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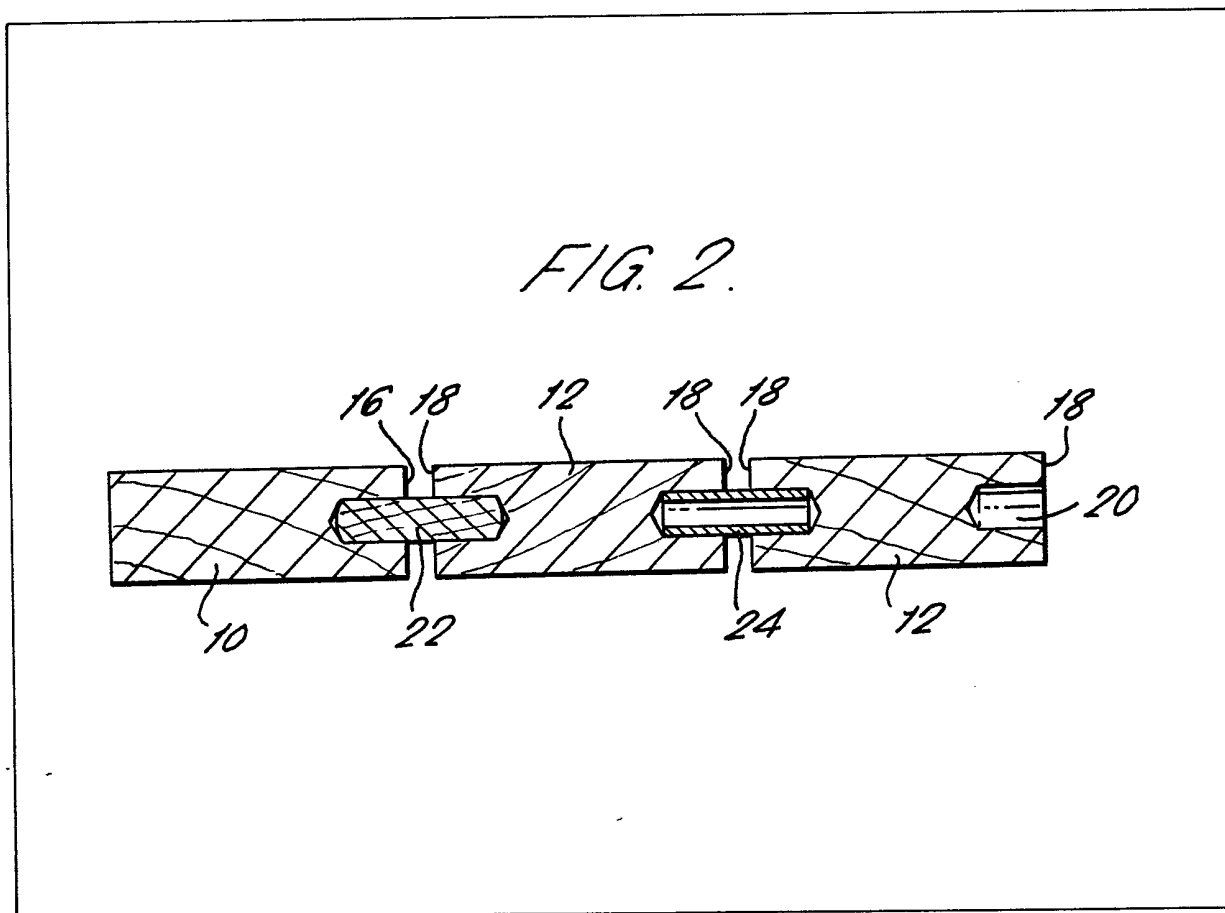
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(54) Shelves and shelf kits

(57) A shelf is formed from a plurality of shelf slats (10, 12) each pair of adjacent slats being spaced apart and secured together by dowels (22, 24) entering blind holes (20) in the sides (16, 18) of the slats. The dowels are preferably all of equal length, and the holes are preferably all of equal depth, so that the spacing between the slats may be easily and accurately gauged during assembly of the shelf.

