Dec. 8, 1953 R. V. SPALDING 2,661,849

COMBINED CLOTHESLINE REEL AND AWNING

Filed April 19, 1950

2 Sheets-Sheet 1

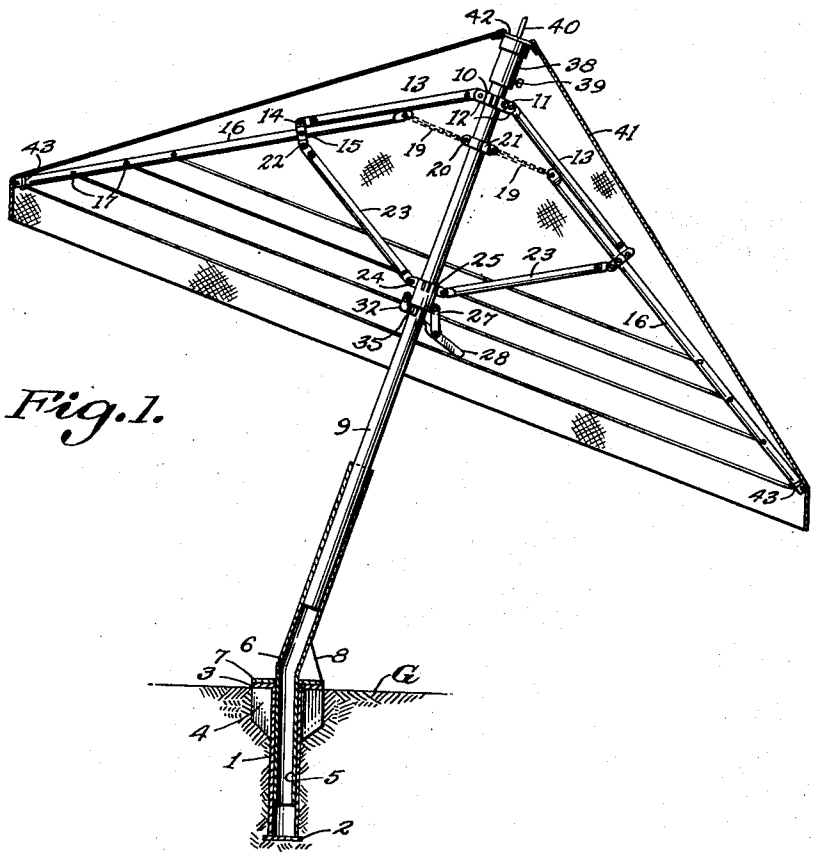


Fig. 1.

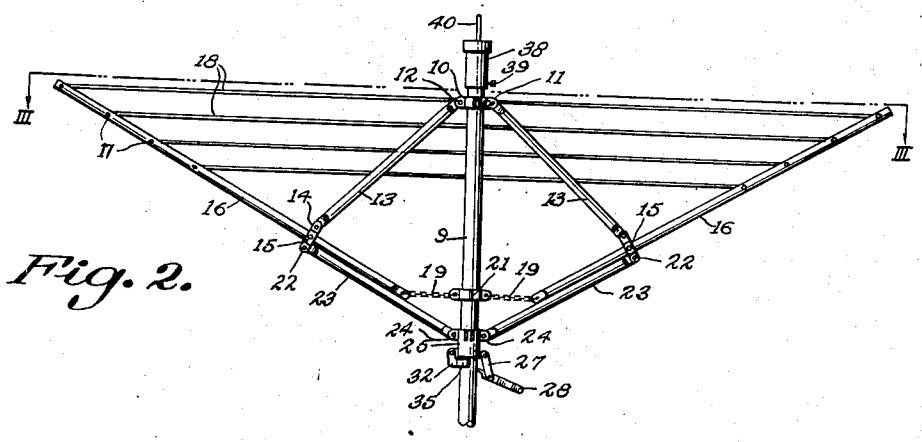


Fig. 2.

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Fig. 3.

