March 6 1934. J. L. LARKIN 1,949,913

DISPLAY STAND

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Fig. 1.

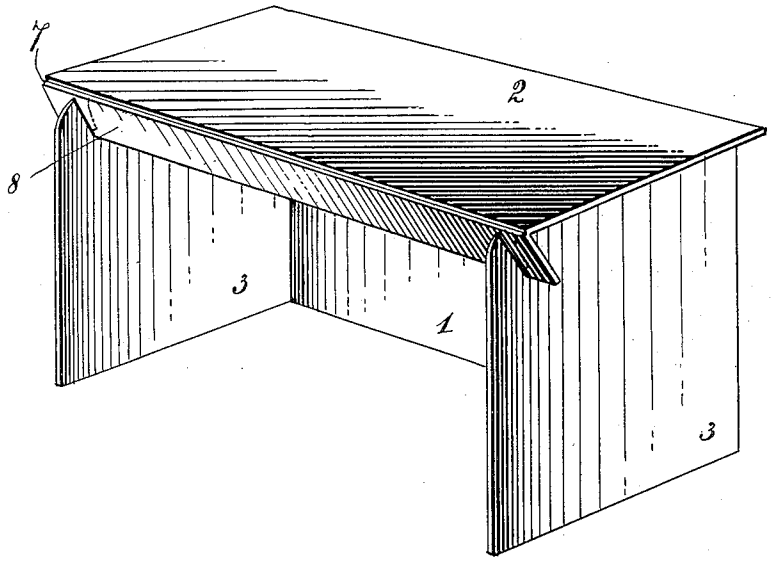


Fig. 2.

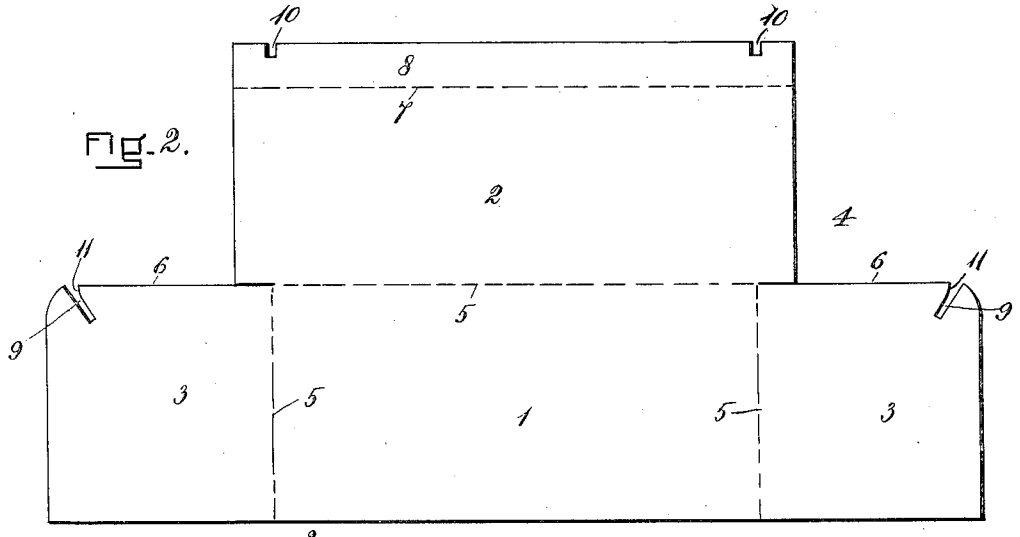


Fig. 3.

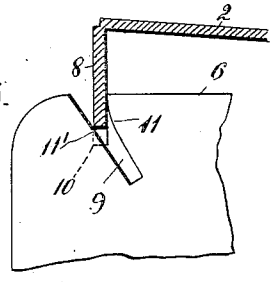
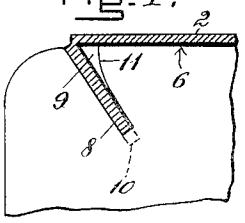


Fig. 4.



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Fig. 5.

