Nov. 14, 1933. E. L. DAVIDSON 1,935,223

FOLDING DISPLAY STAND

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Fig. 1.

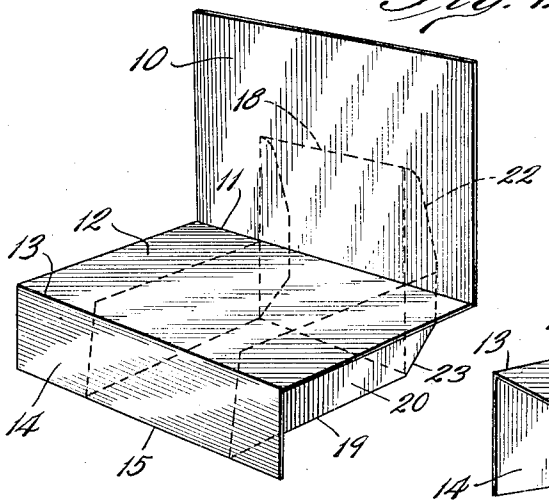
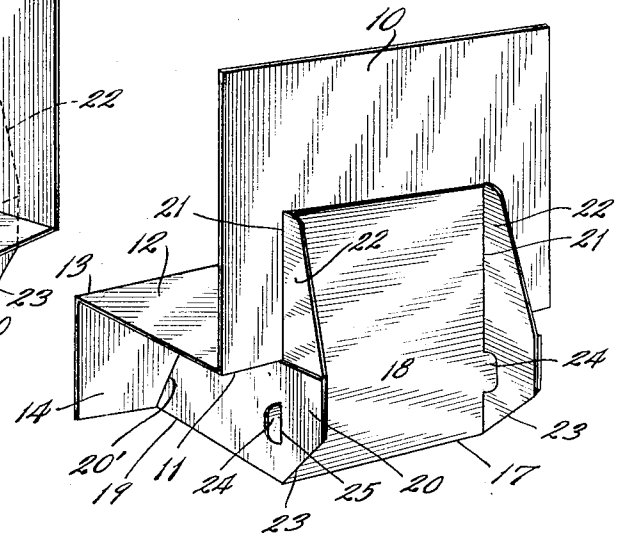


Fig. 2.



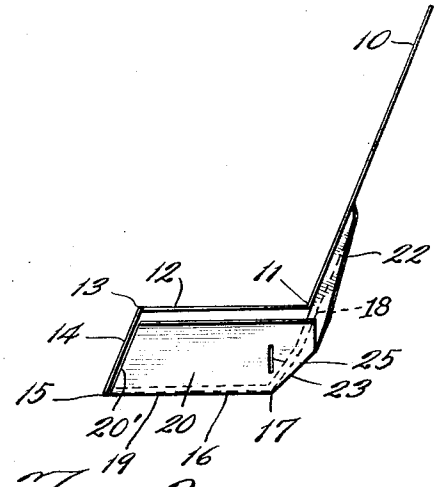


Fig. 3.

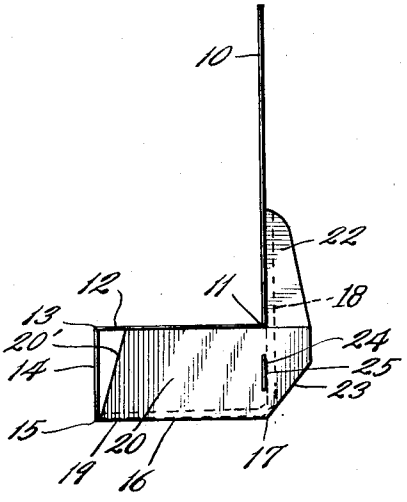


Fig. 4.

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Fig. 5.

