May 31, 1949. G. E. NICHOLS 2,471,536

EASEL

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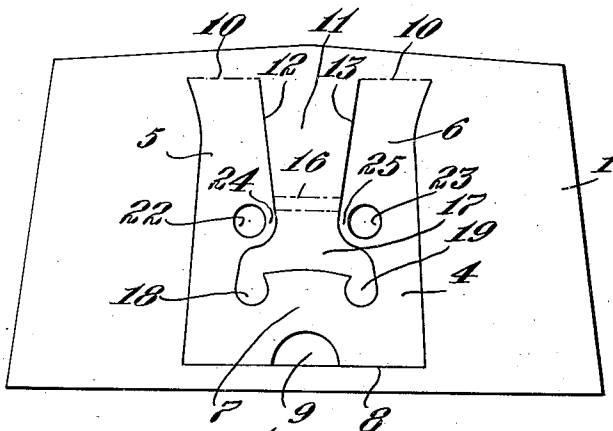


Fig. 1

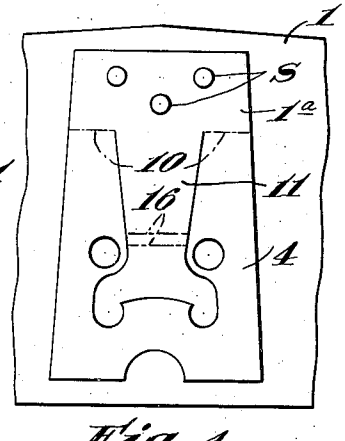


Fig. 4

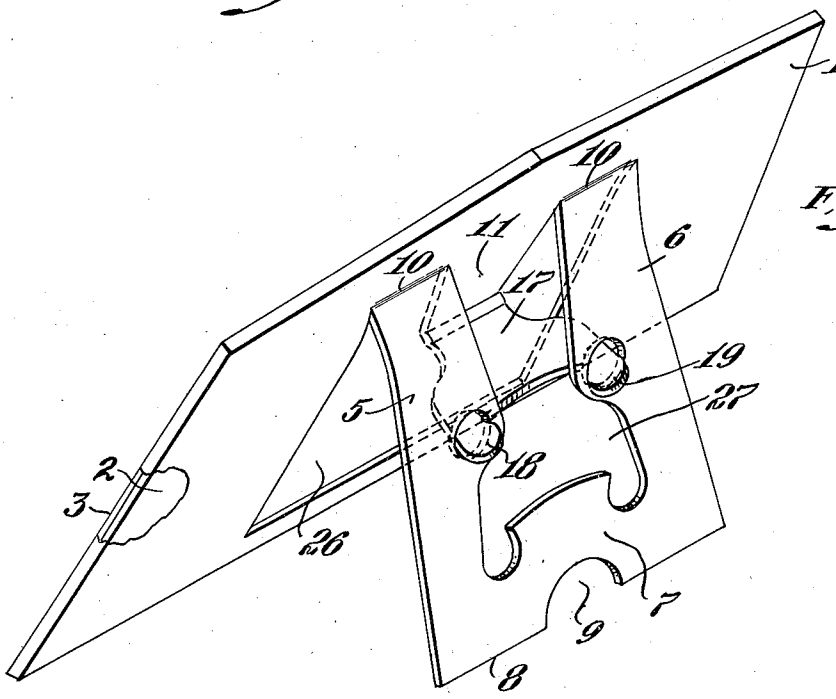


Fig. 2

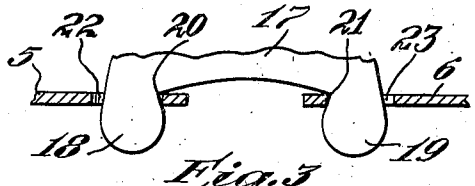


Fig. 3

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EASEL

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4 Claims. (Cl. 248—35)

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This invention pertains to supports, in particular to folding easels such, for example, as are employed as mounts for photographs, calendars, advertising material, etc. Such easels are customarily made of stiff sheet-like material, for instance cardboard, wood veneer, sheet metal, etc., and usually comprise a body portion of extended area, and the article to be exhibited, that is to say, the photograph, calendar, or the like, is attached or otherwise mounted on the front side of this body portion. A leg is arranged at the rear side of the body portion and diverges downwardly from the latter, thereby holding the body portion (with its lower edge resting upon a support, for example a table top) in upright, slightly inclined position. Customarily the leg is hinged or similarly attached to the body portion to permit the body portion and leg to be folded compactly for shipment or storage.