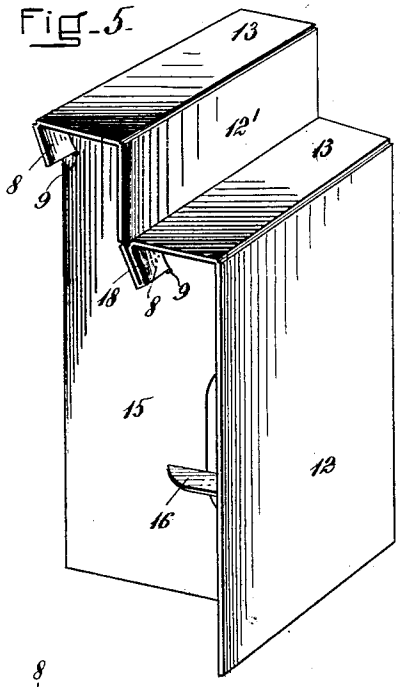
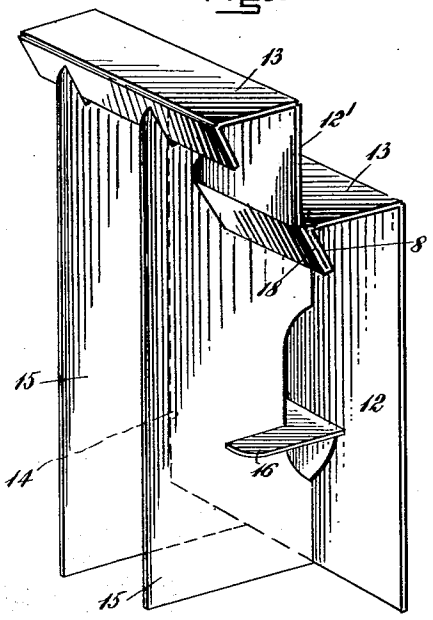


Fig. 6.



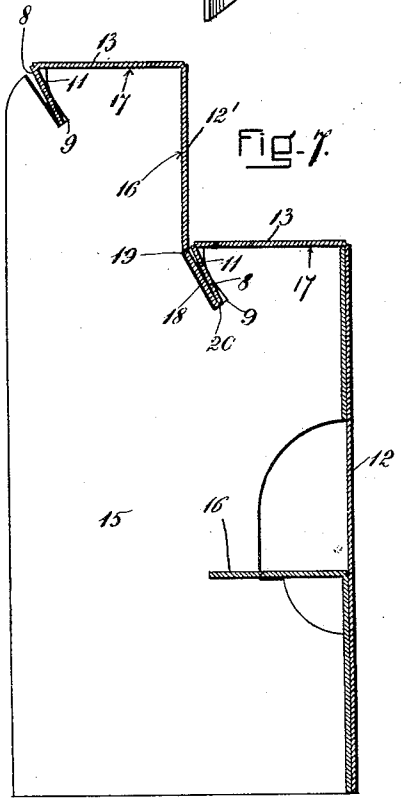
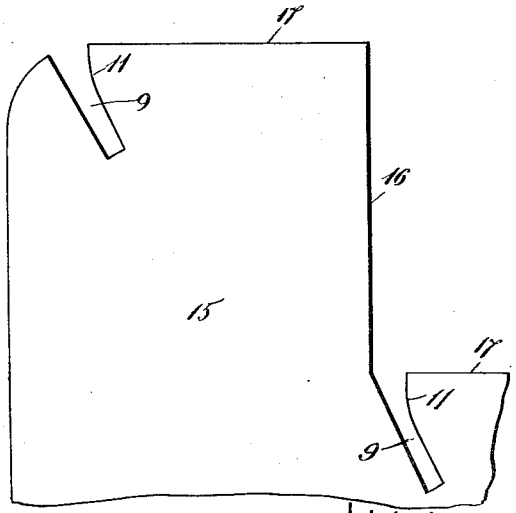


Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE

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DISPLAY STAND

James L. Larkin, Winthrop, Mass., assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass., a corporation of Massachusetts

Application October 5, 1931, Serial No. 566,921

8 Claims. (Cl. 211—156)

The invention relates to display stands made of sheet material and foldable in character, occupying when extended a display form and foldable flatly.

The object of the invention is to provide certain improvements which give increased strength and rigidity to the stand when occupying its display form, and this especially with relation to stands having walls or plates which need be firmly though detachably held together.

The invention can best be seen and understood with reference to the drawings in which are shown selected embodiments thereof.

Fig. 1 is a perspective view of the display stand.

Fig. 2 is a plan of the blank from which the stand is made.

Fig. 3 is a side elevation in enlarged detail of a portion of one of the elements of the stand.

Fig. 4 is a side elevation showing the same element as in Fig. 3 but having associated therewith another cooperating element shown in section.

Figs. 5 and 6 are perspective views of a modified structure of stand.