The slats are spaced apart so that any difference in warping between the slats is less noticeable and so that book-ends or the like may be secured by means extending through the spaces allowing adjustment of the book-end along the shelf.

The slats may be of wood or plastics, and the dowels may be wooden (22) or of brass in solid or tubular (24) form.



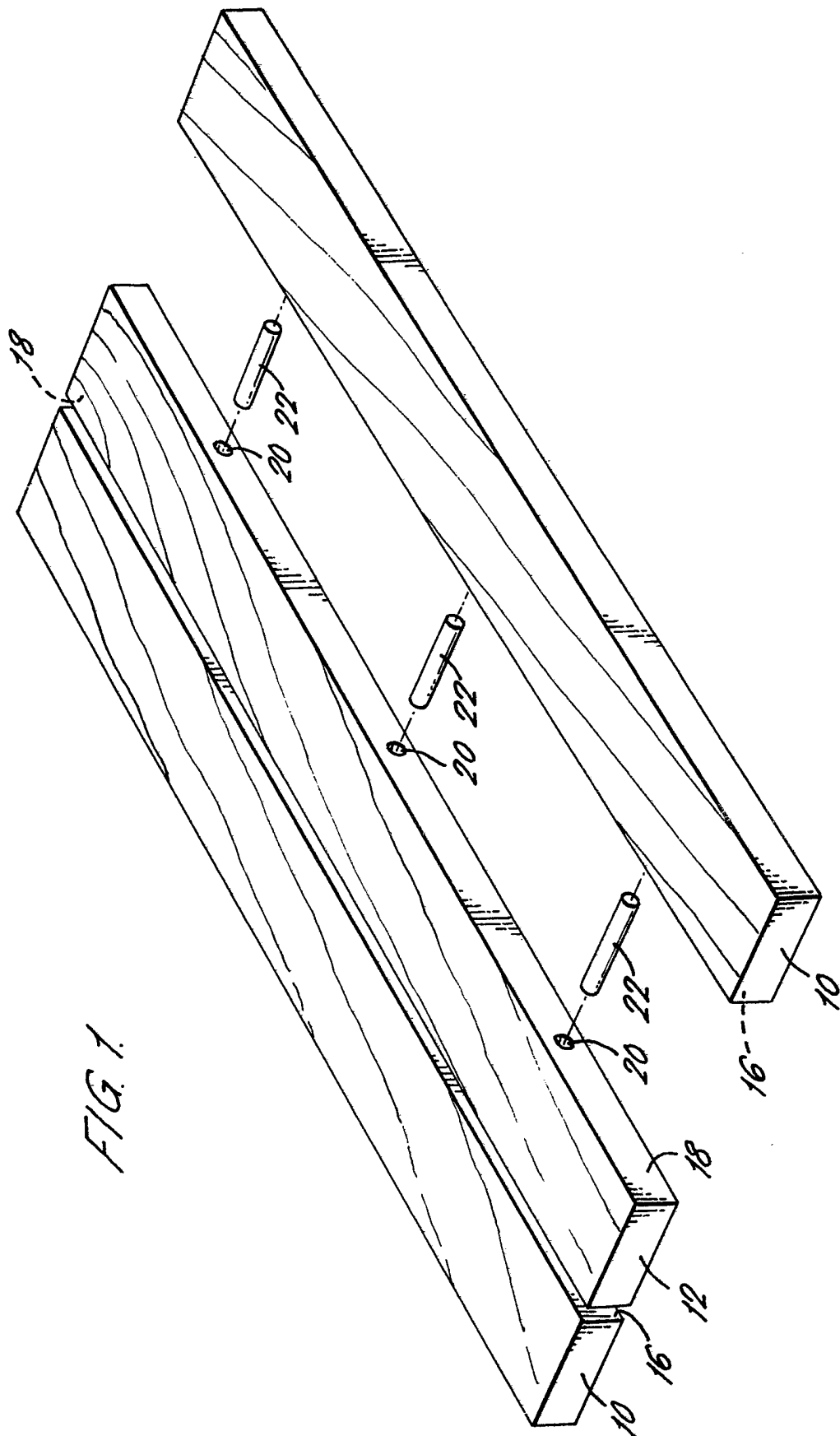


FIG. 1

FIG. 2.

