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L. S. DE VILLERS
COLLAPSIBLE DISPLAY SHELF

2,744,713

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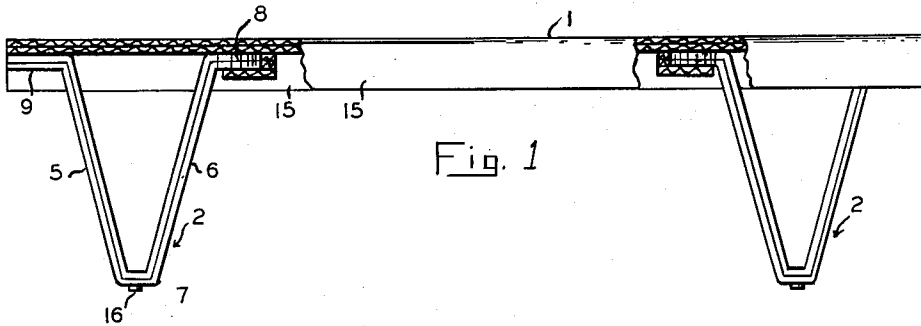


Fig. 1

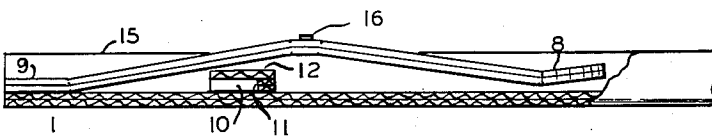


Fig. 2

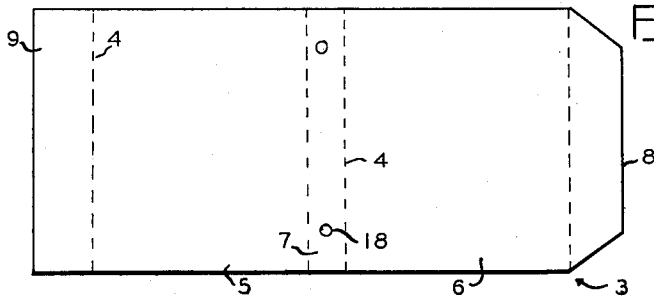


Fig. 3

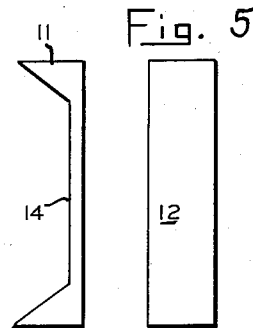


Fig. 5

Fig. 4

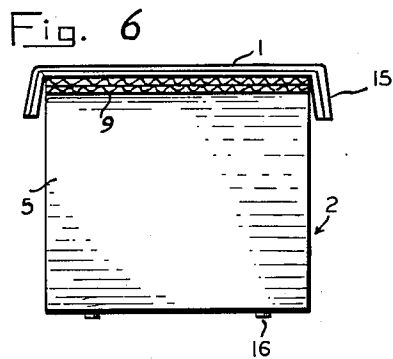


Fig. 6

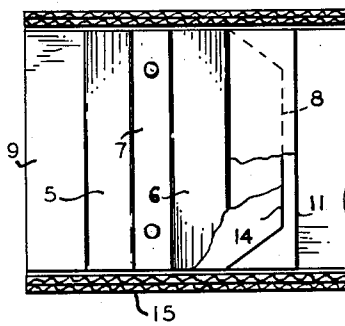


Fig. 7

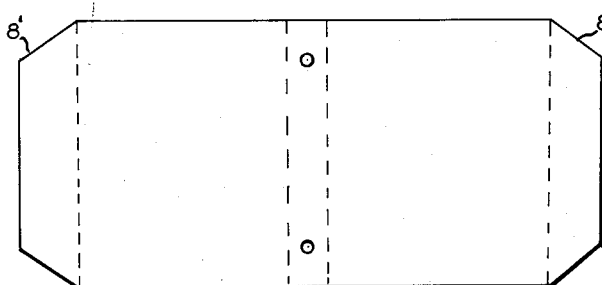


Fig. 8

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COLLAPSIBLE DISPLAY SHELF

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1 Claim. (Cl. 248—174)

This invention pertains to new and useful improvements in display shelves, and it is particularly concerned with a collapsible and portable nesting display shelf.

