Jan. 19, 1937. W. STUEBING, JR 2,068,358

STAND FOR DISPLAY DEVICES

Filed March 29, 1934

Fig. 1.

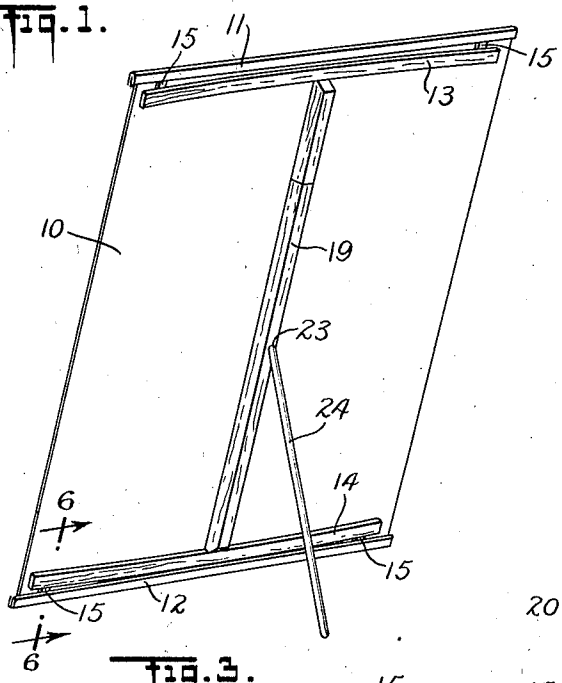


Fig. 2.

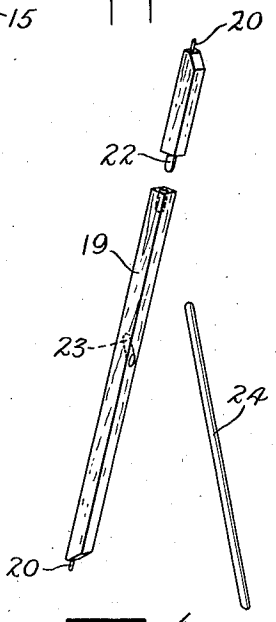


Fig. 3.

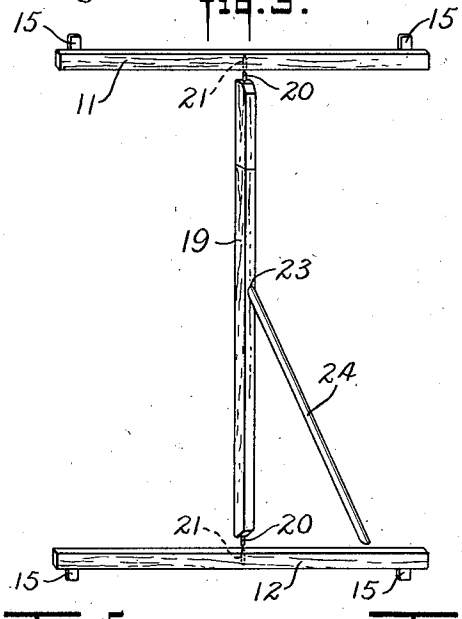


Fig. 4.

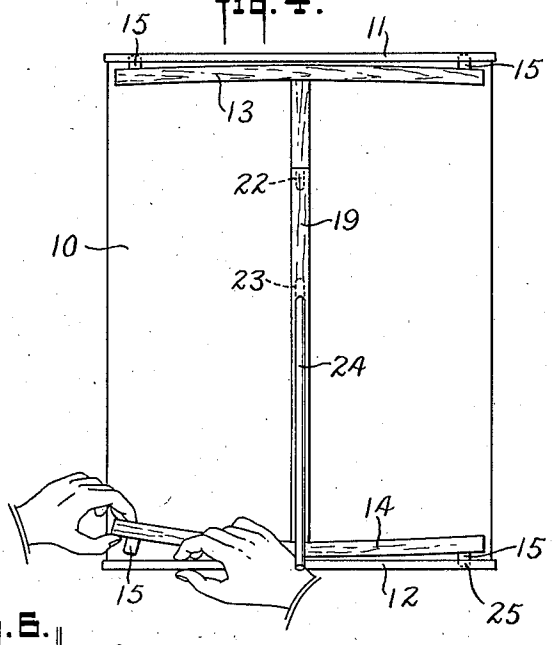


Fig. 5.

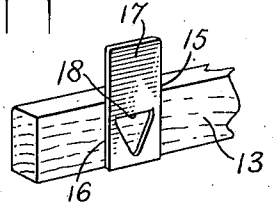
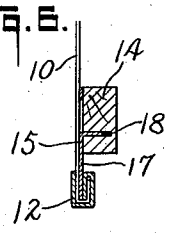


Fig. 6.



