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CLOTHESLINE TIGHTENER

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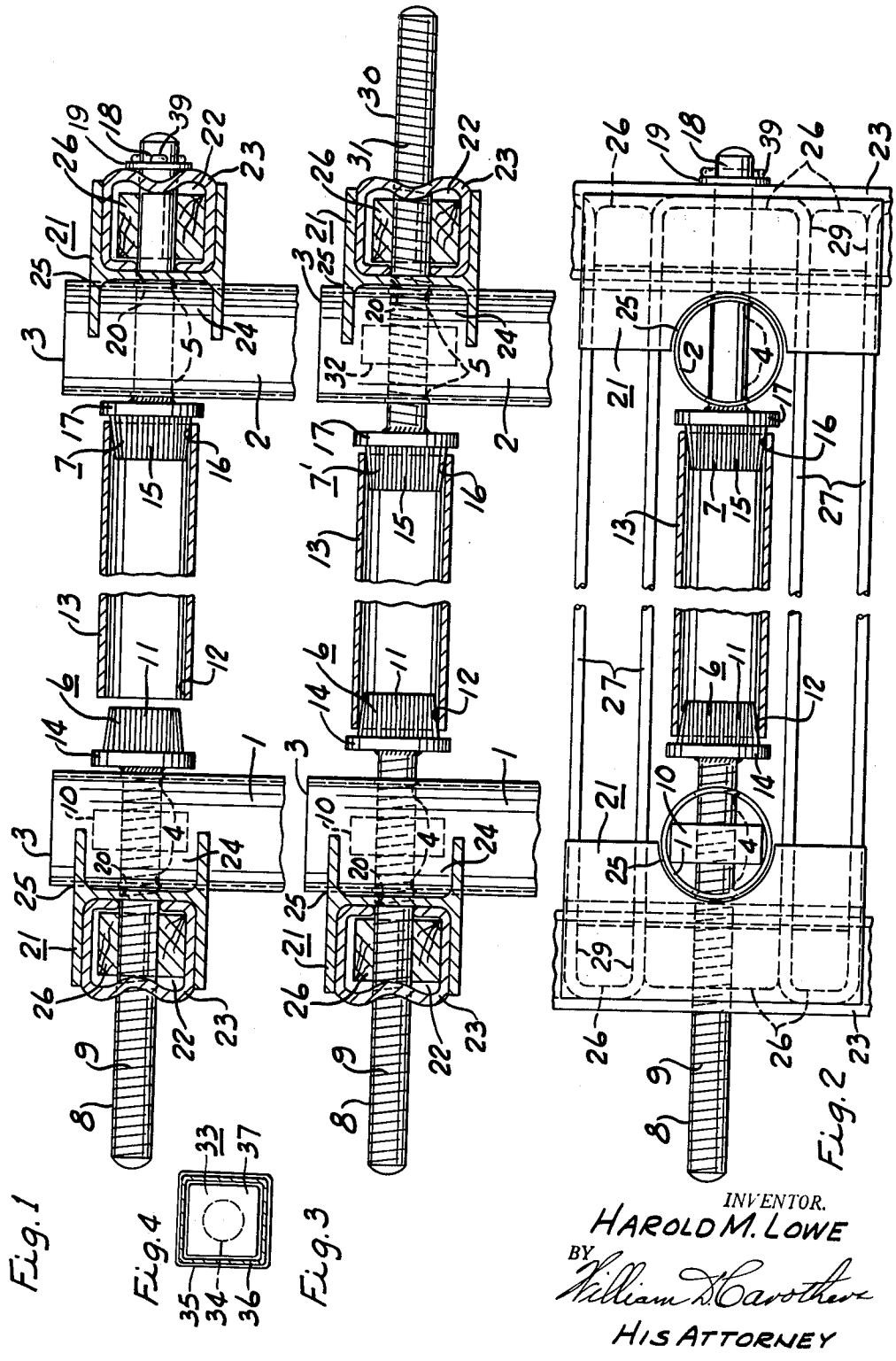


Fig. 1

Fig. 4

Fig. 3

Fig. 2

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CLOTHESLINE TIGHTENER

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This invention relates generally to clothesline racks and more particularly to the manner of constructing and expanding the racks to tighten the clothesline.

