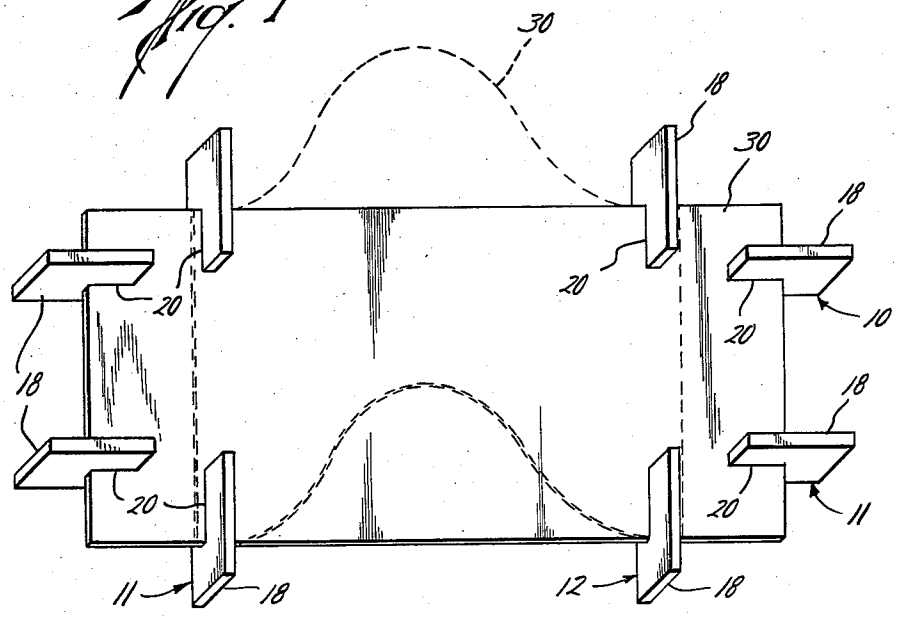
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FRAMING DEVICE

Filed Sept. 14, 1962

Fig. 1



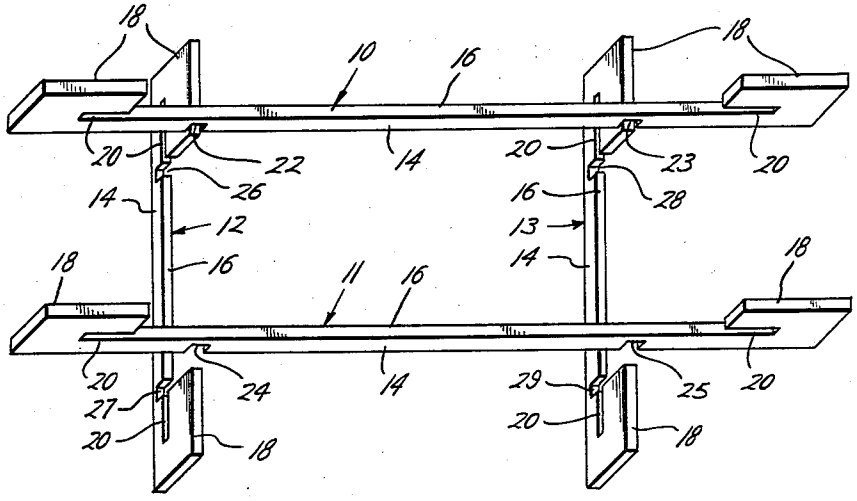


Fig. 2

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FRAMING DEVICE

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This invention relates to a display unit and more particularly it relates to a framing device which includes a combination of a frame and a picture or other sheet material display which forms an integral part thereof.

The framing device of this invention comprises a plurality of interlocked frame members held together solely by the interlocking means and a semi-flexible sheet member which is also interlocked with the framing members to prevent any disengagement of the interlocking frame members. For a better understanding reference is made to the accompanying drawing wherein

FIGURE 1 is a pictorial view of one embodiment of this invention and

FIGURE 2 is an exploded pictorial view of the framing elements of the embodiment shown in FIGURE 1.

