Nov. 8, 1949 P. DAVIS ET AL 2,487,527

CLOTHESLINE SUPPORTING STRUCTURE

Filed June 30, 1945

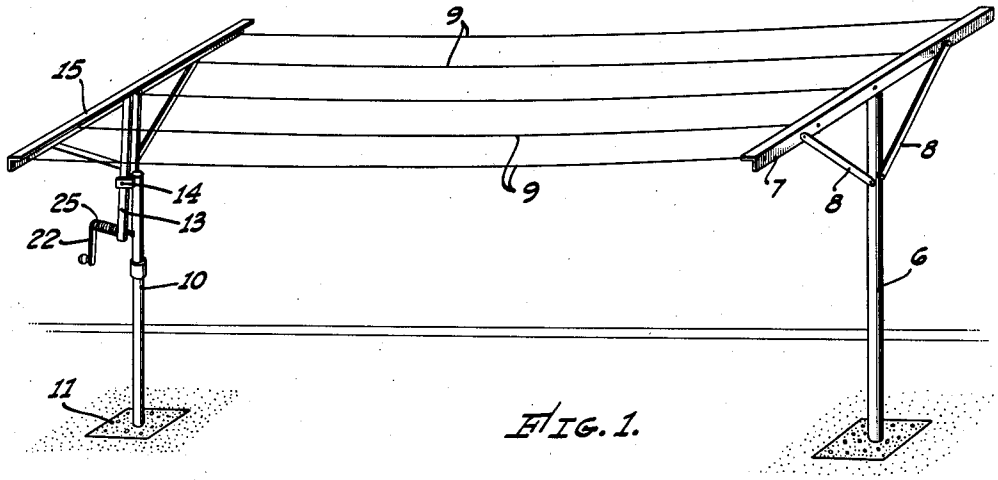


FIG. 1.

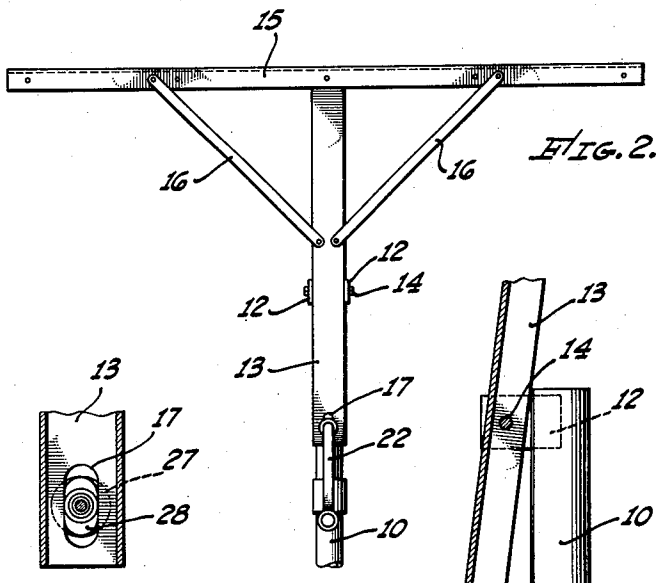


FIG. 2.

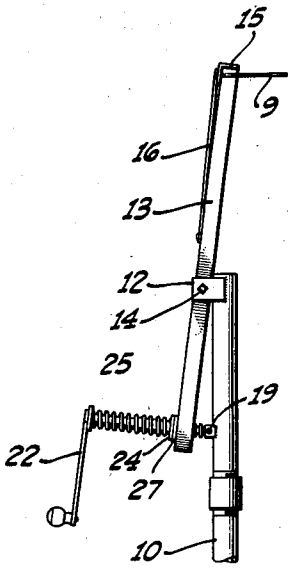


FIG. 3.

FIG. 5.

FIG. 4.

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Patented Nov. 8, 1949 2,487,527

UNITED STATES PATENT OFFICE

2,487,527

CLOTHESLINE SUPPORTING STRUCTURE

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Application June 30, 1945, Serial No. 602,474

2 Claims. (Cl. 211—119.16)

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This invention relates generally to clothesline supporting structures of the character embodying mechanism by which the tension of the lines may be relaxed to facilitate placement of the clothes thereon, and thereafter restored to return the lines with the clothes thereon to a safely elevated position.