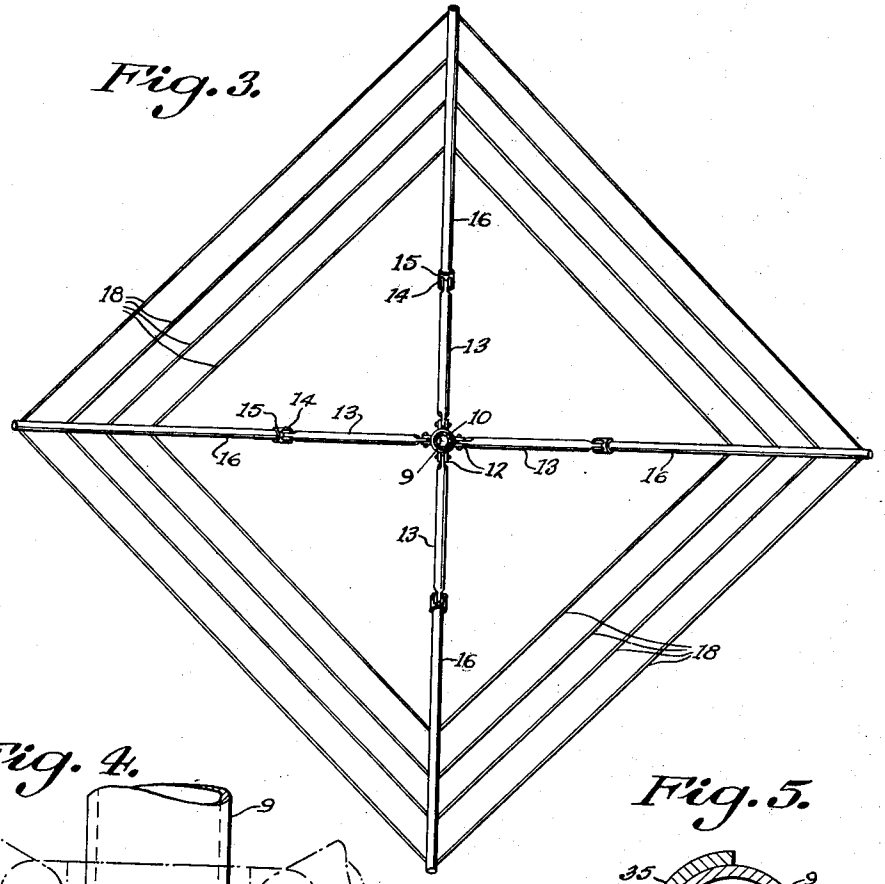


Fig. 4.

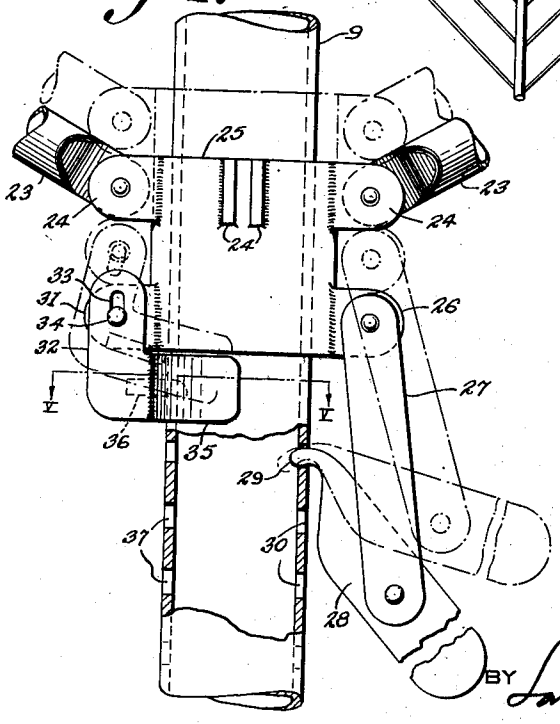
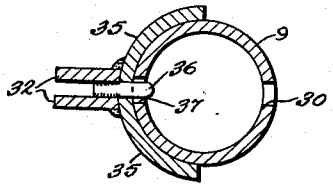


Fig. 5.



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COMBINED CLOTHESLINE REEL AND AWNING

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6 Claims. (Cl. 211—2)

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This invention relates to a combined clothesline reel and tent awning.

For maximum efficiency, the present day clothesline reel is generally constructed with the radial line-supporting arms thereof inclined upwardly from the center post. This results in progressively increased elevation of the line sections extending between each pair of adjacent arms, the line sections at the same time increasing progressively in length. The major portion of the line is thus placed at a substantial distance from the ground, and the highest line sections are also the longest, for the hanging of sheets and similar large pieces.

However, this improved modern construction of a clothesline reel precludes its use as a supporting frame for a tent awning of commercially acceptable, umbrella-like appearance. That a reel frame might be put to such use is an idea not new per se, but to my knowledge, those reel frames heretofore devised for this dual function have not permitted the adjustment of the radial arms in a manner both to lift the long outer line sections high above the ground, and support a tent awning covering on an umbrella-like frame, in different selected positions of said radial arms.

