Aug. 11, 1964 E. D. SPERRING 3,143,980

WALL-SUPPORTED ADJUSTABLE SHELVING

Filed May 1, 1961 2 Sheets-Sheet 1

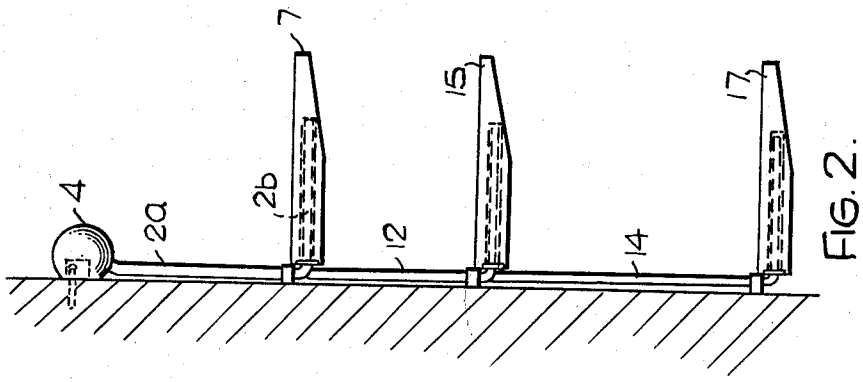


FIG. 2.

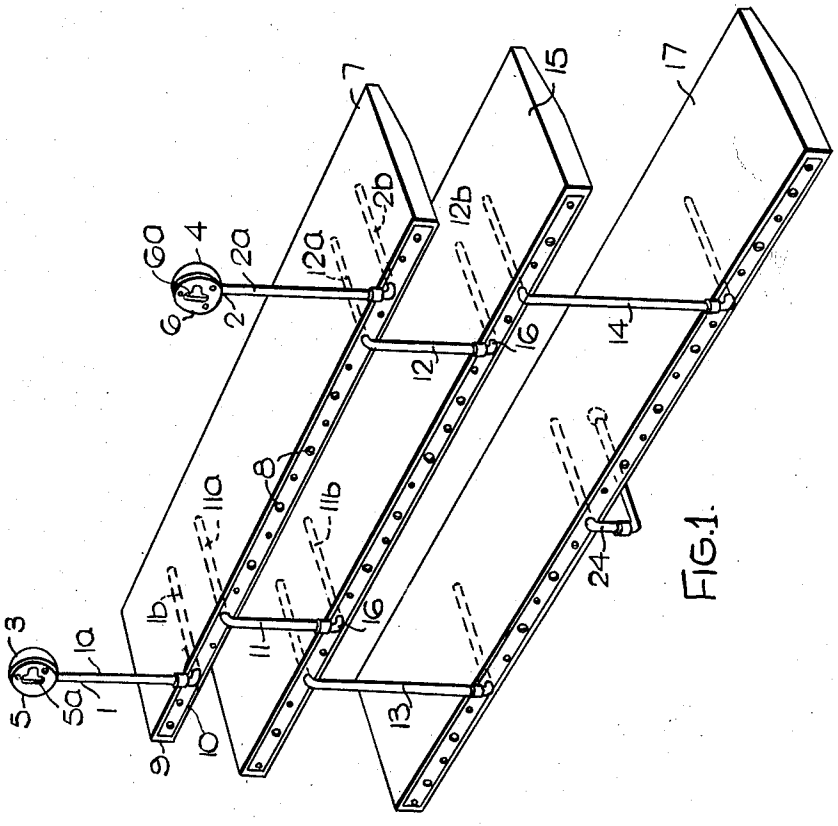


FIG. 1.

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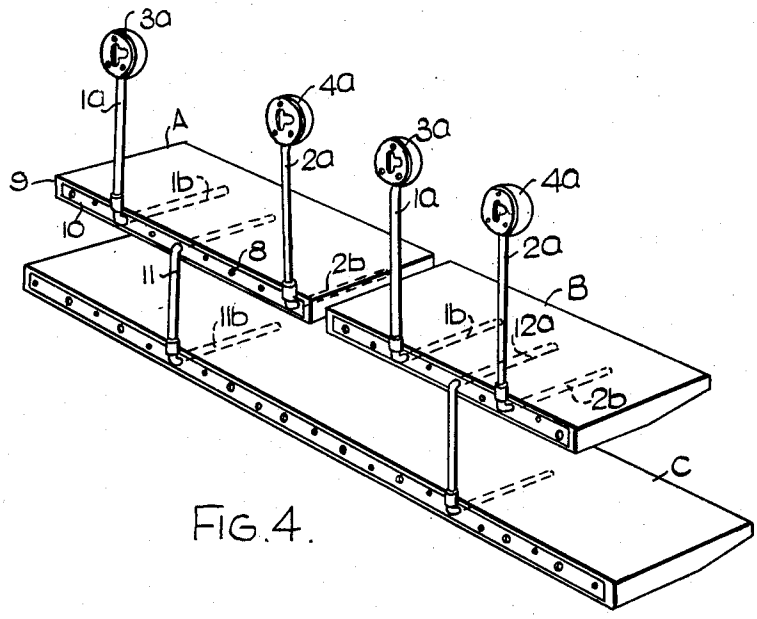


FIG. 4.