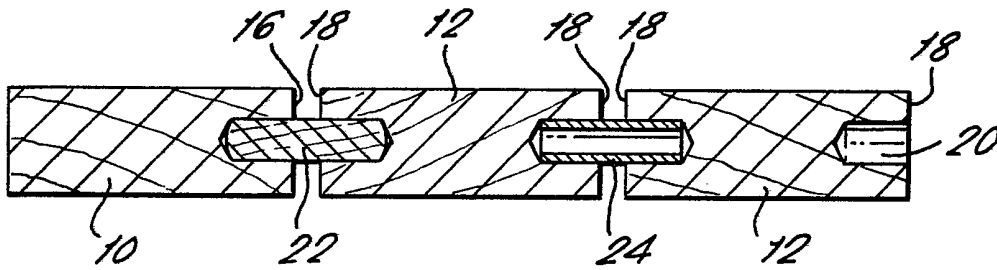
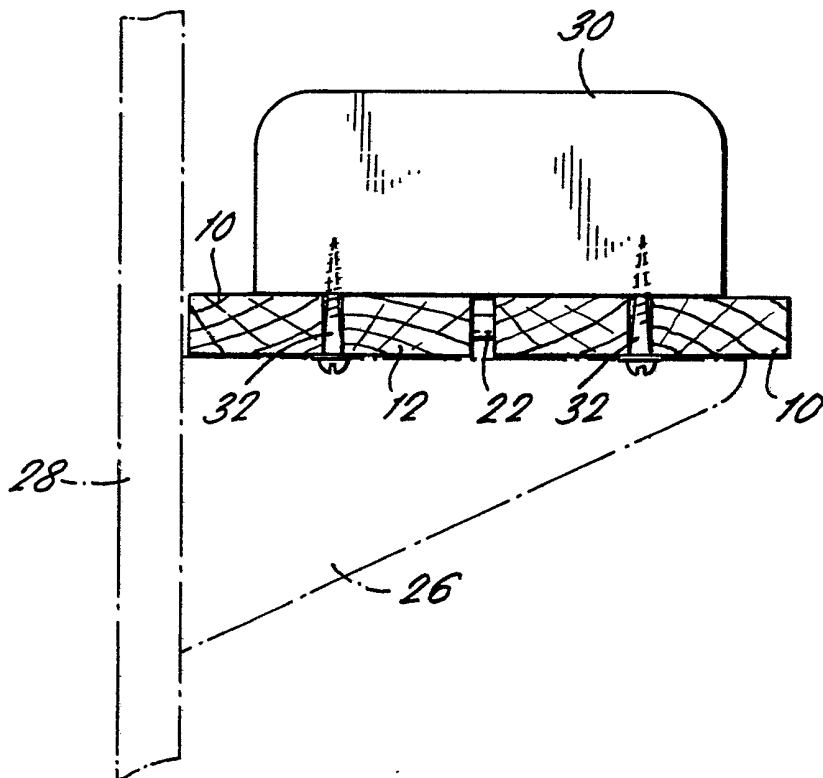


FIG. 3.



SPECIFICATION

Shelves and shelf kits

5 This invention relates to shelves and shelf kits.

Known shelves take a variety of forms and can be made from a variety of materials, each having their own advantages and disadvantages.