Fig. 7 is a view partly in side elevation and partly in section of the stand shown in Figs. 5 and 6; and

Fig. 8 is a side elevation in enlarged detail of a portion of one of its elements.

Reference will first be made to the embodiment of the invention shown in Figs. 1 to 4. Here the display stand comprises a front plate 1, a top plate 2, and supporting wings 3, all formed from a single piece of material or blank 4 and foldable into display form by scorings 5 in the material. When the stand is occupying its display form the wings 3—3 will extend back from the side marginal edges of the front 1. The top plate 2, connected along its front marginal edge to the top marginal edge of the front plate 1, will extend back with bearing to rest upon the top marginal edges 6 of the supporting wings. It is necessary that the top plate be firmly held down and secured in order to obtain a properly rigid structure, and it is to this the invention especially pertains.

Secured to the rear marginal edge of the top plate and made to turn thereon by a scoring 7 in the material is a tongue or flange 8. The supporting wings 3 are provided with slots 9 extending into the wing from the top marginal edges 6 thereof and into these slots the tongue on the top plate is adapted to fit. To prevent lateral displacement of the wings slots 10 are cut in the outer edges of each of the tongues at the points where the tongue enters the slot 9 in the wings so that when the tongue is fully seated in the slots 9 in the wings that portion of the wings lying just below the bottom ends of the slots 9 will enter the slots 10 in the tongue.

In order that the tongue 8 will be held securely within the slot 9 in the wing for holding down the top plate with bearing against the top marginal edge of the wing, the slot is so formed or cut that the tongue can be made to enter the slot only by applied pressure which causes it to become tensioned between the opposite side edges of the slot which press against the tongue tending to bend or distort it whereupon the escape or drawing out of the tongue from the slot will be prevented by the frictional resistance attending the application of such pressure. To this end the slot 9 in the wing is formed or cut to extend downward from the top marginal edge of the wing with acute angular inclination with relation to the adjacent top plate. The mouth of the slot is made relatively wide and the forward edge of the slot is curved. When the tongue is partially inserted into the slot, before any application of pressure, the forward end of the tongue after entering the slot will engage the rear edge 11′ of the slot while the body of the tongue will engage the rounding forward edge 11 thereof. (See Fig. 3.) Full insertion of the tongue within the slot cannot be obtained until the inclination of the tongue has been changed to that of the slot and this cannot be obtained until the forward end of the tongue has been moved down over the rear edge of the slot and the body of the tongue has been passed around the curved forward edge of the slot. This can only be effected by application of pressure to the tongue although little pressure is required after the inclination of the tongue has become changed to correspond with that of the slot. As pressure is applied to the tongue the forward edge thereof will rub over the rear edge of the slot while the body of the tongue will be bent or passed around its curved forward edge. This has the effect of tensioning the tongue between the opposite sides of the slot which press against the tongue tending to bend or distort it and the frictional resistance attending such bending or distortion will hold the tongue within the slot until forcibly withdrawn therefrom, and will accordingly hold down the top plate snug against the top edge of the wing. The rounding surface of the slot is preferably as shown so arranged that little pressure will be exerted on the tongue tending to bend or distort it when the inclination of the tongue is brought to correspond with that of the slot and the tongue has become fully seated within the slot.

The invention is especially applicable for display stands presenting a stepped front an embodiment of which is shown in Figs. 5 to 8, in which 12 represents a main front plate above which in stepped order is another front plate or riser 12', with top plates 13 all formed from a single piece of material. The stepped front thus provided is maintained in display form by a collapsible easel back in which 14 represents the body of the easel provided at either side with wings 15, 15 held out by a tongue 16 struck from the body of the easel. The body 14 of the easel is secured by pasting or otherwise to the main front plate 12 of the stepped front. The wings are provided with vertical and horizontal stepped edges 16 and 17 against which the vertical plate or riser 12' and top plates 13 of the stepped front bear respectively, being supported by the wings when the wings are turned out.

