

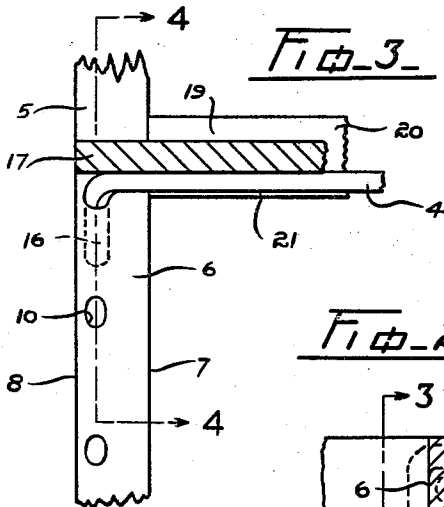
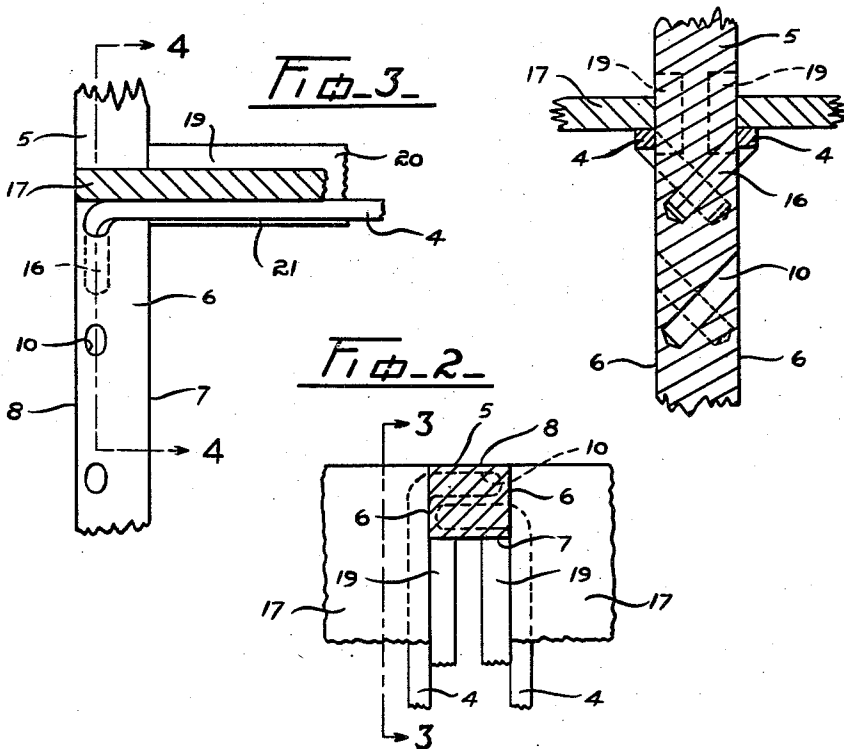
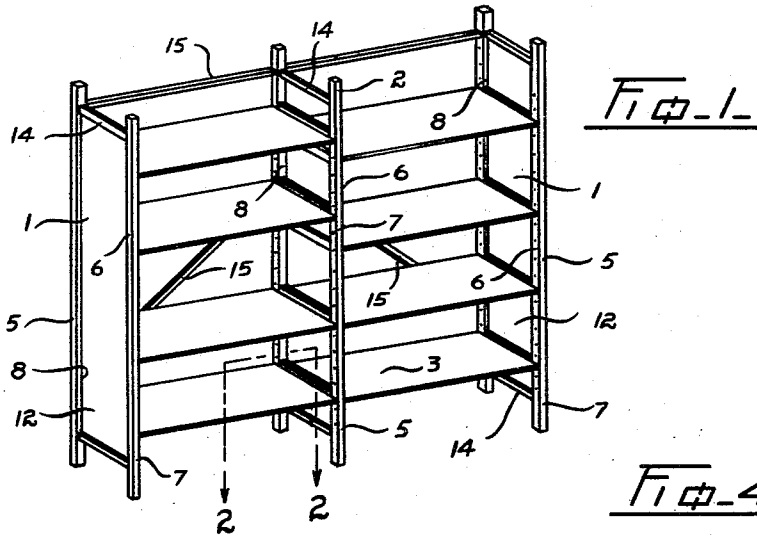
Jan. 21, 1958

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2,820,552

ADJUSTABLE SHELVING

Filed June 24, 1954



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ADJUSTABLE SHELVING

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Application June 24, 1954, Serial No. 438,936

3 Claims. (Cl. 211-147)

My invention relates to improvements in adjustable shelving.