Referring first to FIGURE 2, it will be seen that the framing elements comprise longitudinally extending members **10**, **11**, **12** and **13**. Each frame member comprises an elongate body portion **14** each of which has a top edge **16** as viewed in FIGURES 1 and 2 of the drawing. At either end of each of the frame members there is an enlargement **18** which extends from the top edge of the frame member. A longitudinally extending slot **20** between each enlargement **18** and the top edge **16** of each frame member opens toward the body of each frame member, the top edge of the frame member forming one side of the slot and the enlargement **18** forming the other side of the slot.

Each of the frame members **10**, **11**, **12** and **13** is also provided with at least two spaced-apart transverse notches, preferably relatively near each end, frame member **10** being provided with notches **22** and **23** on the bottom edge, frame member **11** being provided with notches **24** and **25** on the bottom edge, frame member **12** being provided with notches **26** and **27** on the top edge, and frame member **13** being provided with notches **28** and **29** on the top edge. In the embodiment shown, the combined depth of the notches facing each other approximately equals the width of the body portion **14** of the frame member and the width of each notch is approximately equal to the thickness of the frame member. Thus, when notch **22** is engaged in its opposing notch **26** the top edges **16** of frame members **10** and **12** are in substantially the same plane. Similarly, if the body portion **14** of frame members **10** and **12** are of the same width, the bottom edges of these two frame members will be in substantially the same plane. Furthermore, when said two opposing notches are inter-engaged with each other frame members **10** and **12** are interlocked together against movement in two dimensions, i.e. the frame members cannot be moved longitudinally nor laterally with respect to each other. However, they can be moved in the third dimension, i.e. in the direction of movement apart of the notches.

In assembling the frame of this invention, the notches **22** and **26** are inter-engaged as are notches **23** and **28**, **24** and **27**, and **25** and **29**. Thus, the four frame elements are interlocked with each other against movement with respect to each other in two dimensions but not against movement in the third dimension, and each of the members crosses at least two other members so as to form a polygon, in this case a quadrilateral, in between the four frame members. Obviously, if three frame members were used the crossing members would form a triangle. Similarly, if two horizontal and three vertical members were used, the members would form two quadrilaterals. When

so assembled the slots **20** open toward the polygon formed.

When assembled in this manner, a relatively stiff yet somewhat flexible sheet member bearing a picture or other display may be fitted into the slots **20** in the manner shown in FIGURE 1. Preferably the sheet member is in the form of a polygon similar to the polygon formed by the frame members. The word "similar" is used in a geometric sense, i.e. having the same angles and having proportional dimensions. This figure shows in broken lines the movement of a piece of sheet material **30** as it is inserted into the slots in frame members **12** and **13**. FIGURE 1 also shows sheet member **30** after it has been fully inserted into all of the slots **20**. It will be apparent that the slots **20** are only slightly wider than the thickness of sheet member **30**, so as to provide a slip fit. It will be seen that when the relatively stiff sheet member is in this position, it will restrain the frame elements **10**, **11**, **12** and **13**, against movement relative to each other in the third dimension; i.e., the piece of sheet material prevents the frame members from becoming disengaged by means of the opposing notches moving apart from each other.

Preferably the sheet member **30** is of a relatively stiff material, i.e. about the stiffness of the usual manila paper or of cardboard, but the apparatus of this invention will work satisfactorily if only ordinary paper is used. Better results are obtainable in all cases if the notches in the top edges, i.e. upwardly opening notches **26**, **27**, **28** and **29**, as shown in FIGURE 2, are closely adjacent the inner ends of the enlargements **18**. With such an arrangement the sides of the slots **20** will engage the sheet material to a point immediately adjacent the notches, and therefore to immediately adjacent the traversing frame member, so that only by direct shear of the sheet material at this point can the frame members become disengaged from each other.