The principal object of this invention is the provision of a clothesline rack supported from vertical posts wherein at least one of the posts is provided with a threaded opening to receive a threaded member on the end of an expander which when rotated unscrews the threaded member from the post to expand and tighten the clotheslines therebetween.

Another object is the provision of a clothesline rack supported from a vertical post having a saddle to straddle the post and receive a rack carrying the clothesline and which are maintained on the post by the threaded member.

Another object is the provision of a clothesline rack having vertical tubular posts with aligned openings having nut members in the tubular posts aligned with the openings to receive threaded members on the opposite ends of an expansion member, the threaded members being of opposite hand so that the rotation of the expansion member tightens the clothesline.

Another object is the provision of an expansion member having a socket at each end for receiving a headed member. These headed members passing through aligned openings in vertical posts and at least one of them being threaded to mate with the threaded opening in the post. The sockets on the expansion member removable from the headed members when closely adjacent the post. Both of the headed members may have threaded stems one being right hand and the other being left hand thread for simultaneously expanding the posts relative to each other. When the spreader is rotated to unscrew the right hand thread member from the post, said expansion member spreads the posts to tighten the clothesline.

Other objects and advantages of this invention appear hereinafter in the following description and claims.

The accompanying drawings show for the purpose of exemplification without limiting this invention or the claims thereto, certain practical embodiments illustrating the principles of this invention, wherein:

FIG. 1 is a view in vertical elevation with parts in section showing this invention.

FIG. 2 is a plan view of two posts of the structure shown in FIG. 1.

FIG. 3 is a view in vertical elevation employing right and left hand threaded members.

FIG. 4 is a sectional view of a modified form of headed member.

Referring to FIGS. 1 and 2 of the drawings the post members 1 and 2 may be set permanently in the ground or inserted in tubular sockets in the ground or they may be depending from the ceiling. However, these posts are preferably supported substantially vertically with their ends 3 at about the same elevation. Each of the posts 1 and 2 is provided with an opening 4 and 5 for the purpose of receiving the headed member 6 and 7. The headed member 6 is provided with a stem 8 having a right hand thread indicated at 9. This stem passes through the opening 4 of the post 1 and projects materially therebeyond. The threaded stem 9 is received in the square nut 10 which is sufficiently large to be inserted into the end of the tube but cannot rotate within the tube. Thus by rotating the headed member 6 the stem will be moved inwardly or outwardly relative to the post depending upon the direction of rotation. The thread 9 is shown as a right hand thread.

The head 11 of the headed member 6 is preferably tapered and knurled so as to snugly fit the socket 12 in the end of the expansion member 13. To insure that the head will not allow the socket member to extend thereover a shoulder in the form of the annular flange 14 is formed at the bottom of the head 11 and between this head and the stem 8. Thus by jamming the tubular expansion member 13 onto the head 11 the latter fits snugly into the socket 12 and by rotating the tubular expansion member 13 one may turn the threaded stem 9 in the nut 10 in a clockwise direction to unthread or withdraw the threaded stem 9 from the opening 4. As the threaded stem 9 increases the effective length of the expansion member 13 the posts 1 and 2 are forced apart and thus spread the same to tighten the clothesline.

The opposite headed member 7 is also provided for the head member 15 which is received in the socket 16 at the opposite end of the expansion member 13. This headed member is also provided with an annular flange 17 and a stem member 18 which is unthreaded and since it is unthreaded the post 2 is not required to have a nut.

Both the stem 8 and 18 are passed through openings 20 through the crosspiece of the saddle members 21 which have an H-cross section. The flanges forming the slot 22 on one side supports the clothesline rack 23, whereas the flanges forming the slot 24 on the opposite side of the crossbar have an arcuate indentation 25 therein as shown in FIG. 2 that fits the surface of the posts 1 and 2. Each of the racks 23 carry a slotted member 26 the slots 29 of which carry the clothesline 27 as illustrated in FIG. 2. Since the clothesline is constructed on one or more sections woven back and forth between the racks 26 they provide a predetermined length that can be made adjustable by shortening or lengthening the clothesline but limit the spacing between the racks 23 and thus the threaded stem 9 need be only sufficiently long to permit the expansion member to move the posts 1 and 2 far enough apart to take up the slack in the clothesline 27. Ordinarily the posts 1 and 2 are sufficiently long that they will readily flex when the expansion member is turned to tighten the clothesline.