In the prior art, clotheslines of the type in most general use comprised one or more lines connected between cross bars supported at a predetermined fixed height from the ground where the lines are at all times accessible for use. However, in practice, clothesline structures of this type tend to sag under the weight of wet clothes, and, if initially low enough for facile placement of the clothes thereon, fail to sustain the clothes from contact with the ground when loaded. As a result, it is ordinarily necessary to employ props which are appropriately placed in accordance with the distribution of the load. Moreover, clothesline structures of this type, being fairly close to the ground, restrict the area over which the lines extend and obviate its use for any other purpose. Numerous devices embodying mechanism for controlling the tension of clotheslines, of which Patent No. 2,202,193, dated May 28, 1940, is representative, have been devised to overcome the above-mentioned difficulties.

It is a general object of our invention to provide a clothesline structure of the character hereinabove alluded to embodying means for slackening the clothesline and coincidentally with the relief of tension, lowering the line to a more accessible position, so as to facilitate the placement of articles to be dried thereon, whereupon the lines may again be raised to elevate the clothes sufficiently to enable normal use of the area therebelow.

More specifically, it is an object hereof to provide a clothesline structure embodying one or more line supports comprising jointed verticals tiltably connected and manually controlled by which the line-attaching means may be moved in a horizontal arc toward and away from the anchoring means for the opposite ends of the lines.

More specifically, it is an object to provide control means actuated by means of a handle for varying the angular disposition of the sections of a jointed clothesline support, whereby a cross beam to which the various lines are attached may be shifted through a range of movement effective to vary the tension and elevation of the lines, and further to lock the apparatus in any adjusted position, regardless of the load imposed thereon.

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Numerous other objects and salient features of the mechanism comprising our invention, including all of the operative advantages of the apparatus of our prior patent above referred to, and particularly its susceptibility to economical yet extremely strong construction will be apparent from the following description of a preferred embodiment illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of the entire assembly;

Fig. 2 is an enlarged broken elevation of the jointed adjustable line support;

Fig. 3 is a side elevation of the mechanism illustrated in Fig. 2;

Fig. 4 is an enlarged sectional view of the control mechanism by which the angular relation between the uprights of the adjustable line support is regulated;

Fig. 5 is an enlarged broken sectional view taken on lines 5—5 of Fig. 4.

Referring to the drawings in detail, the numerals of which indicate similar parts throughout the several views, 6 designates a tubular vertical support mounted in concrete or otherwise permanently secured in a suitable position having a cross-bar comprising an angle iron 7 attached to its upper end. The perpendicular relation between cross-bar 7 and vertical support 6 is reinforced by a pair of braces 8 so as to provide a rigid mounting for one end of each of a plurality of clotheslines 9 which are connected individually in spaced relation to cross-bar 7 by any means well known in the art.

A second sectional tubular support 10, spaced from support 6 a suitable distance depending upon the desired length of the clotheslines, is mounted in concrete as indicated at 11. A pair of brackets 12 are welded or otherwise secured to the upper end of support 10 in parallel relation with one another and with the vertical plane common to the two supports 6 and 10 for the pivotal connection of an adjustable line supporting assembly. To this end we provide a channel iron 13 pivoted intermediate its ends between brackets 12 on a pin 14 having its ends secured in the brackets, respectively. An angle iron or cross bar 15 is secured to the upper end of channel 13 in perpendicular relation by suitable means, and its position is reinforced by braces 16. It will be observed that by swinging the lower end of channel 13 laterally of the vertical support 10 the cross bar 15 may be moved through a horizontal arc, varying the distance between the line-supporting angles 7 and 15 as well as the distance

between angle iron 15 and the ground level. One end of each clothesline 9 is attached to angle iron 15, whereby all the lines will be maintained in parallel relation. The length of the respective lines 9 is proportioned to the distance between the vertical supports 6 and 10 therefor, i. e., the lines being taut when channel 13 is vertically-aligned parallel with support 10.

The back of channel 13, adjacent its lower end, is formed with an elongated opening 17 through which projects a screw 18 having one end pivoted on a pin 19 between a pair of lugs 20, welded or otherwise secured to vertical support 10 below brackets 12. Screw 18 projects into the complementarily-threaded bore of a tubular member 21 adapted to be rotated in response to actuation of a handle 22, welded or otherwise attached to its outermost end. Encircling tubular member 21 is a sleeve 23 having an integral annular flange 24 adjacent one end thereof. Flange 24 forms a seat for a helical spring 25, encircling sleeve 23 and member 21 and bearing at its opposite end against a flange 26 integral with member 21. The expansive urge of spring 25 maintains flange 24 of sleeve 23 in contiguous relation with a washer 27 of a diameter greater than the width of opening 17 in the back of channel 13, for a purpose about to be described. Integral with washer 27 is a narrow boss 28 adapted to slidably fit within the confines of opening 17 in channel 13.

