

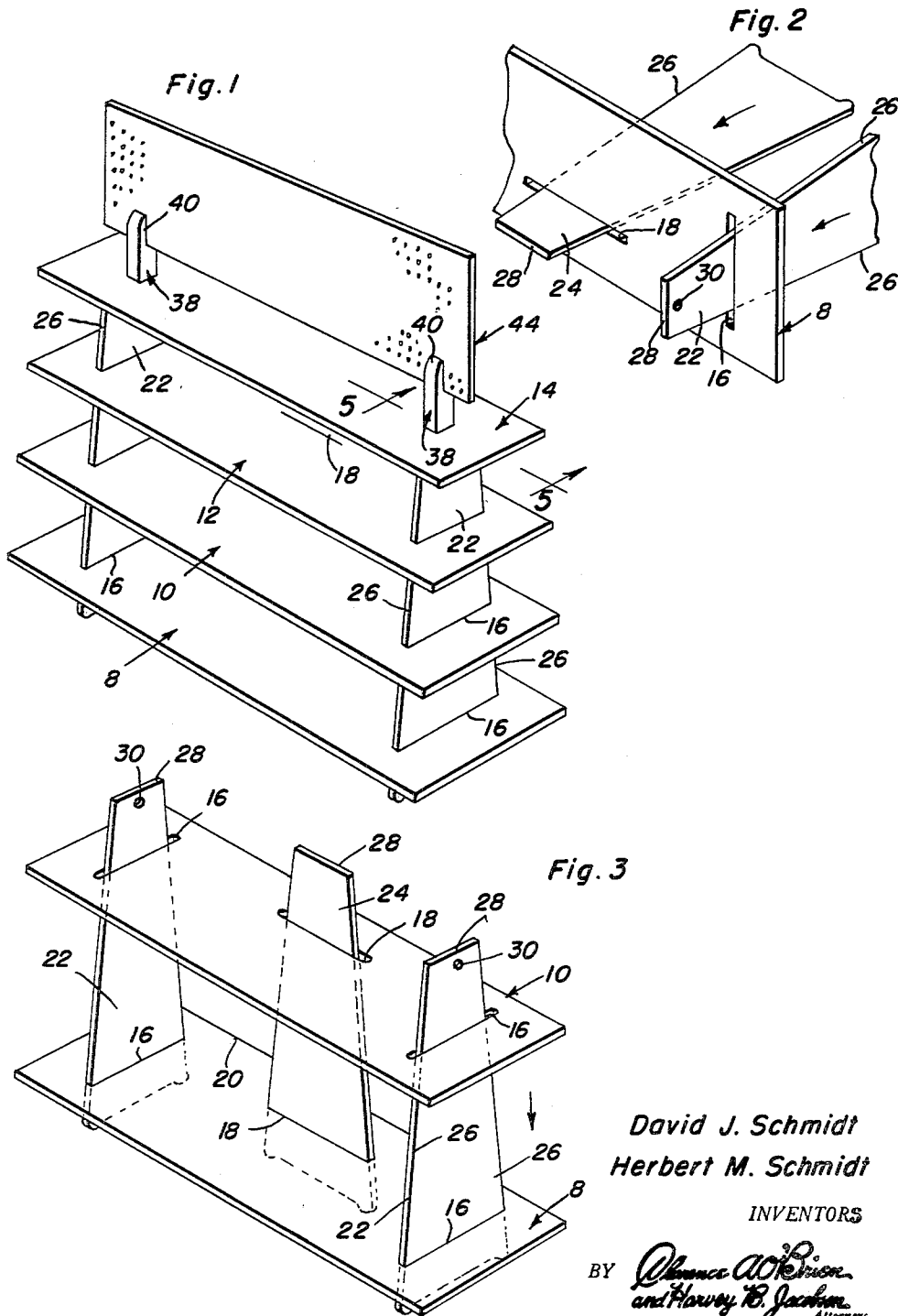
May 31, 1960

D. J. SCHMIDT ET AL
KNOCKDOWN DISPLAY SHELVES

2,938,633

Filed July 29, 1957

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5

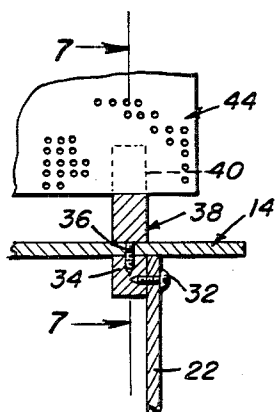


Fig. 6

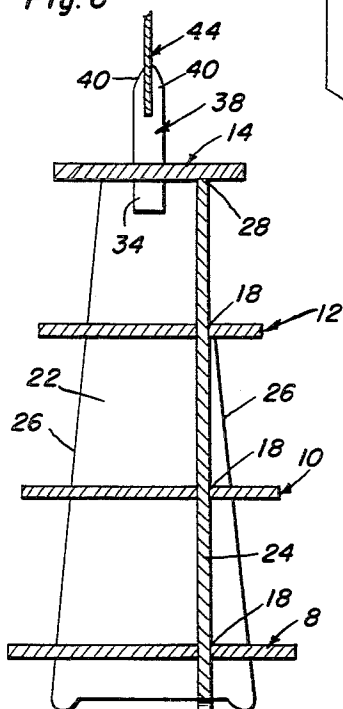


Fig. 7

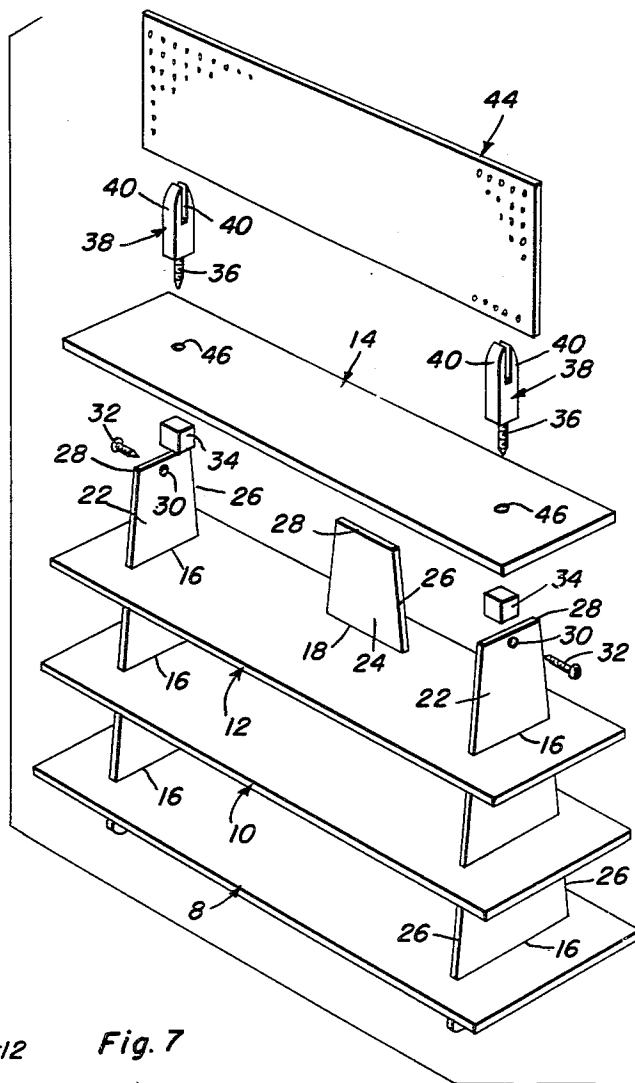
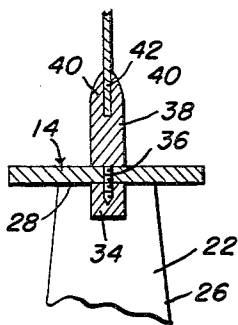


Fig. 4

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1

2,938,633

KNOCKDOWN DISPLAY SHELVES

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Filed July 29, 1957, Ser. No. 674,921

3 Claims. (Cl. 211—148)

The present invention relates to portable, knockdown stands and shelf constructions which are primarily used as so-called display stands and shelves and has particular reference to a construction wherein the principal parts may be readily assembled and disassembled without requiring the use of nails, screws or similar headed fasteners.

An object of the invention is to provide a simple, practical and economical construction wherein the components are precision made and may be compactly packaged for shipping, storage and handling and may be expeditiously assembled and set-up for use.

Another object of the invention is to structurally, functionally and otherwise improve upon similarly constructed and performing stands and shelves. For example, and in order to get some notion of the state of the art to which the invention relates reference may, if desired, be made to the Schneider display stand patent, 2,595,002, and also to the Youngstrom knockdown stand patent, 2,574,607. Reference is directed to these patents because in some ways they are similarly constructed and appropriate the use of shelves which are of different sizes, arranged in spaced parallel vertical planes, provided a stepped construction and utilize the idea of apertures in the shelves fitting over the upright members which function to separably interconnect the shelves.