For example, solid wood shelves have the advantages of beauty and strength, but the disadvantages that they are expensive and may warp, swell and split with changing humidity and temperature. Blockboard shelves overcome the disadvantage of warping, swelling and splitting, but blockboard shelves must be provided with edgings to hide the sandwiched blocks of wood in order to obtain a pleasing appearance. Chipboard shelves with a plastics coating or wood veneer are cheaper, but also have the disadvantage of requiring edging strips for cut edges; furthermore, such chipboard shelves tend to sag, and the coating or veneer, if damaged, is difficult to repair satisfactorily. Slatted shelves are also known in which a plurality of wooden slats are nailed or screwed to a plurality of wooden cross-battens to hold the slats parallel and spaced apart. In constructing such a slatted shelf, after the slats and cross-battens have been cut to size, the spacing of the slats must be accurately gauged to obtain a pleasing appearance, and this can be difficult, or at least time consuming, for a home handyman constructor.

In accordance with one aspect of the present invention there is provided a shelf comprising a plurality of shelf slats arranged edge-to-edge and spaced apart from one another, the tops of the shelf slats forming a slotted shelf surface, adjacent edges of the or each adjacent pair of slats having a plurality of pairs of opposed blind holes, and for each pair of holes a dowel fitted into the holes and extending to the bottoms of the holes to hold the slats together with the respective edges spaced apart.

In accordance with another aspect of the present invention, there is provided a kit for making a shelf, comprising a plurality of shelf slats, two of the slats having a plurality of blind holes along at least one edge of the slat and any slat in excess of two for making the shelf having a plurality of blind holes along opposed edges of the slat, the pitches of the holes along the respective edges being the same for all the edges, and the depths of all the holes being the same, and a plurality of similar dowels of length greater than twice the depth of each hole, wherein the dowels can be fitted into pairs of holes to extend to the bottoms of the holes and hold the slats together edge-to-edge and spaced apart from one another.

55 The word "slat" as used in this specification is not intended to be limiting to a slat in which one cross-sectional dimension is far greater than the other cross-sectional dimension, and may include square-section slats, and also planks.

60 The slat may be of solid wood, thereby giving the advantages of the beauty of solid wood and strength. However, since the shelf is formed from slats rather

than a single plank, the wood is far less likely to split. Although the slats may warp differently to each other to some extent, this is unlikely to be noticed without careful inspection, because the slats of the shelf are spaced apart.

In construction of the shelf according to the invention, no special steps need be taken by the constructor to gauge accurately the spacing of the slats, because the gauging is catered for automatically by the depths of the blind holes and the lengths of the dowels. Also, unlike the prior slatted shelf, the shelf according to the present invention does not require cross-battens cut to the required size.

In the case where the slats are made from solid wood, they can be cut and corners of the shelf can be rounded without the disadvantage in the prior chipboard or blockboard shelves of the need to apply edging strips; also, minor damage to the slats can be repaired by sanding-down the wooden slats, and re-dyeing and/or re-varnishing the slats as required. If one of the slats is damaged more seriously, it can be replaced.

85 A specific embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings in which:

Figure 1 is partly exploded perspective view of three-slat shelf according to the present invention;

90 Figure 2 is a sectional end elevation of a shelf according to the present invention; and

Figure 3 is an end elevation of a four-slat shelf according to the present invention on a shelf support and with a book-end mounted thereon.

95 Referring to Figure 1, a shelf is shown comprising three wooden slats 10, 10, 12 of equal rectangular cross-section and equal length arranged side-by-side and parallel to one another to form a slotted shelf surface. The inwardly facing sides 16 of the outer slats 10 and both sides 18 of the inner slat 12 have equally spaced blind round holes 20 drilled therein so that pairs of holes 20 in adjacent sides of the slats are in register with each other. A round wooden dowel 22 is provided for each pair of holes and is fitted into the holes so that it extends to the bottoms of them. The dowels are of sufficient length so that the slats are spaced apart. The spacing may be, for example about one-tenth of the width between the sides of each slat. The dowels 22 are a tight fit into the holes 20, and the cylindrical surfaces of the dowels 22 may be longitudinally serrated. Glue may be used on the dowels 22 for a permanent fixing.

105 Referring to Figure 2, a three slat shelf is shown, in which the right-hand slat 12 has holes 20 along both sides 18 so that further slats can be added, using further dowels to form a wider shelf. Figure 2 also illustrates that, instead of using wooden dowels 22, brass dowels 24 may be used, being either tubular, as shown in Figure 2, or as a pin.

