatively rigid panel engaging clips 26 at the top of the frame border, are as shown most clearly in Figs. 3 and 6 made from a single piece of flat metal bent into somewhat U shape to provide an anchoring base portion 40 and a pair of outwardly extending risers 41. Preferably the risers 41 normally spread somewhat, as shown in Fig. 6, and are made sufficiently flexible and resilient so that they may be forced toward each other but tend to separate. Each rigid clip terminates in an outwardly turned hook 42. These clips are positioned with the base portion 41 resting on the bottom of the top frame groove 13 and the risers 41 extending from the frame toward the resilient clips at the opposite side of the border as shown most clearly in Fig. 3. Then when the backing board 15 is shoved into place, its upper edge goes into the groove 13 between the risers 41 and the rigid clips are thereby anchored to the frame, the resiliency of the clips serving to prevent looseness.

The panels or placards 20-21 may be alike except for the displays they carry, which may be duplicates or different, as desired. A panel is a generally rectangular piece of fabric shaped to fit rather loosely into the opening of the frame or border. Its upper and lower edges are provided with means to be engaged by the hooks of the upper relatively rigid retaining clips and the lower spring retaining clips. Preferably this means comprises an edging 45 of metal which, as shown most clearly in Fig. 8, is made trough shape to encompass the panel edge and, when compressed, tightly to grip the edge. If the retaining clips are located near the inner four corners of the border frame, as indicated in Figs. 1 and 2, each panel edging projects beyond the side margin of the panel, as shown most clearly in Figs. 2 and 8, to provide a catch 46 at each panel side margin for engagement by the hooks of the associated clips. In order to afford protection for the margins or edges of a panel adjacent the latches 46, one side or flange of edging 45 may be extended for a distance over a surface of the panel as indicated at 47 in Fig. 8.

In applying a display panel to either side of the backing board, the projecting catches 46 at opposite top corners of the panel are hooked to upper clips 26, then the two catches 46 at the opposite bottom corners of the panel are hooked to the two lower clips 25. This may be readily done, even though the height of a panel is less than the normal distance between upper clips 26 and lower clips 25, because these lower clips, on account of their resiliency, permit the hooks

36 to be raised, by pulling up on finger grips 37, until the lower corner catches 46 can be hooked under hooks 36 of these lower clips, as indicated by the dotted lines of Fig. 2. After a panel is thus hooked in place between the upper and lower retaining clips, the lower clips are released whereupon their resiliency causes the hooked free ends to return to normal, or near normal positions as indicated by the full lines of Fig. 2. Thus, not only is it easy to position and remove and replace display panels whenever necessary or desirable but the panels are maintained in a taut, unwrinkled and not readily distorted condition, and this condition is attainable even though the height of the panels may vary considerably. In other words, a slightly appearance is attainable and maintainable without accurate fitting and wind or water, which might cause panels to bulge or shrink or expand do not cause trouble, and the likelihood of panels becoming torn if they shrink for any cause is lessened if not eliminated.

Fig. 7 shows a modification wherein the panel retaining clips are located in regions remote from the panel and border corners. Here the hooks of clips 25 and 26 engage the panel edge bindings not beyond the side margins of a panel, as previously explained, but well toward the center of the panel. In order to enable the clip hooks to hook around the edge binding strips, the panel may be provided with openings or "windows" 50 which permit the hooks to reach the binding.

The backing boards provide rigid and strong reinforcement to the panels, which is important if the panels are made of frail fabric, such as paper. With this reinforcement close back of the panels, the panels will not be so easily injured, such as by being punctured by some object. However, if desirable, the backing board may be omitted, in which event the panel retaining clips may be properly anchored in the border grooves by ordinary nails or staples. And, of course, by merely halving the panel retaining clips so as to remove the hook on one side single panel, instead of the double panel, display devices may be produced.

Having thus illustrated and explained the nature and several embodiments of my invention, what I claim and desire to secure by United States Letters Patent is as follows:

1. A display device comprising, in combination, an open rigid border frame having facing grooves in at least two of its opposite sides; at least one pair of clips, at least one clip of a pair being resilient relative to the other and each clip having a hook portion disposed within the opening of the frame and an anchoring portion extending into a frame groove; a relatively stiff backing board fitting between and into the grooved sides of the frame over the anchoring portion of both clips to wedge those portions into the grooves and thereby retain the clips in place on the frame; and a fabric display panel provided with means cooperating with the hook portions of the clips to hold the panel under tension in the frame.

2. A display device comprising, in combination, a rigid rectangular open frame having an inwardly facing groove in two opposite sides; a relatively stiff backing board bridging across the frame between its grooved sides; a pair of relatively rigid panel-engaging clips at one groove side of the frame, each rigid clip having two hooks and an intermediate U-shaped body portion, the hooks being on opposite sides of the backing

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board and extending inwardly of the frame when the body portion lies in the frame groove; a pair of resilient panel-engaging clips at the opposite grooved side of the frame, each resilient clip having two resilient hooks and an intermediate body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove; said backing board being a size to press upon the U-shaped body portions of the panel-engaging clips to retain them in the frame grooves; and a flexible fabric panel having means engageable by the hooks of the clips to hold the panel removably and taut within the opening of the frame.

3. A display device comprising, in combination, a rigid rectangular open frame having an inwardly facing groove in two opposite sides; a relatively stiff backing board lying within the frame between its grooved sides; a pair of relatively rigid panel-engaging clips at one grooved side of the frame, each rigid clip having two hooks and a U-shaped body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove; a pair of resilient panel-engaging clips at the opposite grooved side of the frame, each resilient clip having two resilient hooks and an intermediate body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove, said backing board being of a size to press upon the U-shaped body portions of the panel-engaging clips; and a flexible fabric panel having a metal binding along two opposite edges, the binding being engageable by the hooks of the clips to hold the panel taut but removably within the frame.

4. A display device comprising, in combination, a rigid rectangular open frame having an inwardly facing groove in two opposite sides; a relatively stiff backing board lying within the frame between its grooved sides; a pair of relatively rigid panel-engaging clips at one grooved side of the frame, each rigid clip having two hooks and a U-shaped body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove; a pair of resilient panel-engaging clips at the opposite grooved side of the frame, each resilient clip having two resilient hooks and a body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove, said backing board being of

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a size to press upon the U-shaped body portions of the panel-engaging clips; and a flexible fabric panel having a metal binding along two opposite edges, the binding extending beyond the edges of the panel and there being engaged by the hooks of the clips to hold the panel taut but removable within the frame.

5. A display frame comprising, in combination, a rigid rectangular open frame having an inwardly facing groove in two opposite sides; a relatively stiff backing board bridging across the frame between its grooved sides; a pair of relatively rigid panel-engaging clips at one grooved side of the frame, each rigid clip having two hooks and an intermediate U-shaped body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove; and a pair of resilient panel-engaging clips at the opposite grooved side of the frame, each resilient clip having two resilient hooks and an intermediate body portion, the hooks being on opposite sides of the backing board and extending inwardly of the frame when the body portion lies in the frame groove, said backing board being of a size to press upon the U-shaped body portions of the panel-engaging clips.

6. A frame for tautly supporting a pair of display panels, comprising a border for surrounding the panels and having at least two sides which are opposite each other and between which the display panels may be placed; and at least two panel retaining clips, at least one for each of the opposing sides and one of which clips is resiliently movable toward and from the other clip, each clip having two hooks which lie on opposite sides of a plane median to the faces of the border to engage and hold the two display panels parallel to each other; and means for anchoring the clips to the associated sides of the border.

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