The shelf is adapted for a wide variety of uses, such as floor displays in stores and trade shows, but it is particularly suitable for use in window displays. In window displays it is of decided advantage in having shelves that are light in weight and which can easily be set up. This advantage is desirable because of the usually confined space encountered, and the reaching required in setting up the displays. Shelves of this nature have a further advantage in that they may be readily moved about, stacked one upon the other and, if dropped, are not heavy enough to do any damage. It is also desirable to have display shelves which can be stored in quantities or transported without taking up too much space or room. It is, therefore, an object of this invention to provide a practical display shelf of sturdy construction and of lightweight material, which can be collapsed, stored without taking up a large area of valuable space and carried from one place to another without difficulty and in large quantities.

A further object of this invention is a lightweight and collapsible display shelf.

Another object of this invention is a collapsible and nestable display shelf.

A further object of this invention is a knockdown display shelf of sturdy construction formed of paperboard.

The foregoing objects and advantages of this invention, as well as others, will become readily apparent as this specification unfolds in greater detail and as it is read in conjunction with the accompanying drawings, forming a part of this application.

In the drawings:

Fig. 1 is a side elevational view of a display shelf, cut away in part and embodying the invention;

Fig. 2 is a side elevational view of one end of the shelf in upside down position and with one of its legs in a collapsed position;

Fig. 3 is a plan view of a leg in flat and blank form, apart from the shelf;

Fig. 4 is plan view of one element of a leg pocket;

Fig. 5 is a plan view of another element of a leg pocket;

Fig. 6 is a view in end elevation of the shelf;

Fig. 7 is a bottom plan view of one end of the shelf;

Fig. 8 is a plan view of a leg in flat and blank form, apart from the shelf and illustrating a leg of a modified form of the invention.

In describing the invention in greater detail reference is directed particularly to Figs. 1 to 7, wherein there is disclosed a display shelf including an elongated panel 1 supported by a pair of legs 2.

The panel is formed of firm material, such as heavy paperboard, preferably of double wall corrugate paperboard, and is sulfur impregnated. The double wall thickness serves to strengthen the board, making it firm and

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sturdy, while the sulfur impregnate serves to harden the paperboard.

The legs are formed of similar material, but are collapsible, and for this reason the legs are preferably not sulfur impregnated. Each leg is similarly constructed and is formed from a blank 3 of paperboard, shown in Fig. 3, and the blank comprises a plurality of integral sections which are bendable at the fold lines 4 to form a leg of substantially V design as disclosed more clearly in Fig. 1. A leg 2 includes a pair of branches 5 and 6 integrally connected with a narrow intermediate strip 7. Strip 7 forms the apex of the leg, and from it the branches extend upwards and outwards. The free ends of the branches are integrally connected with outwardly extending flanges 8 and 9.

The legs are adapted to support the panel 1 and are secured to the underside thereof, one at each end. The legs are secured to the panel in such manner as to be collapsible along the fold lines 4. To this end one flange of each leg, namely flange 9 is secured fast to the underside of the panel at the outer end thereof in suitable manner, preferably by glue. The other flange of each leg, that is flange 8, is left free in the manner of a tongue and is removably received and contained in a slot or pocket 10 formed on the underside of the panel. There is a pocket 10 for the tongue 8 of each leg. The pockets are preferably positioned on the inner portion of the panel. Each pocket is formed of a paperboard strip 11 fixed to the underside of the panel and a second strip of paperboard 12 underlying the first strip, plainly shown in Fig. 1. The pocket may be formed by making the strip 11 of narrow dimensions and by having the outer strip 12 overlapping it to form the pocket between it and the panel board. Here, however, the first strip 11 appears as in Fig. 4 having a central portion 14 cut out to the edge, the depth of the cut-out section being greater across the center and tapering outward to the ends of the strip, in the manner of a U with the arms thereof spread slightly outward. The cut-out strip 11 is of a double wall thickness, equal to that of the tongue flange 8 receivable therein. The second strip 12 is rectangular and is fixed to the outer side of strip 11 and underlying the cut-out section 14 so as to form the pocket 10 between the panel 1 and the strip 12. The flange tongue 8 is shaped to substantially conform to and complement the cut-out form of the pocket in which it is received. The tongue 8 is retained in the pocket by the outer strip 12 and is prevented by its particular shape and the complementarily formed pocket from side play therein. The tongue is further held in the pocket by a slight outward tension of the diverging leg branches 5 and 6.