When the body portion of the easel is made of cardboard or the like, it is customary to make it by assembling several plies of the material in registering relation, and uniting them to form a sufficiently heavy and stiff support, this plied arrangement facilitating the provision of a recess, for instance in the forward face of the body portion, for the insetting of the photograph, calendar or the like. When so made of plied material the leg is customarily hinged to the rear ply. In order to hold the leg and body portion in the desired downwardly divergent relation of use, it is customary to provide a brace member designed to unite the body portion and leg at a substantial distance from the hinge axis. Desirably this brace, when arranged in the operative position, should be firmly held so that it will not slip and permit collapse of the easel. On the other hand, it is desirable that the brace be easily released at will so as to permit the easel to be folded when desired.

The present invention has for one of its objects the provision of an easel having a hinged leg and brace so designed that the brace, when arranged in the operative position, is firmly though releasably held by the interlocking coaction of the engaging parts. A further object is to provide an easel having a leg and brace, the latter being so designed as to prevent the leg from swinging either toward or from the body portion when the easel is in use. A further object is to provide an easel having a leg and brace both of which if desired may be integrally united to the body portion or to the rear ply of the latter, if the body portion be of plied construction. A

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further object is to provide an easel having a leg and brace which may be so constructed that, when folded, both leg and brace lie wholly within the thickness of the body portion or the rear ply thereof, the rear ply of the body portion, the leg and the brace being integral parts of the same piece of sheet material. A further object is to provide an easel having a body portion (or the rear ply of the body portion) integrally joined with the leg and brace and so designed that they may be formed by a simple die cutting operation and without producing any substantial amount of waste. Other and further objects and advantages of the invention will be pointed out in the following more detailed description and by reference to the accompanying drawings, wherein

Fig. 1 is a rear view of the easel with the parts folded;

Fig. 2 is a perspective view, to larger scale, showing the easel in position for use with the leg extended and the brace in operative position;

Fig. 3 is a fragmentary section, to larger scale, to illustrate the interlocking engagement of the brace and leg; and

Fig. 4 is a view similar to Fig. 1, but illustrating a modification.

Referring to the drawings, the numeral 1 designates the rear body ply of the easel, assuming that the body portion comprises more than one ply. If the body portion be of single ply construction, then the part 1 constitutes the entire body portion. However, as above suggested, it is common, in easels of this general type, to make the body of several registered and united plies of sheet material of one sort or another, for instance cardboard, sheet metal or the like. In Fig. 2 the rear ply 1 is shown as thus associated with a middle ply 2 and a front ply 3, although so far as the present invention is concerned, the number of plies forming the body portion of the easel is immaterial.

As here illustrated, the leg is of substantially inverted U-shape, having the substantially parallel spaced limbs 5 and 6 united at their lower ends by the bridge member 7, whose lower edge 8 is spaced a short distance, for example, one-quarter of an inch, above the lower edge of the body ply 1. Assuming that the body ply is made from a stiff sheet material such as cardboard, this leg may be formed by suitable incising the ply 1, for example by means of an appropriate die, the incisions extending completely through the ply 1. Preferably a semi-circular notch 9 is formed in the lower edge of the leg 4 to permit the introduction of the fingernail for swinging

the lower end of the leg rearwardly out of the plane of the member 1.

The upper ends of the limbs 5 and 6 of the leg remain integrally united to the part 1, but preferably the material is scored along the lines 10 to facilitate bending at these points, so that the leg may swing rearwardly about the lines 10, as hinges.