The objects of the invention are to provide a shelving unit which can be made and sold in knock down condition with end or vertical division panels or frames made of wood; to provide transverse metal connecting pieces for connecting front and rear vertical supports together and for supporting the shelves, and to provide that such metal connecting pieces may be of square or round section iron or steel of relatively light weight and capable of being lifted out and replaced in any other desired position without having recourse to the use of tools.

Other objects will appear as the specification proceeds.

Referring to the accompanying drawings:

Figure 1 is a perspective view of the invention.

Figure 2 is a sectional plan view taken on the line 2-2 of Figure 1 and showing shelves connected to one only of the vertical members.

Figure 3 is a sectional view taken on the line 3-3 of Figure 2.

Figure 4 is a sectional view taken on the line 4-4 of Figure 3.

In the drawings like characters of reference indicate corresponding parts in each figure.

The shelving unit herein shown consists of end panels 1, a vertical division 2, shelves 3 and supporting bars 4. The panel 1 and the division 2 are made with vertical supports or legs 5, each of which legs is preferably a length of wood of rectangular cross section and having sides 6 and front and rear faces 7 and 8. The legs 5 are provided with holes 10 which extend either through or substantially through them. These holes are appropriately spaced apart to provide a number of positions in which to place the shelves and extend diagonally downwards from one or both sides 6. The panels 1 which are used for ends of a shelf unit need only have holes on one side, since they support only shelves on one side, whereas similar panels or legs between the end panels will be provided with holes extending downwardly on both sides.

The holes 10 formed on one side of any leg lie in one vertical plane and those on the opposite side lie in another vertical plane parallel to the first, as shown in dotted line in Figure 2, though this is not essential. End panels will normally be braced by filling in the interspace between its legs 5 with a board or plywood panel 12 and permanently connecting them together with top and bottom rails 14.

The divisions 2 will consist of two legs connected together for convenience of assembly by one or more similar rails 14. The end panels 1 and such divisions 2 as are desired to make up the unit are set up and, if desired, connected together by braces 15, diagonally or otherwise, which are affixed to the back legs of the unit. When the framework is set up and braced and the desired position of the shelves determined, supporting bars 4 which have right angularly bent ends or dowels 16 are set in place by inserting the dowels into the appropriate holes 10 of the legs 5 so that the bars are fixed in a horizontal position.

The shelves 3 of a unit are made up of shelf lengths

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17 equal to the space between adjacent pairs of legs 5 and of a width equal to the width of an end panel 1, or a division 2, including the front to rear dimension of the front and back legs, and on the end of each shelf 5 length a strip of wood 19 is fastened. This strip is of such width as to project above the upper shelf surface to form a book stop 20 and also to extend below the shelf to hook inside of the supporting bars as at 21, see Figure 3. The abutment of the end of each shelf length to a pair of legs, the similar abutment of the ends of the strip 19 to other faces of said legs and the tensional hold of said strip 19 to the supporting bars which is held against withdrawal from the legs by the weight of the shelf and its load materially stiffens the unit against any side play.

15 The disposition of one hole 10 lying in a vertical plane to another hole driven into a leg on its opposite side and lying in another vertical plane of the same leg and at the same height, is important in that it allows both holes to accommodate dowels 16 of much greater length than 20 would be possible if the holes leading into the leg were both lying in one vertical plane of the leg, so that the dowels could not extend beyond the vertical axis of the leg.

It has been found that the use of supporting bars having dowels which extend beyond the vertical axis of the leg do not cause any damage to the side walls of the hole into which the dowels are placed, even when the shelf lengths are heavily loaded, whereas when the dowels terminate before reaching said axis, the wood fibres surrounding said dowels may become damaged and cause a slight lowering of the shelf length supported thereby.

It will be obvious that if it is desired to incline any shelf lengths, such as when displaying an open book, or for any other purpose, the dowels 16 will need to be bent at an angle differing from a right angle.

What I claim is:

1. A shelving unit comprising pairs of legs spaced apart, a plurality of shelf supporting bars each connecting the legs of a pair together in spaced relation, shelves carried by the bars from one pair of legs to another, each leg of a pair having a plurality of pairs of holes spaced apart vertically and the holes of each pair entering the leg from opposite sides of the leg, said holes extending downwardly and inwardly into said leg, the supporting bars being bent at right angles at each end to form a pair of parallel dowels, each dowel of each bar being entered into a hole in each of a pair of legs.

2. A shelving unit as claimed in claim 1, wherein the dowels of the supporting bars are of such length as to extend into the holes in each leg so that the dowel of one end of a supporting bar will extend transversely across the dowel of an adjoining supporting bar having an end carried by the same leg.

3. A shelving unit as claimed in claim 1, wherein a shelving length is provided with a transverse strip latching over a supporting bar and lying between the face planes of each of a pair of legs.

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