The main or general object of the present invention is to provide a frame adjustable in this desirable manner.

Among other, more specific objects of the invention are the provision of a structure of this character that will permit the adjustments to be made with speed and facility; will be adapted for manufacture at little or no increase in cost above the ordinary clothesline reel; and will be securely and swiftly locked in each adjusted position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Figure 1 is a vertical sectional view showing the frame adjusted for use as a tent awning.

Figure 2 is a view similar to Figure 1, the frame being adjusted for use as a clothesline reel, the lower portion of the structure not being shown.

Figure 3 is a top plan view of the arms in their position of use as a clothesline reel, the view being taken on the line III—III of Figure 2.

Figure 4 is an enlarged detail view partly in side elevation and partly in vertical section of a jack-type adjusting means embodied in the invention, the dotted lines showing a second position of said means assumed during the operation thereof.

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Figure 5 is a section taken substantially on line V—V of Figure 4.

Referring to the drawings in detail, a cup base 1 is of tubular form and is provided with a closed bottom 2. An annular flange 3 formed upon the upper end of the base is reinforced by circumferentially spaced fins 4. The base so formed is sunk vertically in the ground G or other supporting surface and may if desired be embedded in concrete, the flange 3 being exposed at ground level.

Removably supported in the base and adjustable rotatively therein is the tubular center post support 5. A substantial portion of the support projects upwardly out of the base, the support being formed with a medial bend 6, preferably, so that the projecting part is inclined slightly out of the vertical. This arrangement is one often used for tent awning supports and is preferred but not critical in the present structure.

An annular supporting flange 7 is rigidly mounted upon the support 5 intermediate its ends and seats upon the flange 3. A brace plate 8 reinforces the connection of the flange 7 to the support. The flange 7 rotates upon the flange 3 when the support 5 is rotatably adjusted within the base, and I believe it sufficiently obvious as not to require special illustration that if desired, a suitable means can be provided that will interengage between the flanges in selected positions of rotatable adjustment of the support. For example, a drop pin extending through a single opening of the flange 7 into one of a plurality of circumferentially spaced openings of the flange 3 can be used to advantage for this purpose.

The inclined projecting part of the support 5 above the medial bend 6 provides a slideway for the lower portion of the center post 9, which portion is inserted in the hollow projecting part and is shown in Fig. 1 as partly inserted thereinto.

A collar 10 is secured fixedly to the center post close to the upper end thereof, as by a set screw 11, and this collar is provided with circumferentially spaced pairs of radial ears 12. The flattened inner end of an upper radial brace rod 13 is pivotally secured to and between the ears of each pair, and the flattened outer ends of these rods are similarly connected to ears 14 rigid with collars 15 that are fixedly connected to elongated radial arms or ribs 16, said collars 15 being disposed approximately midway between the inner ends of the arms and the center points thereof.

The arms or ribs 16 are provided with line-receiving openings 17, spaced longitudinally of the respective arms, and through these openings extend the conventional flexible and endless clotheslines 18. As seen readily from Figure 3, the line sections are of progressively greater length, this being a common arrangement in clothesline reel construction.

In the illustrated example of the invention, only four radial arms 16 are shown, but there can be more if desired.

Connected to the inner ends of the arms 16, said inner ends being spaced a substantial distance from the center post, are the short chains or equivalent flexible connecting elements 19, the other ends of these chains being connected to the circumferentially spaced radial ears 20 of a ring 21 slidable freely upon the post 9 below the collar 10.

Rigid with the collars 15 and diametrically opposite the ears 14 thereof are ears 22. The outer ends of lower radial brace rods 23 are connected pivotally to the ears 22. The rods 23 correspond in length to the rods 13, each rod 23 being associated with a rod 13 for controlling the movement of a particular radial arm 16.

The flattened inner ends of the lower brace rods 23 are pivotally connected to and between the ears 24 of circumferentially spaced radial pairs of ears rigid with the upper end of an operating sleeve 25 slidable on the center post below the ring 21. At its lower end this sleeve has a radial projection 26 to which is pivotally connected the upper end of a depending link 27. The lower end of the link is pivotally joined to the intermediate portion of an operating lever of a sufficient length to be grasped as a handle.

On the inner end of the lever 28 is a small curved finger 29 extendable into any of a series of vertically spaced openings 30 formed in the center post. On engagement of the finger 29 in one of these openings, a user can swing the lever 28 upwardly to the dotted line position thereof seen in Figure 4, thus to adjust the sleeve 25 upwardly upon the post, through the medium of the connecting link 27.