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STAND FOR DISPLAY DEVICES

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8 Claims. (Cl. 40—125)

This invention relates to display devices and, with regard to more specific aspects thereof, to a stand or easel for supporting a flexible poster or a flexible sheet of any character tightly in a flattened condition. One of the objects of this invention is to provide an easel made of separable parts which may be easily assembled and attached to the display sheet and which when disassembled may be folded with the display sheet in a small package for easy transportation.

Another object is to provide an easel of the character described which will provide points of attachment to the display sheet suitably spaced to provide efficient stretching of the sheet under all conditions of use. Another object is to provide an article of the character described which will be cheap to manufacture, of simple and durable construction and which will be thoroughly efficient for the purpose described.

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

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts as will be exemplified in the structure to be hereinafter described and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible embodiments of my invention:

Fig. 1 is a perspective view showing the rear side of the display sheet with the support attached thereto;

Fig. 2 is a perspective showing the construction of certain members of the easel and the manner of their assemblage;

Fig. 3 is a perspective disclosing the same members in displaced relation to other parts of the easel;

Fig. 4 is a rear elevation of the assembled easel, showing it in course of attachment to the display sheet;

Fig. 5 is a perspective view of a portion of one of the stretching members of the easel to which is secured a means for attaching the stretching member to the display sheet; and

Fig. 6 shows a cross-section taken on line 6—6 of Fig. 1.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring to Fig. 1, there is shown a poster or other display sheet composed of paper or other flexible material supported in upright position upon an easel embodying the present invention. The display sheet is indicated by the reference numeral 10, and is provided with upper and lower binding strips numbered 11 and 12 respectively. In the preferred form shown the top and bottom edges of the display sheet are folded within the folds of a metallic strip constituting the binding means.

The stand or easel comprises an upper elongated stretching member 13 preferably made of wood, which is in length slightly shorter than the binding member 11. It may, however, be of the same length, or even longer, if it should be found desirable. An identically constructed stretching member for the bottom of the sheet is designated 14. Stretching member 13 is adapted to be secured to the upper binding strip 11 and the member 14 to the lower binding strip 12. The preferred means for attaching these wooden members to the binding strips are metal attachment members 15. The attachment members are manufactured from a strip of metal in a pressing and cutting machine adapted to form them completely and attach them to the wooden members as the latter are fed to the machine. Each member 15 comprises a plane portion 16 adapted to lie flatly against the rear surface of stretching member 13 or 14, and providing an extension 17 projecting outwardly from the wooden member. The extension 17 may be slipped under the edge of a metal binding strip 11 or 12, as indicated in Figs. 1, 4 and 6. Each member 15 has an offset portion 18 struck out from the metal of the strip substantially at right angles to the plane portion 16, which portion 18 may be forced into the body of the wooden stretching member, as shown in Fig. 5, by the machine in which the attachment members are formed.

This attachment member is simple and inexpensive, may be easily fastened to the stretching member, and enables the stretching member to be quickly and securely attached to a binding member of the display sheet. Preferably two of these members 15 are secured to each stretching member at points adjacent the ends thereof, so that when a pair of stretching members are attached to the binding members of the display sheet their points of contact with the binding members are near the ends of the latter. Thus the display sheet is stretched between its four points of attachment to the easel. It should be noted that the projecting portions 17 of the attachment member is slightly longer than the depth of the space behind the edge of the bind-

ing strip so that the face of the stretching member is held a short distance away from the edge of the binding strip. The reason for this arrangement will become apparent as the description proceeds.

For holding the display sheet in its flattened condition a strut 19 is employed. This strut, preferably made of wood, is substantially rigid and is provided at its two ends with pins 20 adapted to form pivotal connections with the stretching members. Perforations 21 for receiving the pins 20 are provided in the stretching members, see Fig. 3, substantially midway between the ends thereof. As said above, the struts are rigid. Rigid struts have been used heretofore with rigid cross-members for holding display sheets in flattened condition, but since in such earlier constructions all of the parts were rigid the struts were made adjustable as to length to provide means for spreading the cross-members into stretching relation with the ends of the display sheet. Such constructions have proved unsatisfactory because display sheets under varying conditions of humidity and temperature are apt to stretch, thus making necessary frequent readjustments in order to keep the sheets flat.

To overcome this difficulty the stretching members of the present device are made sufficiently resilient to take on a camber, or be put under strain, when a strut of sufficient length relatively to the length of the display sheet is employed to separate them. Figs. 1 and 4 show this camber and it will be understood that in determining the proper length of strut for any given display sheet allowance will be made for sufficient camber to compensate for whatever stretching may subsequently take place in the display sheet. It will be noted that the strut 19 is made in two sections held together by a dowel pin 22, see Fig. 2. This detail is not an essential feature of the invention but is desirable, since the two-part construction serves to facilitate folding the parts of the easel in the display sheet when the latter is rolled, wherefore the longer portion of the strut may be given a length substantially the same as the breadth of the display sheet. As shown in Figs. 1 and 2, the strut is provided with an oblique drill hole or socket 23 adapted to receive the end of a prop 24. The degree of obliquity of the socket will depend upon the angle at which it is desired that the mounted display sheet stand and the length of the prop 24 is designed accordingly.