The present concept, instead of using uprights which have shoulders to support the apertured portions of the shelves, have continuously uninterrupted vertical marginal edges which taper upwardly and which serve to accommodate carefully sized and prepared slots in the shelves so that by shoving the slotted portions of the shelves over the uprights the shelves are wedged firmly in place and in this manner the parts are readily joined for practical use.

Novelty is also predicated on the idea of having the extreme upper ends of the tapered uprights substantially flat and in a common plane to accommodate a top shelf. This particular shelf is not slotted. Instead it is bolted in place using wooden blocks, the wooden blocks serving to accommodate screw threaded shanks on brackets. The brackets are bifurcated and are employed to support a sign, advertisement or the like.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Fig. 1 is a perspective view of the complete stand or shelf construction showing the same set up for display use;

Fig. 2 is a fragmentary perspective view illustrating one of the steps wherein the uprights are inserted into the slots in one of the panels for quickly erecting or putting up the stand and shelf;

Fig. 3 is a perspective view which shows another step in the construction illustrative of the practical simplicity of the unique construction;

Fig. 4 is a further perspective view with the uppermost

2

shelf, advertising sign and other parts "exploded" to bring out the construction and arrangement of the parts;

Fig. 5 is a view in section and elevation showing one of the structural adaptations, the section being on the plane of line 5—5 of Fig. 1;

Fig. 6 is a vertical section through the finished construction; and

Fig. 7 is a detail view with parts in section and elevation taken on the vertical line 7—7 of Fig. 5, looking in the direction of the arrows.