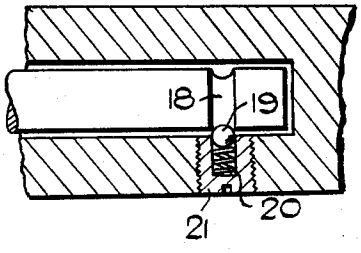


FIG. 3.

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WALL-SUPPORTED ADJUSTABLE SHELVING

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This invention is concerned with improvements in or relating to shelves and is concerned with providing either a simple shelf or a set of shelves preferably adjustable, which may be supported on a wall from no more than two locating points and in which the distance between various shelves may be adjusted and the number of shelves forming the set may be varied as desired.

With this and other objects in view the invention provides adjustable shelving comprising at least two L-shaped brackets, each of which has one end of one limb means for securing to a vertical surface so provided with that the other limb is substantially horizontal and below the point of attachment to the vertical surface, first a shelf having at least four sockets in the rear edge of the shelf (i.e. that edge which lies adjacent with the vertical surface when in use) for receiving the other limb of the said brackets and for receiving one limb of L-shaped brackets to the other limb of which a second shelf may be secured and disposed below the first mentioned shelf.

The invention also provides adjustable shelving comprising at least four L-shaped brackets each which has one end of one limb provided with means for securing to a vertical surface so that the other limb is substantially horizontal and below the point of attachment to the vertical surface, a pair of shelves each having at least three sockets in the rear edge of the shelf (i.e. that edge which lies adjacent with the vertical surface when in use) for receiving the other limb of at least a pair of said brackets, and for receiving one limb of a U-shaped bracket to the other limb of which a third shelf may be secured and disposed so that said third shelf is supported by at least a pair of shaped brackets at least one of which is secured to sockets in the rear edge of each of the said pair of shelves.

Conveniently the L-shaped two members are provided which are secured to the wall in releasable manner have a keyhole slot for engaging a head of a screw.

If desired one or more of the angle members may be rigidly secured to a shelf but preferably they are releasably secured so that different angle members may be associated with any one of the shelves.

It will be appreciated that the second shelf also has sockets for U-shaped brackets and that by having different sized U-shaped brackets, the distance between the shelves may be varied as desired.

It will also be appreciated that by having the brackets and shelves connected to each other, it is possible to remove a pair of U-shaped brackets and substitute them by a pair of larger or smaller brackets if it is desired to support different articles on the shelf.

Thus the invention provides a set of adjustable shelves which is adapted for variety of purposes.

Furthermore only two support means are necessary to secure the set of shelves to a wall and no part of the set stands on the floor.

Thus the floor is left clear for other articles and since only two supports are required it is comparatively easy to arrange and locate a set of adjustable shelves according to the present invention.

Conveniently the sockets are formed in the middle of the thickness of the shelves and preferably a metallic strip reinforces the mouths of the sockets while strip may extend the entire length of the shelf.

Conveniently the brackets are releasably secured to the shelves with locating means such as for example a spring biassed plunger engaging in a notch formed near the end of the brackets.

The above and other features of the invention set out in the appended claims are incorporated in the construction which will now be described, as a specific embodiment with reference to the accompanying drawings in which:

FIGURE 1 is a perspective view of shelving equipment according to the invention, assembled;

FIGURE 2 is a side view of the assembly;

FIGURE 3 is a sectional detail of locating means;

FIGURE 4 is a perspective view of a modified form of shelving equipment according to this invention.

Referring now to FIGURES 1 and 2 of the drawings, shelving equipment is provided comprising a pair of top brackets **1** and **2**; each of which is of right angle rod form providing a vertical limb **1***a*, **2***a* which lies against a wall and a horizontal limb projecting outwardly from the lower end of the limb **1***a*, **2***a* to constitute a plug **1***b*, **2***b*.

The upper end of each vertical limb **1***a*, **2***a* is in the form of a rearwardly directed cup **3**, **4** having a rear cover plate **5**, **6** in which there is formed a keyhole slot **5***a*, **6***a*.

There is also provided a shelf **7** having sockets **8** formed transversely of it in the middle of its thickness and opening out into its rear edge **9**, and on this rear edge **9** there is fixed a metallic strip **10** with holes **25** therein registering with the mouths of the sockets **8** to reinforce them.

This shelf **7** is releasably attached to the brackets **1**, **2** by plug-in connections between the plugs **1***b*, **2***b* of the brackets and the sockets **8** in the shelf **7**, and the brackets are hung on the wall **27** by providing headed screws **26** in the wall **27** for releasable engagement by the keyhole slots at the upper ends of the brackets.

