Jan. 26, 1954 F. G. W. ULLBERG, JR., ET AL 2,667,322

SUPPORT

Filed June 11, 1951

FIG. 2.

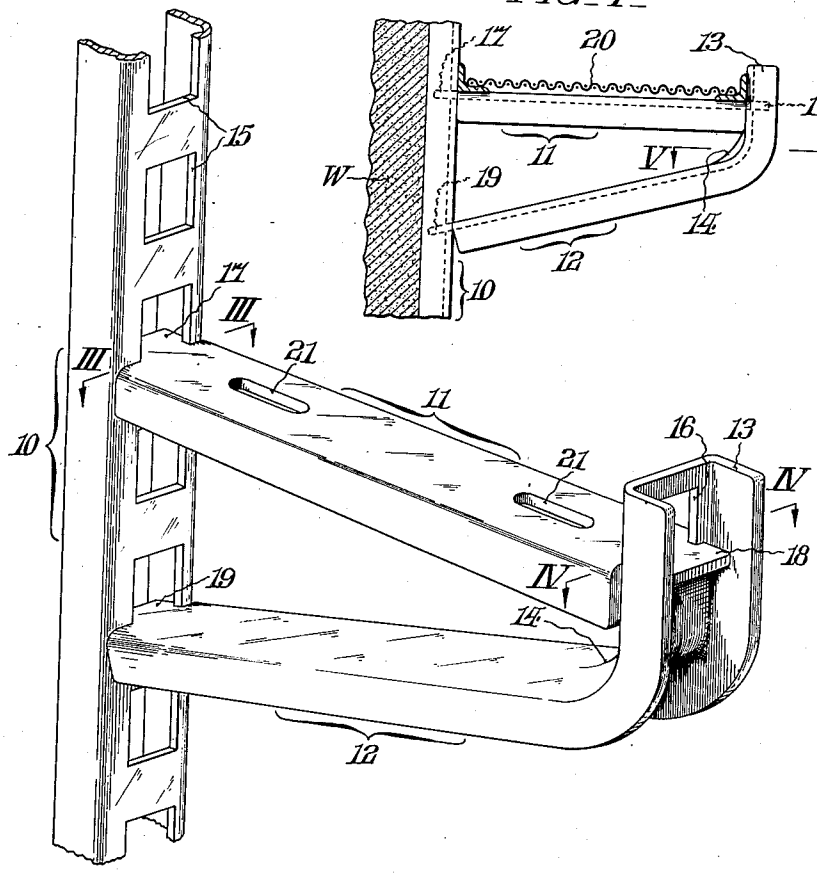


FIG. 1.

FIG. 3.

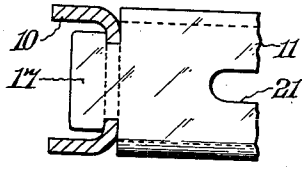


FIG. 4.

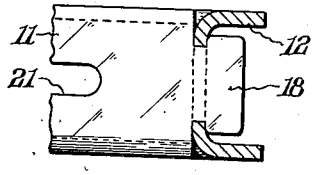


FIG. 5.

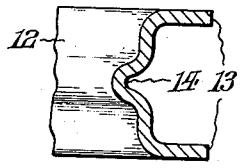
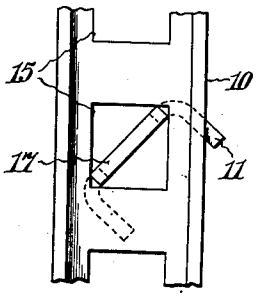


FIG. 6.



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Patented Jan. 26, 1954

2,667,322

UNITED STATES PATENT OFFICE

2,667,322

SUPPORT

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Application June 11, 1951, Serial No. 230,904

1 Claim. (Cl. 248—243)

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This invention relates to supports. More specifically, it is concerned with rack-like structures designed for the support of shelving, cables, piping or any other elongate objects.

The chief aim of our invention is to provide a rack structure suitable for the stated purpose of which the component parts interlock one with another, without necessitating the aid of any separate or special securing means, in such a manner as to be easily and quickly assembled or disassembled, and capable, moreover, of being set up to support one or more shelves at selectively different elevations.