120 Figure 3 illustrates a four-slat shelf supported on bracket 26 attached to an upright, both of which are shown in outline. The upright and bracket may, for example, be one of types disclosed in United Kingdom Patent Application No. (Filing No. 8 201 392). A pair of

book-ends 30 (one of which is shown) are secured to the top of the shelf each by a pair of screws 32 which pass through the slots between the slats 10, 12 with the screw heads, or washers on them, engaging the bottoms of the slats 10, 12. The book-ends may be adjusted along the shelf between the dowels connecting the slats 10, 12 upon loosening of the screws.

Other items may be secured to the top or bottom of the shelf in a similar, adjustable manner. For example, if the shelf is used in the kitchen, hooks for hanging cups, saucepans and kitchen utensils may be fitted below the shelf, and if the shelf is to be used in a bedroom or clothing shop, a hanger rail may be fitted below the shelf.

Dowel holes may be formed in the outwardly facing sides of the outer slats if it is thought that they would not detract from the appearance of the shelf, thus giving the advantage that all of the shelf slats can be identical.

The slat may be made of plastics rather than wood. The shelf may be supplied, for example to the home handyman, as a packed kit containing the pre-drilled slats and the dowels. The handyman can cut the slats to a shorter length, if desired, and then assemble the shelf simply by inserting the dowels, using glue if desired, into the appropriate pairs of blind holes so that the dowels extend to the bottoms of the holes.

CLAIMS

1. A shelf comprising a plurality of shelf slats arranged edge-to-edge and spaced apart from one another, the tops of the shelf slats forming a slotted shelf surface, adjacent edges of the or each adjacent pair of slats having a plurality of pairs of opposed blind holes, and for each pair of holes a dowel fitted into the holes and extending to the bottoms of the holes to hold the slats together with the respective edges spaced apart.

2. A shelf as claimed in Claim 1, wherein the shelf slats are parallel to each other.

3. A shelf as claimed in Claim 1 or 2, wherein the or each adjacent pair of slats are spaced apart closely compared with the widths of the slats.

4. A shelf as claimed in any preceding claim, wherein both sides of each slat have a plurality of such holes.

5. A shelf as claimed in any preceding claim, wherein the two slats forming the edges of the shelf are not provided with holes along the outwardly facing sides thereof.

6. A shelf as claimed in any preceding claim, in combination with an item secured to the top or the bottom of the shelf by securing means passing between the adjacent slats of the shelf and engaging the bottom or top, respectively, of the shelf.

7. A shelf as claimed in Claim 6, wherein the fastening means can be loosened or released to permit the position of the item to be adjusted along the shelf between the dowels.

8. A kit for making a shelf, comprising a plurality of shelf slats, two of the slats having a plurality of blind holes along at least one edge of the slat and any slat in excess of two for making the shelf having a plurality of blind holes along opposed edges of the slat, the pitches of the holes along the respective edges being the same for all the edges, and the depths of all the

holes being the same, and a plurality of similar dowels of length greater than twice the depth of each hole, wherein the dowels can be fitted into pairs of holes to extend to the bottoms of the holes and hold the slats together edge-to-edge and spaced apart from one another.

9. A shelf as claimed in any of Claims 1 to 7 or a kit as claimed in Claim 8, wherein the slats are all of substantially equal rectangular cross-section.

10. A shelf as claimed in any one of Claims 1 to 7 or 9, or a kit as claimed in Claim 8 or 9, wherein each slat edge having said holes has three or more such holes equally spaced along the edge.

11. A shelf as claimed in any one of Claims 1 to 7, 9 or 10, or a kit as claimed in any one of Claims 8 to 10, wherein the holes and dowels are round.

12. A shelf as claimed in any one of Claims 1 to 7 or 9 to 11, or a kit as claimed in any one of Claims 8 to 11, wherein each dowel is fluted and is a tight fit in the respective holes.

13. A shelf substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

14. A kit for making a shelf, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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