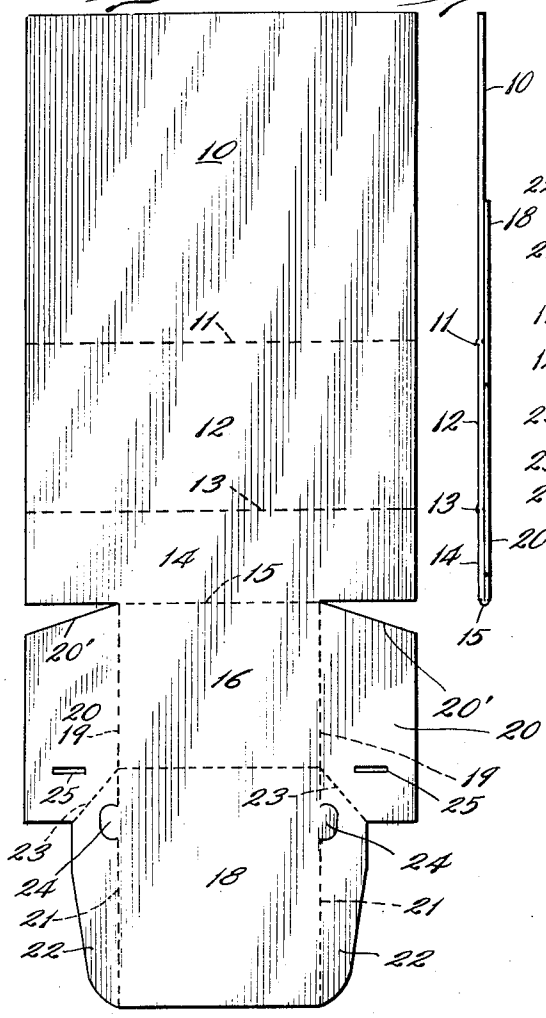
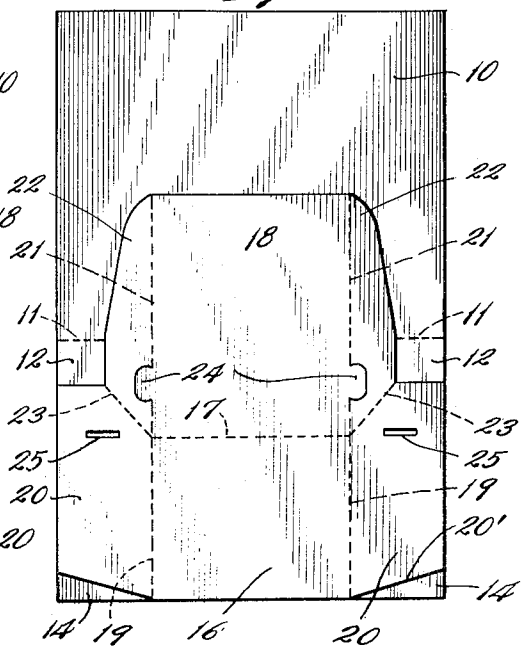


Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE

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FOLDING DISPLAY STAND

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Application October 17, 1932. Serial No. 638,121

5 Claims. (Cl. 211—157)

This invention relates to that type of foldable display stands or supports in which a sheet of cardboard or like flexible material is formed with predetermined hinge lines or scores dividing the same into a series of integral sections or panels which when properly folded in relation to each other constitutes a self supporting stand for displaying goods and articles. And the present improvement has for its object:

To provide a structural formation and arrangement of parts in a stand or support of the above described type, wherein a sheet or blank of flexible material is formed with hinge lines or scores, enabling the ready folding and securing the connected parts or portions of the blank into a completed stand or support in which condition the portions coact to produce a light, rigid and substantial structure, the arrangement of parts being such as to automatically bring into registry conditions the coupling means by which the parts of the stand are locked in a set up condition of the same, all as will hereinafter more fully appear.

In the accompanying drawings:

Fig. 1 is a front perspective view of the stand or support in an assembled condition ready for use.

Fig. 2 is a rear perspective view of the same.

Fig. 3 is an end elevation of the portions in a partially folded condition in a set-up operation on the stand, and illustrating the movement wherein the locking lugs or ears of this improvement are automatically brought into register and engagement with receiving slits in adjacent portions of the structure.

Fig. 4 is an end elevation of the completely set-up stand or support.

Fig. 5 is a face view of the blank in a complete and unfolded condition.

Fig. 6 is an end elevation of said blank in a compactly folded condition for shipment from place to place.

Fig. 7 is a rear view of the blank in the folded condition shown in Fig. 6.

Like reference numerals indicate like parts in the different views.

The stand or support of this improvement, in its set-up condition, comprises portions or panels, etc., as follows:

An upright rear panel 10 integrally connected at its lower end by a hinge line 11 with a forwardly extending and preferably horizontal panel 12, which constitutes the top web of the box like main body of the stand in its set-up condition.

At its forward edge the panel 12 is integrally connected by a hinge line 13 with the upper edge of a panel 14 which constitutes the front wall of the box like main body aforesaid. The panel 14 is in turn integrally connected by a hinge line 15 with a horizontal panel 16 constituting the bottom wall of the aforesaid main body.

The bottom panel 16 is in turn integrally connected at its rear edge by a hinge line 17 with the lower end of an upright panel or extension 18 which extends upwardly in contact with the aforesaid rear panel 10 of the structure and is fixedly attached thereto by paste or other means to the rear face of the panel 10.