It will be appreciated that the sheet member may be of paper or paperboard, or may be of a plastic or of a plastic impregnated fibrous material, or may be of metal or any other material suitable for use for display purposes which is at least semi-flexible, i.e. which has sufficient flexibility to be inserted into the slots **20** in the manner heretofore described and as is shown in FIGURE 1 of the drawing. Similarly, the frame members are preferably made of wood but can also be made of any other materials such as various plastics and molded materials or of metals. The frame members are shown to be relatively straight and flat, however, it will be appreciated that they may be formed in various configurations without departing from the scope of this invention. Similarly, the sheet member **30**, although shown to be flat and rectangular in the drawing, may be of various shapes and may even be molded to configurations other than flat without departing from the scope of this invention. In any event, it is only necessary that the sheet member engage the frame members at their point of crossing.

Thus, although various embodiments have been shown and described herein, the invention is not limited thereto but only as defined by the following claims.

I claim:

1. A display unit comprising
a plurality of longitudinally extending frame members, each having a transverse notch near each end,
the notches in each frame member being interlocked with notches in two other frame members,
the interlocked frame members crossing each other to form a polygon,
a longitudinally extending slot in each end of each frame member,
said slots being in the same plane and opening toward said polygon, and

a flexible sheet member engaged in said slots to retain said frame members in interlocking engagement.

2. A picture and frame combination comprising

a plurality of longitudinally extending frame members,

at least two spaced-apart transverse notches in each frame member,

the notches in each frame member being interlocked with notches in two other frame members, whereby relative longitudinal movement of one interlocked frame member with respect to another interlocked frame member is prevented,

the interlocked frame members crossing each other to form a polygon,

a longitudinally extending slot in each end of each frame member,

said slots being in the same plane and opening toward said polygon, and

a semi-flexible sheet member engaged in said slots to retain said frame members in interlocking engagement.

3. A display unit comprising

a plurality of longitudinally extending frame members crossing each other to enclose a polygon and interlocked with each other against movement in two dimensions,

a semi-flexible sheet member lying on said frame members, and

means on each of said frame members engaging said sheet member to hold it against said frame members at their points of crossing,

whereby said frame members are held against movement in the third dimension.

4. A display unit as defined by claim 3 wherein

said plurality of frame members comprises two frame members crossing each of two other frame members to form a quadrilateral, and

said sheet member is in the form of a similar quadrilateral.

5. A display unit as defined by claim 3 wherein

the means engaging the sheet member comprise

a longitudinally extending slot in each end of each member,

said slots opening toward said polygon.

6. A display unit as defined by claim 3 wherein

the frame members are interlocked with each other by opposing notches in each member.

7. A picture and frame combination comprising

at least three longitudinally extending frame members,

each of said frame members traversing at least two other frame members,

a transverse notch in each frame member at each place where is traverses another frame member,

said notch being directed toward the traversed frame member,

the notches on traversing frame members being inter-engaged whereby each notch engages a traversed frame member, so that movement of the frame members relative to each other in two dimensions is prevented,

a longitudinally extending slot in each end of each frame member,

said slots opening toward each other, and

a semi-flexible sheet member engaged in said slots to restrain said frame members against movement in the third dimension.

8. A picture and frame combination comprising

at least three longitudinally extending frame members,

each having top and bottom edges,

each of said frame members traversing at least two other frame members,

a notch in one edge of each frame member at each place where it traverses another frame member,

each said notch engaging the traversed frame member, whereby the notches of traversing frame members are inter-engaged,

the top edges of all of said members being in substantially the same plane,

an enlargement on each end of each frame member extending from the top edge thereof,

a longitudinally extending slot formed between each enlargement and the top edge in substantially the same plane as said top edges,

said slots opening toward each other, and

a semi-flexible resilient sheet member engaged in said slots to retain said frame members in interlocking engagement.

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