The material 11 of the body ply which intervenes between the spaced upper portions of the limbs 5 and 6, remains within the plane of the body member 1, the inner edges of the limbs 5 and 6 being defined by the incisions 12 and 13. This fixed part 11 terminates about midway between the plane of the hinge lines 10 and the lower edge of the leg, its lower end being defined by one or more score lines 16. The incisions 12 and 13 extend downwardly below the score lines 16 to define a brace member 17, the score lines 16 defining a hinge about which this brace may swing. The brace 17 has a downwardly directed tab 18 and 19, at its respective lower corners, these tabs having arcuate edges and being so shaped as to provide notches 20 and 21 (Fig. 3), respectively, in their opposing edges. The limbs 5 and 6 of the leg have openings 22 and 23 (here shown as circular) with their centers in a horizontal plane slightly below the plane of the score lines 16, the tabs and openings being so dimensioned and horizontally spaced that when the tabs are pushed through the respective openings the material 24 and 25 constituting the inner borders of the openings, snaps into the notches 20 and 21, thereby interlocking the brace and leg.

When the easel is to be used, the lower part of the leg 4 is swung rearwardly, as shown in Fig. 2, about the hinge lines 10, and then the brace member 11 is swung rearwardly about the hinge defined by the score lines 16, and the tabs 18 and 19 are projected through the openings 22 and 23. When thus projected through the openings, the notches 20 and 21, at opposite sides of the brace member 11, engage the material 24 and 25 at the edges of the openings 22 and 23, thus forming locking elements which prevent the leg 4 from swinging either forwardly or rearwardly. The leg is thus held securely in position so that there is no danger that the easel will collapse during use. On the other hand, by pushing the tabs 18 and 19 forwardly and out of the holes 22 and 23, the brace and the leg may be folded down flat, so as to lie within the plane of the substance of the part 1, the leg being housed within the chamber 26 (Fig. 2) and the brace within the chamber 27, thus making the easel very compact for shipment or storage.

While as herein illustrated the leg 4 and the brace 11 are integral with the member 1, it is contemplated as within the scope of the invention to make them as independent parts and to connect them by appropriate hinge means to the part 1. Thus, as illustrated in Fig. 4, the leg 4 and and brace 11 are formed integral with a piece 1a of sheet material, with score lines at 10 and 16, and the piece 1a is subsequently fixed to the back member, in any suitable manner, for instance by means of adhesive and/or staples, rivets, or the like, as indicated at S. In this modified construction, the leg and brace do not lie within the plane of the member 1 when folded.

While desirable embodiments of the invention have been shown by way of example, it is to be understood that the invention is broadly inclusive of any and all modifications falling within the scope of the appended claims.

I claim:

1. An easel comprising a body ply, a leg and a brace, the leg and brace being hinged at their upper ends to said body ply, the body ply having a chamber in which the leg and brace are housed when the easel is folded, the brace having laterally spaced tabs at its lower end, said tabs having locking elements and the leg having laterally spaced openings of such dimensions as freely to receive said tabs, the locking elements of said tabs being seated in locking engagement with the material bordering the openings by the natural resilience of the brace.

2. An easel comprising a body ply, a leg and a brace, the leg and brace being hinged at their upper ends to said body ply, the body ply having a chamber in which the leg and brace are housed when the easel is folded, the brace having laterally spaced tabs at its lower end, said tabs having notches in their opposed edges, and the leg having spaced apertures therein of such dimensions as freely to receive said tabs for engagement of the notches with the material bordering the apertures thereby to lock the leg and brace in operative position.

3. An easel comprising a body ply, a leg and a brace, the leg being of inverted U-shape and being hinged to the body ply at its upper end, the brace being housed within the lower portion of the leg when the easel is not in use and having a downwardly directed tab at each of its respective lower corners of generally circular contour, the leg having a pair of circular openings therein corresponding in diameter to the major diameter of the circular portions of the tabs into which the tabs of the brace may freely be introduced and drawn down by the natural resilience of the brace to engage a cord of the tab with a corresponding cord of the opening thereby to hold the leg in operative position.

4. An easel comprising a body ply, a leg and a brace, the leg being of substantially inverted U-shape and comprising substantially parallel limbs integrally hinged at their upper ends to the body ply, the upper end of the brace also being integrally hinged to the body ply at a point below the hinge axis of the leg, the brace having laterally spaced tabs with oppositely directed notches in their opposed edges, and the leg having spaced apertures therein the spacing of which corresponds to that of the tabs, said apertures having edge portions engageable with said notches solely by reason of the natural resilience of the brace thereby to hold the brace and leg in operative position.

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