In this improvement a detail formation of the portions or panels above described is provided.

The portions or panels 10, 12 and 14 are the full width of the structure, while the remaining portions or panels are of a less width and are formed as follows:—

The bottom panel 16 is of less width than the aforesaid panels 10, 12 and 14, and is integrally connected at its respective ends by hinge lines 19, 19 with end extensions or panels 20, 20, which when folded upwardly constitute the respective end walls of the main box like body of the structure which in their abutment against the edges of the panels 18 and 22 provide a rigid bracing of set up structure, and in addition constitute a substantial under support for the panel 12. In the construction shown the forward ends 20', 20' of said panels 20, 20, have an inclined form to afford clearance between adjacent parts in effecting a ready and semi-automatic assembly of the stand.

The panel or extension 18 is also of a like and less width as the panel 16, and is integrally connected at its respective sides by hinge lines 21, 21, with end extensions or panels 22, 22, which when folded to right-angle relations to the panel 18 are adapted to impart strength and rigidity to the set-up structure. As shown, the respective panels 20, 20, and end extensions or panels 22, 22, are integrally connected, end to end, by diagonal hinge lines 23, 23 in the cardboard blank from which the stand is produced, with such connection acting to effect a simultaneous movement of said panels in the unfolding and refolding operation of the stand parts and in addition bring the locking means now to be described into operative relation and engagement.

Midway the length of the hinge lines 21, 21 between the panels 18 and 22, the material of the panels 22 are slitted to provide locking lugs or ears 24, 24 adapted for registry with an entry into slits 25, 25, in the supplementary panels

20, 20, aforesaid, and thus provide means for locking the stand parts in their set-up conditions and in a ready manner, with resulting rigidity of the structure due to such connection.

It is within the scope of this invention to arrange the portion or panel 12 either horizontally as shown in the different views, or to arrange the same more or less inclined from the horizontal by variations in its transverse width with a correspondingly inclined formation of the upper edges of the panels 20, 20. And when so desired the portion or panel 12 may be orificed so as to receive and hold in place bottles and like articles as usual in the present type of display stands or supports.

The conversion of the blank into the shipping condition illustrated in Figs. 6 and 7 into a rigid set up form for actual use, involves the pushing the connected panels 12, 14 and 16 away from the rear panel 10 to form the lower box like body of the structure in manner illustrated in Figs. 3 and 4. During such movement the herein described connection of the portions causes the panels 20, 20 to fold upwardly to constitute the end walls of the box like body of this improvement, and at the same time bring the locking lugs or ears 24 of the supplementary panels 22 into register with the slits 25 of the end wall forming panels 20, 20, so that by the engagement by hand of the lugs in the slits the entire portions of the stand are rigidly and strongly connected in a set-up condition ready for actual use.

Having thus fully described my invention, what I claim as new, is:—

1. A folding display stand comprising a primary upright rear panel, a forwardly extending panel hinged at its rear end to said upright rear panel, a bottom panel having hinged connection at its forward end with the aforesaid forwardly extending panel, a secondary upright rear panel hinged at its lower end to the rear end of the aforesaid bottom panel and having fixed attachment to the rear face of the aforesaid primary rear panel, the bottom panel aforesaid having at its respective ends hinged end extensions or panels adapted to fold upwardly and constitute end walls for the stand in a set-up condition of the same, and means for connecting said end extensions of the bottom panel to the aforesaid secondary rear panel.

2. In a foldable display stand as specified in claim 1, and wherein the rearwardly extending panel and its end extensions or panels are formed with locking slits, and the aforesaid upwardly extending rear panel is formed with locking lugs at its sides for engagement in said slits.

3. In a foldable display stand as specified in claim 1, and wherein the secondary upright rear panel is provided at its respective sides with hinged extensions having diagonally disposed hinge connections with the respective end extensions of the aforesaid bottom panel, and adapted to impart movement in unison to said parts in the folding and unfolding operations of the stand.

4. In a foldable display stand as specified in claim 1, and wherein the end extensions of the aforesaid bottom panel are formed with locking slits, and the secondary rear panel is provided with hinged extensions at its respective sides, with said extensions formed with locking lugs for engagement in the aforesaid slits in the end extensions of the bottom panel in a set-up condition of the stand.

5. In a folding display stand as specified in claim 1, and wherein an upright front panel constitutes the connection between the forwardly extending panel and the bottom panel of the structure, and is hinged at its upper end to the forward end of the aforesaid forwardly extending panel and at its lower end to the forward end of the bottom panel aforesaid.

ELLSWORTH L. DAVIDSON.