Another object of our invention is to secure the aforementioned advantages in a supporting structure whereof the component parts lend themselves to expeditious manufacture in quantity from inexpensive materials at small cost.

Other objects and attendant advantages will appear from the following detailed description of the attached drawings, wherein Fig. 1 is a view, in side elevation, of a supporting structure conveniently embodying our invention.

Fig. 2 is a fragmentary perspective view of the structure drawn to a larger scale.

Figs. 3, 4 and 5 are detail sectional views taken as indicated respectively by the arrows III—III, IV—IV, and V—V in Figs. 1 and 2; and

Fig. 6 is a fragmentary view illustrating the procedure followed in assembling the parts.

As herein exemplified, our improved supporting structure comprises an upright component 10, a horizontal bracket component 11, and a brace component 12, all cut from rolled channel section bar stock which may be of metal or any other suitably stiff and rigid material. The upright and bracket components 10 and 11 are straight, and the brace component 12 is upturned at an obtuse angle at one end as at 13. In the region of the curved bend in the brace component 12, a rib 14 is pressed out of the main or cross web of said component for stiffening purposes. Formed in the main or cross web of the upright component 10 is a longitudinally-extending series of equally-spaced rectangular apertures 15. The brace component 12 is provided with a single aperture 16 of the same size and configuration in its upturned or distal end portion 13. At opposite ends the bracket component 11 has key formations 17 and 18 which are T shaped and constituted by extensions of its main or cross web. A similar key projection 19 is formed as a prolongation of the main or cross web of the brace component 12 at the end opposite the upturned end portion 13 thereof.

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The key ends 17 and 19 of the bracket and brace components 11 and 12 are adapted to detachably lock into adjacent apertures 15 in the upright component 10, and the key end 18 of said bracket component to similarly lock into the aperture 16 in said brace component as shown in Figs. 2 and 4. In order to make possible the ready assembling of these parts, the necks of the key projections are made slightly less in width than the width of the apertures, and the width of the T heads slightly less than the diagonal dimensions of the apertures.

In assembling, the bracket component 11 is tilted at an angle about its longitudinal axis and its key end 17 introduced into one of the apertures 15 in the upright component 10 as shown in Fig. 6, and said bracket is then turned so that the side notches of the T head engage and lock with the side edges of said aperture. A similar procedure is followed in engaging the distal key end 19 of bracket component 11 into the aperture 16 in the upturned end 13 of brace component 12, and in engaging the key end 19 of said brace component into the aperture 15 in the upright component 10 next below that occupied by the key end 17 of said bracket component. The three parts are thus easily and quickly assembled and are thereafter held against relative displacement without the need for any separate or additional securing means. Disassembling is likewise easily and quickly accomplished, and due to the provision of the many serially arranged apertures 15 in upright component 10, the bracket and brace components 11 and 12 can be connected to said upright component at any desired elevation.

In practice, several assemblages such as above described are used in laterally spaced relation to form, as exemplified in Fig. 1, a rack suitable for the support of a shelf 20 on the braced bracket components 11, the upright components 10 being bolted or otherwise fastened to a wall W or any other vertical surface or surfaces. It is to be particularly noted that the upwardly-projecting ends 13 of the brace components 12 serve as stops to retain the shelf 20 on the bracket components 11 of the series. If desired the shelf 20 may be fixed in position by means of bolts (not shown) for the passage of which the bracket components 11 are provided with slots 21 in their cross webs. Obviously, several bracket and brace couples may be employed in connection with each upright for the support of as many shelves at different elevations.

The supporting structure of our invention can,

of course, be employed in many other ways and for other purposes than herein illustrated by way of example as will be readily apparent.

Having thus described our invention, we claim:

As a new product of manufacture, a supporting structure of the character described comprising an upright channel section bar adapted to be affixed to a wall and having rectangular apertures at intervals lengthwise thereof in its cross web; a straight horizontal channel section bracket bar having an integral T shaped key formation at one end of its cross web releasably locked in one of the apertures in the upright bar; and an angular channel section brace bar having an integral T shaped key formation at one end of its cross web releasably locked in another aperture in the upright bar and having an up-turned distal end portion provided in its cross web with a rectangular aperture for releasable locking engagement with an integral T shaped key formation at the distal end of the cross web of the bracket bar.

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EDGAR W. BAIRD, JR.

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