Referring to FIG. 3 wherein each of the elements are similar and are provided with the same reference numerals as provided in FIGS. 1 and 2. The essential difference between the structure of FIG. 3 over the previously described structure is the fact that the headed member 7' is provided with a threaded stem 30 the thread 31 thereon being a left hand thread. This threaded stem takes the place of the smooth stem member 18. Likewise the post 2 is provided with a nut 32 which has a mating left hand thread for receiving the stem 30. This device is quite similar to that disclosed in FIG. 1 but by turning the tube 13 to unscrew the stem 8 will also unscrew the threaded stem 30 and thus rapidly spread the tubes 1 and 2. In all other respects, the structure is the same. When the tube 13 is turned to screw the threaded stem 8 into the nut 10 the threaded stem 30 is likewise screwed into the nut 32 and the posts 1 and 2 come together and the heads 11 and 15 are withdrawn from their sockets 12 and 16 respectively since the tube 13 is shorter than the distance between the two heads 6 and 7.

As shown in FIG. 4 the threaded member 33 has a threaded stem 34 and flange 35 on which is seated the end of the square tubing 36 shown in section. The head 37 is square and fits within the bore of the square tube 36 so that the threaded stem may be rotated by rotating the square tube 36. Thus the tube expansion member 13 may be round and the headed member 6 has a round head 11 to fit the socket 12 of the tube 13.

If the clothesline is loosened and the expansion member or tube is removed the saddle may be turned 90° so that the flanges in which the arcuate indentation or cutout is

made, may straddle the post members 1 and 2 and the lines crisscross in an X fashion. The posts 1 and 2 may be lifted from their sockets in the ground and stored with the expansion member as a compact group of longitudinally disposed members in a box. If the posts 1 and 2 are of the telescoping type and contract to six feet and the expansion member is six feet long then the box need be approximately that size. A cellar application where the posts 1 and 2 are hung from the rafters thus may only be two feet long. When the stem of the headed member 6 is unthreaded a cotter key 39 and washer 19 are added as shown in FIGS. 1 and 2.

I claim:

1. A clothesline rack comprising a pair of spaced vertical flexible post members supporting opposed racks with clotheslines extending therebetween, aligned openings in said posts, a headed member for each of said openings and having a stem rotatable therein, a threaded means in one of said openings, a mating thread on the stem in said one opening, an expansion member extending between said posts and having a socket in each end receiving the heads of said headed members to rotate the same and screw said threaded member in said threaded means to spread said posts to tighten said clothesline.

2. The clothesline rack of claim 1 characterized by a saddle member supporting each rack on said posts, said saddle and said racks having openings aligned with said openings in said posts permitting the stems of said headed members to pass therethrough.

3. The clothesline rack of claim 1 characterized in that said threaded means is a nut held by said post.

4. The clothesline rack of claim 1 characterized in that said post members are tubes and said threaded means is a nut in said tube and held from rotation thereby.

5. The clothesline rack of claim 1 characterized in that said headed member has a head to fit in the socket of said expansion member and a shoulder to stop further movement of said socket over said head.

6. The clothesline rack of claim 1 characterized in that both of said stems and openings are provided with mating threaded means, one of said threaded means being right hand and the other being left hand.

7. The clothesline rack of claim 1 characterized by a saddle having an H-cross section parallel flanges projecting in opposite directions to support said racks on said posts, the flanges on one side holding the rack and an arcuate indentation in the flanges on the opposite side to receive said post, and transverse openings through said racks and the crosspiece of said saddle to receive the stems of said headed means to hold said racks on the posts.

8. The clothesline rack of claim 1 characterized in that said expansion member is a tube, and is shorter than the distance between said headed members at the unflexed position of said posts and when said threaded stem is screwed into the post.

9. The clothesline rack of claim 5 characterized in that said head and socket are square.

10. The clothesline rack of claim 5 characterized in that said head and socket are round.

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