When it is desired to collapse the shelf, the branches 5 and 6 of each leg are manually pressed toward one another, whereby the tongues 8 of the legs are removed from their respective pockets. Each leg is then collapsed and straightened out on its fold lines 4 to a substantially horizontal or flat position against the underside of the panel, as in Fig. 3.

It is desirable that the flange 9 of each leg be secured as in Fig. 1, one to each outer end of the panel, and in such direction that the tongue of each leg is directed inwardly toward the interior of the panel. In this construction the legs, when collapsed, will be confined to the interior of the panel, and will not extend out beyond its ends as would otherwise be the case. This feature has the advantage of making the collapsed shelf less bulky and more compact for transportation or storage.

The panel section 1 of the shelf is provided along each of its longitudinal sides with a depending side flange 15, formed by bending the panel marginally along its longitudinal sides prior to subjecting it to impregna-

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tion with sulfur material. This depending flange serves a two-fold purpose. It acts as a stiffener for the panel so as to further strengthen it against sagging, and thereby enabling it to sustain a greater display weight. The side flange also serve as a means to enable nesting of the shelf when collapsed with others, one upon the other between the flanges.

It can readily be seen from this nesting feature how large numbers of the shelves can be collapsed, nested together and stored away or transported by vehicle without occupying too much space.

A further feature of the invention is found in the legs. In these there is provided means whereby the shelves, when being positioned about a display window, may be readily moved or slid about. This sliding feature is obtained by a pair of casters in the nature of round head metal elements 16, fastened to the bottom apex strip 7 in holes 18 of each leg.

In the form of the invention above described it is to be noted that each leg 2 has one of its two flanges, namely, flange 9 fixed to the underside of the panel, while the other flange 8 serves as a tongue removably received in a pocket 10. In a further form of the invention the panel of the shelf is similar to the panel 1 previously described, but includes a pair of the pockets 10 for each leg. In this form the legs are the same as those described above, but the blank form of the leg appears as in Fig. 8, wherein each leg includes a pair of tongues 8' removably receivable in a pair of the pockets 10. In this further form of the invention it is plain that when the legs are collapsed, both tongues 8' of each leg are removed from their respective pockets. When so removed the legs may be flattened out and bundled separately, and the associated panels of the shelves may be nested together in a separate bundle.

Having described the principle of the invention and embodiments thereof, it is my intent to claim all such

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forms and modifications of the invention as may reasonably be construed to be within the spirit of the invention and within the scope of the appended claim.

I claim:

5 A collapsible display shelf of the character described including an elongated relatively narrow stiff panel of double-wall corrugate paperboard serving as a shelf in combination with a pair of substantially V formed legs of similar paperboard supporting the panel, one at the underside of each end of the panel, wherein each leg includes a pair of horizontally disposed free end flanges extending in opposite directions, one end flange being fixed to the underside surface of the panel near an outer end of the panel and the other end flange being slidably received in a complementary pocket formed upon the underside of the panel at a predetermined distance from the said outer end, wherein each leg is collapsible to a flat position against the underside of the panel upon sliding the slidably received end flange out of the associated pocket, and wherein the panel is characterized by a pair of stiff flange portions integral with the panel and depending one along each longitudinal edge of the panel, the flange portions being slanted slightly outward from the edges of the panel and serving as means for strengthening the panel against collapse as well as a means for nesting the panel with other similar panels upon collapsing the legs to a flat position against the underside of the panel.

References Cited in the file of this patent

UNITED STATES PATENTS

1,172,667	Bunnell -----	Feb. 22, 1916
1,415,782	Brace -----	May 9, 1922
1,610,028	North et al. -----	Dec. 7, 1926
1,854,663	Nebel -----	Apr. 19, 1932
2,240,024	Stone et al. -----	Apr. 29, 1941