Thus the shelf is releasably attached to the brackets below the points of attachment of the bracket to the wall.

In one arrangement the plugs **1***b*, **2***b* are fitted in those sockets which are third from the ends of the shelf.

In addition the equipment incorporated pairs of coupling brackets **11**, **12** and **13**, **14**. The coupling brackets of the pair **11**, **12** are of equal size and are of U-shaped rod form employed in a side-ways attitude for their upper limbs to constitute plugs **11***a*, **12***a* and their lower limbs to constitute plugs **11***b*, **12***b*. The upper plugs **11***a*, **12***a* fit into two of the sockets **8** in the shelf **7** so that the coupling brackets hang therefrom, and a further shelf **15** is fitted to these coupling brackets **11**, **12** by the lower plugs **11***b*, **12***b* fitting into sockets **16** in shelf **15** which latter is constructed in the same manner as the top shelf **7**.

There is further provided a shelf **17** which hangs from the shelf **15**, i.e. indirectly from the top shelf **7**, by the coupling brackets **13**, **14**, the upper limbs of which plug into sockets of the shelf **15** and the lower limbs of which plug into sockets in the lower shelf **17**.

Thus a set of shelves is provided hanging from the brackets **1** and **2**.

Evidently coupling brackets of any required different sizes may be provided whereby a required number of the shelves may be thus hung directly or indirectly from the brackets **1**, **2** in required spaced relationship, the shelves being of required lengths.

If desired the plugs or limbs of the brackets may be releasably located in the sockets, as illustrated in FIGURE 3, by having an annular groove **18** in which a ball **19** is resiliently pressed by a spring **20** housed in a set screw **21** secured in the shelf.

In FIG. 4 a pair of shelves A and B are each supported by a pair of L-shaped brackets **1** and **2**. The shelves A and B each have at least three sockets in their rear edge so that they can receive the limbs **1***b* and **2***b* of the brackets **1** and **2** to support the shelves in horizontal manner on a vertical surface. At least one U-shaped bracket **11** engages in the sockets **8** of the shelves A and B to support a third shelf C.

In a further modification (not shown) any pair or more of successive shelves may be partly enclosed by rear and end walls, and having front doors to form a cupboard unit, in which event no coupling brackets are needed between the top and bottom shelves of the unit.

There may also be provided further U-shaped rod members **24** (FIGURE 1) the upper limbs of which can be plugged in to any of the sockets so that their lower limbs, which may have a knob on their front end, project forwardly below the shelf thus providing hanging points for articles.

What I claim is:

1. Adjustable shelving comprising a plurality of L-shaped brackets, attaching means at one end of one limb of each of said L-shaped brackets for securing said L-shaped brackets to a vertical surface so that the other limb of each of said L-shaped brackets is substantially horizontal and below the point of attachment to the vertical surface, a first shelf means having at least four sockets in the edge portion which is directed toward the vertical surface, a plurality of U-shaped brackets having two horizontally extending limbs each, said sockets holding the horizontally extending limbs of said L-shaped brackets and the upper horizontally extending limbs of said U-shaped brackets, respectively, and a second shelf means having a plurality of sockets in the edge portion which is directed toward the vertical surface, said second shelf means being held at a spaced distance below said first shelf means by the lower limbs of said U-shaped brackets extending into a corresponding number of sockets in the second shelf.

2. Adjustable shelving as claimed in claim 1, wherein said first and second shelf means have metallic strips on the edges being directed toward the vertical surface, said metallic strips being provided with holes registering with the mouths of the sockets in the edge portions of the

first and second shelf, thereby reinforcing the mouths of said sockets.

3. Adjustable shelving as claimed in claim 1, wherein each of said attaching means at one end of one limb of each of said L-shaped brackets has a rear cover plate with a keyhole slot.

4. Adjustable shelving as claimed in claim 1, wherein the horizontally extending limbs of said L-shaped and U-shaped brackets have notches and wherein spring biased locating means are provided in said shelf means near the inner ends of said sockets, said locating means being adapted to engage the notches in the limbs of said brackets.

5. Adjustable shelving comprising at least four L-shaped brackets, attaching means at one end of one limb of each of said L-shaped brackets for securing said L-shaped brackets to a vertical surface so that the other limb of each of said L-shaped brackets is substantially horizontal and below the point of attachment to the vertical surface, a pair of shelves, each of said shelves having at least three sockets in the edge portion which is directed toward the vertical surface, at least a pair of U-shaped brackets, each of said U-shaped brackets having two horizontally extending limbs, said sockets in the edge portions of each shelf of said pair of shelves holding the horizontally extending limbs of a plurality of L-shaped brackets and the upper horizontally extending limb of at least one of said U-shaped brackets, respectively, and a second shelf means having a plurality of sockets in the edge portion which is directed toward the vertical surface, said second shelf means being held at a spaced distance below said pair of shelves by the lower limbs of said U-shaped brackets extending into a corresponding number of sockets in the second shelf.

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