A radial projection 31 formed upon the lower end of the sleeve 25 is located diametrically opposite the projection 26, and pivotally connected to and depending from said projection 26 are the plates 32, these having the small slots 33 through which pass the pivot pin 34 of the radial projection 31 to provide the desired pivotal connection.

Rigid with the lower ends of the plates are the arcuate arms of a yoke 35 that straddles the center post so as to center a stop pin 36 relative to the post, thus to assure its entry in one of a series of vertically spaced openings 37 formed in the center post and located diametrically opposite the openings 30.

To the upper end of the center post is secured a cap 38, as by a set screw or equivalent fastening means 39, a pin 40 projecting upwardly from the cap. A tent awning cover 41 has a center ring 42 which can be positioned over the pin 40 when the device is to be used as a tent awning. Grommets or rings 43 are spaced peripherally of the covering 41, and are adapted to engage over the ends of the arms 16, to draw the covering tautly over the supporting frame provided therefor by the arms.

Considering the invention from the standpoint of manner of use thereof, reference should first be had to Figure 1. It will be assumed that the device is to be converted from a tent awning (Figure 1) to a clothesline reel (Figure 2). As a first step, the user inserts the finger 29 of the operating lever 28 in a selected opening 30 and raises the lever to a sufficient extent to elevate the sleeve 25. This causes the stop plates 32 to be pivoted outwardly, the pin 36 moving out of the opening in which it was engaged. By moving the lever 28 slightly to the right from the dotted position as in Fig. 4, so the finger 29 will slide from the opening 30, the sleeve is released for downward movement under pressure of the arm structure supported thereby. When the pin 36 has cleared the opening 37 it may be held retracted by the fingers of the operator grasping the stop plate 32 until the sleeve 25 is lowered.

The arms 16 are allowed to swing downwardly from their position of Figure 1 and this relieves the tension under which the covering 41 was placed when the device was in use as a tent awning. Removal of the rings 43 from the arms 16 is accordingly made possible, and the covering can be either completely removed, or bunched upon the top pin 40, which is of a length sufficient to accommodate all the pins 43 when the covering is to be bunched in this manner.

To elevate the arms 16 to their position of Figure 2, wherein they are positioned for use as a clothesline reel, the sleeve 25 is positioned by the user at a sufficient height to permit the inner ends of the arms 16 to clear the center post when the arms are swung from their Figure 1 to their Figure 2 position. This position of the sleeve would be below either of those positions to which it has been adjusted in these figures of the drawing.

The user now swings the outer ends of the arms 16 upwardly to their Figure 2 positions. The clotheslines will offer a slight measure of resistance as the arms swing past a dead center. However, they stretch slightly to permit such swinging of the arms, and thereafter, they prevent the arms from swinging back downwardly during the balance of the conversion operation.

Having adjusted the arms to their up position, one need simply operate the jack mechanism to flatten out of the angle of the arms somewhat, thus to place the lines under desired tension and enable them to remain taut despite the weight of the articles being supported thereby.

This jack operation proceeds as follows: The sleeve 25 is lifted until the stop pin 36 seats in one of the openings 37. The finger 29 of the lever is now inserted in an opening 30 and the lever is swung upwardly to the dotted line positions thereof illustrated in Figure 4. This causes the stop pin to be unseated from the opening in which it was positioned, the stop plate being rocked outwardly to the dotted line position thereof. As lifting of the sleeve 25 continues by manipulation of the lever, the stop pin reseats itself, in the opening 37 next above that in which it was previously seated. The finger 29 is now inserted in the opening next above that in which it was engaged, and the operation repeated. In this way, the angle of the arms 16 is flattened out to place the clotheslines under full tension, with a minimum of difficulty.

Elevation of the sleeve 25 by jack operation is also desirable when positioning the arms 16 for use as a tent awning support. Again, the jack operation flattens out the angle of the arms to a desirable extent for placing the covering 41 under tension.

In either case, the flexible connections 19, 21 which the arms 16 have with the center post operate as a stop means limiting excessive flattening out of the arms. In both the Figure 1 and Figure 2 positions, the chains draw taut after predetermined upward adjustment of the sleeve 25, to set up pull uniformly and simultaneously upon the inner ends of all the arms and thus

cause the arms to resist further tensioning adjustment thereof.