Referring now to the views of the drawings with reference numerals and lead lines the shelves are wooden or equivalent panels and as a matter of fact the uprights or legs are also panels. To distinguish however the horizontal members or panels will be treated as "shelves" and in the arrangement seen there are four of these and they are denoted by the numerals 8, 10, 12 and 14. Each one is flat and the shelves 10, 12 and 14 are progressively smaller than each other and the lowermost shelf 8. Basically, however, the shelves 8, 10 and 12 are much alike in that each one is provided adjacent its transverse end portions with inwardly spaced transverse slots 16. These are parallel to each other but are at right angles to the intermediate lengthwise slot 18. The last named slot is closer to the rear edge 20 of the shelf to provide the preferred positioning and cooperation of the collective slots 16 and 18. Manifestly the sizes of the slots in the respective shelves diminish in proportion to their sizes as the drawings clearly illustrate. In keeping with this idea the vertical panels, which are here called legs or uprights are basically the same in construction and each one is of truncated triangular form. The two end uprights are denoted by the numerals 22 and the intermediate upright is denoted at 24. It is significant to note that the lengthwise edges are uninterruptedly smooth and taper upwardly to the truncated flat upper ends, said edges being denoted at 26 and the truncated upper ends at 28. On the end uprights near the upper ends are bolt holes 30 to accommodate the bolts 32 which are utilized to fasten in place wooden or equivalent stabilizing blocks 34. These blocks in turn serve to accommodate the depending screw threaded shanks 36 (Fig. 7) on the lower ends of the so-called brackets 38. The brackets are bifurcated to define furcations 40 which serve to receive and hold in place the lower edge portion 42 of the sign panel 44. Thus the brackets serve to support the sign and also themselves are connected with the uppermost shelf 14 and by being threaded into the blocks 34 through the bolt holes 46, they serve to assemble and clamp the uppermost shelf securely in place.

It will be evident that the slots are accurately positioned in the panel-like shelves and that the panels which go to make up the uprights or legs are likewise precision made so that the dimensions of slots and legs are such that when the slotted portions of the shelves are fitted over the uprights the parts all fall in place in predetermined and symmetrical relationship.

In following the assembly instructions one might refer to Fig. 2 for example and assume that this is the first step which consists in laying the bottom shelf or panel 8 on the long edge and at the same time insert the truncated end portions of the tapering legs 22 and 24 into the slots 16 and 18 in the obvious manner illustrated. Next one may set the bottom shelf with the legs in upright position as is shown for example in Fig. 3. By striking the bottom shelf with a hand it can be forced down to its intended level position whereupon it is wedged in place on the uprights by way of the tight-fitting slots as is clear. The rest of the shelves are slid in a similar manner with their slotted portions over the respective legs until the top shelf 14 is brought into play. This shelf is caused to rest atop the truncated upper ends 28 of the

3

several legs. Previous thereto the anchoring and stabilizing wooden blocks 34 are bolted in place by the bolts 32 passing through the bolt holes 30. This permits the result seen in Figs. 5 and 7 to be accomplished which consists in bolting the shanks 36 of the brackets 38 in place in the blocks and at the same time setting up the brackets to accommodate the insertable and removable sign 44.

This construction is well balanced, stable, easy to erect and knockdown. Therefore, it is believed to be such that it fulfills the requirements for which it is aptly intended.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A knockdown stand and shelf construction comprising, in combination, at least two flat shelves arranged in vertically spaced parallelism, each shelf being provided at its end portions with slots transverse to the lengthwise dimension of said shelf and the respective slots being in spaced parallelism relative to each other, each shelf being provided midway between its ends with a third slot and said third slot being at right angles to the first slots, and also parallel with and adjacent to one longitudinal

4

marginal edge of the shelf, and flat surfaced tapered assembling and supporting legs passing upwardly through the respective slots, the marginal edges of all of said slots being frictionally bound and wedged in place by the cooperating tapering lengthwise edges of the cooperating legs.

2. The structure defined in claim 1, and wherein the upper and lower ends of the respective legs are horizontal and flat, a top shelf resting atop the flattened upper end portions, brackets carried by said top shelf and detachably connected with the upper ends of said legs, said brackets being bifurcated and the furcations being adapted to accommodate an insertable and removable sign.

3. The structure defined in claim 2, and wherein the upper portions of the legs are provided with removable wooden blocks, said brackets having screw threaded shank portions passing through holes provided therefor in the top shelf and being screwed into their respective blocks.

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