It will thus be seen that the pressure of spring 25, interposed between the flanges 24 and 26 of sleeve 23 and tubular member 21, respectively, performs the dual function of maintaining the washer assembly in operative engagement with the opening 17 in channel 13 and further, of imposing a load upon the threads of screw 18 and the bore of tubular member 21, so as to resist relative rotation therebetween. The weight and tension of the clotheslines 9 normally tend to tilt the lower end of channel 13 relative to vertical support 10, thus obviating any tendency toward displacement of channel 13 from engagement with washer 27 which might otherwise occur as the result of such movement of the lower end of channel 13 toward the vertical support 10. The coaxial alignment of screw 18, tubular member 21 and sleeve 23 is assured by the automatic sliding compensation effected by washer 27 in the elongated opening 17.

The operation of the invention is briefly described as follows: The vertical supports 6 and 10 are preferably of a length to sustain the clotheslines 9 at a level above the reach of the average user in order to assure that clothes supported thereby will be held from contact with the ground. As will be seen, the verticals 6 and 10 and associated structure may be proportioned whereby the clotheslines as well as the articles suspended therefrom for drying may be positioned at a height sufficient to enable normal use of the area therebelow. Thus, while normally suspended out of the way, the clotheslines may be made available for use by turning handle 22 and threaded tubular member 21 connected therewith outwardly so as to permit channel 13 to be tilted and the lines to be lowered.

An important feature of the invention resides in the arrangement of the mechanism for controlling the position of channel 13 whereby the tension of lines 9 may be varied without permitting the lines to sag to any appreciable extent. It will be understood that with handle 22 adjusted for supporting channel 13 in vertical position, lines 9 are drawn very tight by spring 25 which is compressed by such adjustment. By threading the tubular member 21 outwardly, the compression of spring 25 is relieved to a corresponding extent. However, by changing the position of the mechanism, by rotation of handle 22, from that illustrated in Fig. 1 to that shown in Fig. 4, only the compression of spring 25 is affected, the spring being capable in the second adjustment of exerting sufficient pressure on the lower end of channel 13 to maintain lines 9 taut. As the compression of spring 25 is relieved to some extent, the lines may be pulled downwardly by the user for the placement thereon of the articles to be dried, the manually-exerted tension on the lines being effective to again increase the compression of the spring, but obviates the necessity for constant readjustment of handle 22. Release of the lines by the user results in their return to elevated positions in response to the expansive urge of spring 25. The lines may, if desired, be relaxed more completely by manipulating handle 22 so as to further relieve the compression of spring 25, thus permitting the lines to sag under their own weight and the weight of channel 13 and cross bar 15. It will be seen that any adjusted position of handle 22 will be maintained as a result of the friction between the complementary threads of screw 18 and tubular member 21, which friction varies proportionately with the tension applied to the lines.

A single embodiment of our invention is described above and illustrated in the accompanying drawings. However, numerous changes in size, design, shape, number and proportion of the various parts may be made, both ends of clotheslines 9 may be supported and adjusted by clothesline supporting structures such as illustrated in Figs. 2 to 5 inclusive, and particularly that the pivotal connection between support 10 and screw 18 may be omitted with these parts fixed in perpendicular relationship if desired, suitable compensation for the tilting of channel 13 being provided in such case by the flexible connection between washer 27 and the channel, all without departing from the spirit of our invention as defined in the appended claims.

What we claim and desire to secure by Letters Patent is:

1. In a supporting structure of the character described, an upright, a crossbar, a slotted member connected to said crossbar and pivoted intermediate its ends to said upright, an actuating screw pivoted to said upright and extending through said slot in said member, and a tubular member threaded on said screw and bearing against said slotted member at a point below the point of pivoting of said member to said upright, to transmit axial movement of said tubular member with respect to said screw, incident to relative rotation between said tubular member and screw, to said first-named slotted member, said screw and tubular member being movable through said slot longitudinally of said member to compensate for corresponding variations in the angle between said member and upright.

2. In a supporting structure of the character described, an upright, a crossbar, a slotted member connected to said crossbar and pivoted intermediate its ends to said upright, an actuating screw pivoted to said upright and extending through said slot in said member, a tubular member threaded on said screw and bearing against said slotted member at a point below the point of pivoting of said member to said upright, to transmit axial movement of said tubular mem-

ber with respect to said screw, incident to relative rotation between said tubular member and screw, to said first-named slotted member, said screw and tubular member being movable through said slot longitudinally of said member to compensate for corresponding variations in the angle between said member and upright, and a crank connected to said tubular member to rotate the latter on said screw.

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