I claim:

1. In a combined clothesline reel and tent awning frame a center post, upper braces having a stationary pivotal connection at their inner ends to the post, lower braces having a sliding pivotal connection at their inner ends to the post, radial arms pivotally connected intermediate their ends to and between the outer ends of the upper and lower braces for rocking movement to opposite extreme positions in one of which they are inclined upwardly from the post and in contact along portions of their lengths with portions of said lower braces, and in the other of which they are inclined downwardly from the post and in contact along portions of their length with portions of said upper braces, manually-operable means mounted on said sliding connection and engageable with the post for selectively adjusting the sliding connection longitudinally of the post, and flexible clothesline means to maintain said arms in their upwardly inclined positions.

2. In a combined clothesline reel and tent awning frame a center post, upper braces having a stationary pivotal connection at their inner ends to the post, lower braces having a sliding pivotal connection at their inner ends to the post, radial arms pivotally connected intermediate their ends to and between the outer ends of the upper and lower braces for rocking movement to opposite extreme positions in one of which they are inclined upwardly from the post and in the other of which they are inclined downwardly from the post, manually-operable means mounted on the sliding connection and engageable between the sliding connection and post to selectively retain said sliding connection in selected positions longitudinally of the post, and to permit rocking of the arms in the direction of either of said extreme positions thereof, flexible connections extending radially between the inner ends of the radial arms and the post for limiting movement of said arms toward either of said extreme positions, and flexible clothesline means to maintain said arms in their upwardly inclined positions.

3. In a combined clothesline reel and tent awning frame a center post, upper braces having a stationary pivotal connection at their inner ends to the post, lower braces having a sliding pivotal connection at their inner ends to the post, radial ribs pivotally connected intermediate their ends to and between the outer ends of the upper and lower braces for rocking movement to opposite extreme positions in one of which they are inclined upwardly from the post and in the other of which they are inclined downwardly from the post, a manually operable means mounted on the sliding connection and engageable between the sliding connection and post to selectively retain said sliding connection in selected positions longitudinally of the post, to permit rocking of the ribs in the direction of either of said extreme positions thereof, and elongated flexible chain connections extending radially between the inner ends of the radial ribs and the post for limiting movement of said ribs toward either of said extreme positions, and flexible clothesline means to maintain said ribs in their upwardly inclined positions.

4. In a combined clothesline reel and tent awning frame a center post, upper braces having a stationary pivotal connection at their inner ends to the post, lower braces having a sliding pivotal connection at their inner ends to the post, radial ribs pivotally connected intermediate their ends to and between the outer ends of the upper and lower braces for rocking movement to opposite extreme positions in one of which they are inclined upwardly from the post and in the other of which they are inclined downwardly from the post, a manually-operable means mounted on the sliding connection and engageable between the sliding connection and post to selectively retain said sliding connection in selected positions longitudinally of the post, to permit rocking of the ribs in the direction of either of said extreme positions thereof, and connection means extending radially between the inner ends of the radial ribs and the post for limiting movement of said ribs toward either of said extreme positions, comprising a sleeve slidable longitudinally of said post and flexible connections extending radially from said sleeve to said ribs adjacent their inner ends, and flexible clothesline means to maintain said ribs in their upwardly inclined positions.

5. In a combined clothesline reel and tent awning frame, a center post; radial upper and lower braces pivotally connected to the post; radial arms; means pivotally connecting the outer ends of the braces to the radial arms intermediate the ends of the radial arms and nearest their inner ends for swinging movement of the radial arms to selected positions of inclination relative to the post, including upwardly inclined positions of the arms, and with portions of the arms in engagement longitudinally with some of the braces; manually-operated means mounted on the post for selected adjustments longitudinally thereof to manually move the braces to exert force to adjust the arms toward one of the selected positions of the arms responsive to said adjustments of said means longitudinally of the post; and flexible clothesline means to maintain the arms in said upwardly inclined positions.

6. In a combined clothesline reel and tent awning frame a center post, upper braces having stationary pivotal connections to said post, lower braces having a sliding pivotal connection to said post, radial arms; pivotal connection means between the outer ends of the upper and lower braces for rocking to positions in one of which positions said arms incline upwardly from the post and are in longitudinal contact with said lower braces and in the other of which positions they incline downwardly from the post and are in longitudinal contact with said upper braces; manually-operated means slidable longitudinally of the post to force said sliding pivotal connections longitudinally of said post and said braces into selected angular positions with respect to the longitudinal axes of said post for flattening of the angles of inclination of the arms with respect to the longitudinal axes of said post and flexible clothesline means to maintain the arms inclined upwardly when said clothesline means is taut.

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