Since the easel is received by the user in knock-down form, a description of the manner in which the parts are assembled and attached to the display sheet may be appropriate. After removing the disassembled easel parts from the rolled display sheet, the upper and lower stretching members may be first mounted on the pivots at the ends of the strut member. Then one of the stretching members, say the upper one, is secured to the upper binding member of the display sheet by slipping the projecting ends of the metal members 15 under the said binding. It is then a simple matter to slip one of the metal members 15 of the lower stretching member under the binding member at the lower end of the display sheet as indicated at 25 in Fig. 4. In order to bring the second metal member of the lower stretching member into cooperative relation with the lower binding member 12, it is necessary to press upwardly the still free end of the binding member 14 until the member 15 will clear the edge of the binding member 12, when the said member 15 may readily be slipped in beneath the binding member. The force applied to the lower stretching member 14 is sufficient slightly to camber both stretching members so that in its assembled relation with the display sheet each of said members is strained sufficiently to cause its respective attachment devices to press outwardly against the respective binding members of the display sheet. Thus the display sheet is tightly stretched and due to the resiliency of the stretching members would continue to be held in a tightly stretched condition even should expansion of the sheet take place.

Thus it will be seen that the present invention provides a simple and efficient means for accomplishing the objects hereinbefore set forth.

As many possible embodiments may be made of the above invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In a display device of the character described, in combination, a flexible display sheet having binding members secured to opposite edges thereof, a resilient stretching member rigidly engaging one of said binding members at two spaced points, a similar stretching member rigidly engaging the other of said binding members at two spaced points, and a strut secured between said stretching members to camber said stretching members between their points of engagement with said binding members, the length of said strut being greater than the normal distance between said stretching members.

2. In a display device of the character described, in combination, a flexible display sheet having binding members enveloping opposite edges thereof, a stretching member engaging each of said binding members, said stretching members being normally straight and disposed in substantially parallel relation to the respective binding members, and a multisectioned strut of predetermined length interposed between said normally straight stretching members for causing flexure thereof toward said binding members.

3. In a display device of the character described, in combination, a display sheet having rigid binding members attached to opposite edges thereof, a normally straight stretching member engaging each of said binding members at spaced points thereon whereby said stretching members are spaced from their respective binding members, and means disposed between said stretching members to cause flexure thereof toward said binding members between the respective points of contact.

4. In a display device of the character described, in combination, a flexible display sheet having binding members secured to opposite edges thereof, a pair of normally straight resilient stretching members engaging the respective binding members at two spaced points, and rigid means of a length greater than the distance between said stretching members interposed between said stretching members as a strut.

5. In a display device of the character described, in combination, a flexible display sheet having binding members secured to opposite edges thereof, a pair of normally straight resilient stretching members engaging the respective binding members at two spaced points, and rigid

means of a length greater than the distance between said stretching members interposed in pivotal relation between said stretching members as a strut.

6. In a display device of the character described, in combination, a flexible display sheet having binding members enveloping opposite edges thereof, a pair of stretching members each provided with spaced projecting means underlying the respective binding members whereby the end portions of said stretching members are removably attached to the respective binding members, and a strut secured between said stretching members and of a length relative to the length of the display sheet adapted to spread said stretching members in their attached relation to said binding members so as to camber said stretching members between their said end portions thereby to hold said display sheet tightly in a flattened condition.

7. In a display device of the character described, in combination, a flexible display sheet having binding members enveloping opposite edges thereof, a pair of stretching members each provided with spaced projecting means underlying the respective binding members whereby the end portions of said stretching members are removably attached to the respective binding members, a strut mounted between said stretching members in engagement with said stretching members substantially midway between said spaced projecting means, said strut being of a length adapted to spread said stretching members in their attached relation to said binding members so as to camber said stretching members between their said end portions, thereby to hold said display sheet tightly in a flattened condition, and a prop member removably attached at a predetermined angle to said strut.

8. In a display device of the character described, in combination, a display sheet having rigid binding members attached to opposite edges thereof, and means disposed between said binding members adapted to force the end portions of one binding member away from the end portions of the other binding member, said means comprising a pair of normally straight members disposed in substantially parallel relation to the respective binding members and in contact with opposing surfaces of said binding members adjacent the ends thereof, and a strut of predetermined length relatively to the distance between said binding members interposed between said normally straight members for causing flexure of said straight members toward said binding members between the respective points of contact.

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