The top plates 13 of the stepped front are bound to the wings of the easel in a manner similar to that in which the top plate 2 was bound to the wings in the construction first described. In other words, each of the top plates 13 is provided along its rear edge with a tongue or flange 8 which enters a slot 9 in the edge of the adjacent wing in the same manner as in the first construction. Inasmuch as the stepped front is made in one integral piece, the front plate 12' which rises from the rear edge of the lower top plate 13 is provided with a bottom extension 18 made flexible by a scoring 19 in the material. The depth of the extension 18 is substantially equal to the depth of the tongue 8, the extension connecting with the outer end of the tongue and this by a connection made flexible by a scoring 20 in the material. In consequence the extension on the riser thus connected with the tongue will enter the slot in the wing with the tongue and may be considered a part of the tongue as far as the retention of the top and face plates are concerned. In this way the face plates and top plates of the stepped front are firmly and securely bound to the wings of the easel when the wings are turned out and the stand is in its display form.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:

1. In a display stand having combined plates, one having a side engagement with the edge of the other plate and detachably connected thereto by a movable tongue on the one plate fitting within a slot in the other of said plates, said slot being arranged at an acute angle with relation to the adjacent edge-engaging side of said one plate, and the inner edge of said slot being cut away whereby said tongue will be made to enter said slot by application of pressure and become tensioned between the opposite sides of said slot.

2. In a display stand having combined plates, one having a side engagement with the edge of the other plate and detachably connected thereto by a movable tongue on the one plate fitting within a slot in the other of said plates, said slot being arranged at an acute angle with relation to the adjacent edge-engaging side of said one plate, and presenting a curved inner edge around which said tongue is bent when made to enter said slot by application of pressure and thereby become tensioned between the opposite side edges of said slot.

3. In a display stand having combined plates, one having a side engagement with the edge of the other plate and detachably connected thereto by a movable tongue on the one plate fitting within a slot in the other of said plates, said slot being arranged at an acute angle with relation to the adjacent edge-engaging side of said one plate, and provided with a widened mouth and adjacent rounded edge around which said tongue is passed when made to enter said slot by application of pressure to said tongue.

4. In a display stand having combined plates, one having a side engagement with the edge of the other plate and detachably connected thereto by a movable tongue on the one plate fitting within a slot in the other of said plates, said slot being arranged at an acute angle with relation to the adjacent edge-engaging side of said one plate, and provided with a widened mouth and rounded inner edge whereby the tongue may enter the slot and engage the opposite side edges thereof on partial entry of the tongue into the slot and afterward be seated within the slot only by applied pressure.

5. A display stand comprising a front plate, a top plate connected along its front marginal edge to the top marginal edge of the front plate and provided along its rear marginal edge with a movable tongue, a support for the front plate including a wing presenting an edge against which the top plate has bearing when the stand is in its display form, said wing having a slot therein into which said tongue fits when said top plate is bearing against said wing, said slot having a widened mouth and rounded inner edge whereby the tongue may enter the slot and engage the opposite side edges thereof on partial entry of the tongue into the slot and afterward be seated within the slot only by applied pressure.

6. A display stand having a stepped front including a top plate and a front plate rising from the rear edge of said top plate, a movable tongue on the rear edge of said top plate, a movable extension to the bottom of said front plate connecting with the outer edge of said tongue and movable with said tongue, and a support for said stepped front including a wing presenting an edge against which said top plate has bearing when the stand is in display form, said wing having a slot therein inclined in the general direction of said stepped front into which said combined movable tongue and movable extension fit when said top plate is bearing against said wing.

7. A display stand having a stepped front including a top plate and a front plate rising from the rear edge of said top plate, a movable tongue on the rear edge of said top plate, a movable extension to the bottom of said front plate connecting with the outer edge of said tongue and movable with said tongue, and a support for said stepped front including a wing presenting an edge against which said top plate has bearing when the stand is in display form, said wing having a slot therein into which said combined flange and extension fit when said top plate is bearing against said wing, said slot having a widened mouth and rounded inner edge whereby the combined tongue and extension may enter the slot and engage the opposite side edges thereof on partial entry of the combined tongue and extension into the slot and afterward be seated within the slot only upon applied pressure.

8. A display stand having a stepped front including a top plate and a front plate rising from the rear edge of said top plate, a movable tongue on the rear edge of said top plate, a movable ex-

tension to the bottom of said front plate connecting with the outer edge of said tongue and movable with said tongue, and a support for said stepped front including a wing presenting an edge against which said top plate has bearing when the stand is in display form, said wing having a slot therein inclined in the general direction of said stepped front and into which slot said combined tongue and extension fit when the top plate is bearing against said wing, said slot having a widened mouth and inner edge whereby the combined tongue and extension may enter the slot and engage the opposite side edges thereof on partial entry of the combined tongue and extension into the slot and afterward be seated within the slot only upon applied pressure.

JAMES L. LARKIN.