July 29, 1947. P. BERMAN 2,424,646

COLLAPSIBLE CLOTHES DRIER

Filed May 3, 1945

Fig. 1

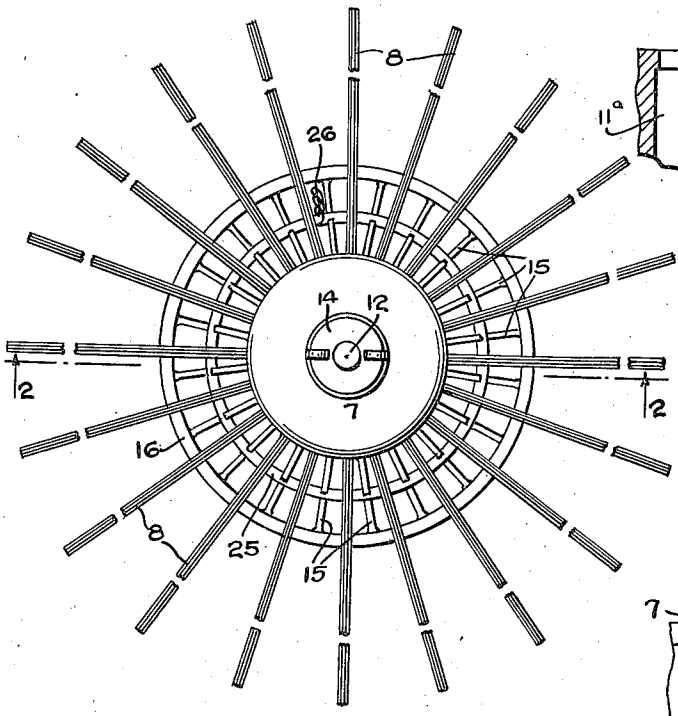


Fig. 6

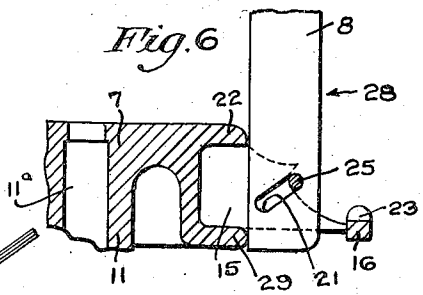


Fig. 5

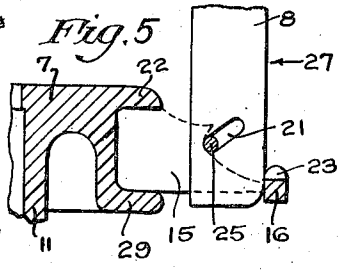


Fig. 4

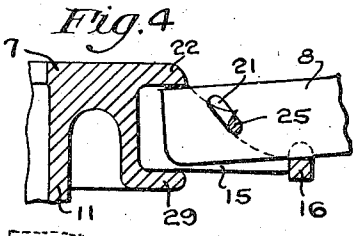


Fig. 2

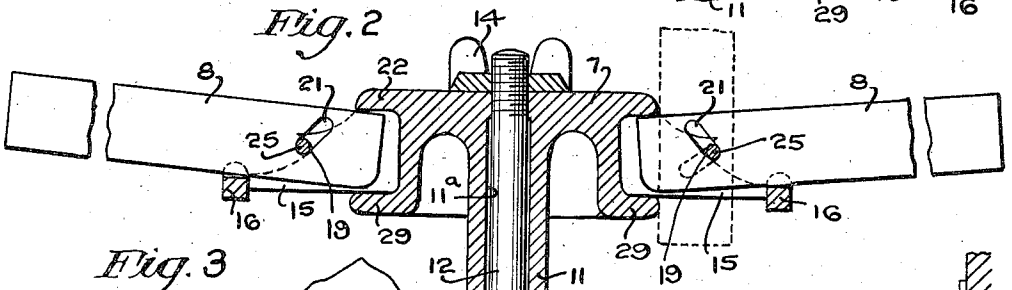
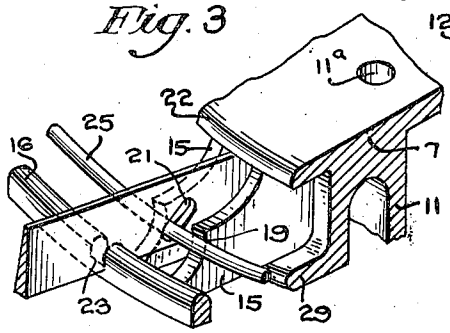


Fig. 3



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COLLAPSIBLE CLOTHES DRIER

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4 Claims. (Cl. 211—100)

1

This invention relates generally to clothes drying frames and more particularly to improvements in the construction of a type of clothes drying frame having a plurality of radially extending collapsible drying arms.

Among the objects of the present invention is the provision of a type of clothes drying frame having a plurality of radially extending drying arms which may quickly and easily be collapsed or expanded to either occupy a minimum of storage space or to provide a maximum length of effective clothes drying arms. It is a further object of this invention to provide means which will retain the drying arms in collapsed position positively locked against accidental displacement thereof and which will permit quick and easy disposition of selected arms in their expanded clothes drying position.

Other objects and advantages of the invention will be apparent from the description of the accompanying drawings in which:

Figure 1 is a plan view of the clothes drying frame of my invention in expanded position;

Figure 2 is a sectional view of the clothes drying frame taken on line 2—2 of Figure 1 and showing the clothes drying frame mounted upon a suitable bracket;

Figure 3 is a perspective view of a section of the clothes drying frame showing the means for mounting the drying arms;

Figure 4 is a sectional view of a single drying arm and the supporting means therefor with the arm in expanded position;

Figure 5 is a view similar to that of Figure 4 with the arm in an intermediate collapsed position; and

Figure 6 is a view similar to that of Figure 5 with the arm in fully collapsed position and positively locked against accidental displacement thereof.

Referring now to the drawings and more particularly to Figure 2 thereof, the clothes drying frame of my invention comprises generally a centrally disposed main supporting base member or hub 7, drying arms 8 mounted on the hub 7 and a supporting member 9 by means of which the frame may be mounted upon any suitable wall bracket, such as that designated by the reference numeral 10.

The generally circular shaped hub member 7, preferably of metal, has a hollow tubular depending sleeve 11, through which is adapted to extend a vertical post 12 which is an extension of the supporting member 9. Formed on the post 12 is a stop member 13 upon which the hub 7 rests, being securely held in this position by a wing nut 14 threaded on the post 12. If desired, the supporting member 9 may be reversed from that as shown for insertion downwardly through the bore 11a of the tubular sleeve 11 in order to provide

2

an overhead support for the member 7, in which case the stop 13 would engage the upper surface of the member 7 and the wing nut 14 the lower end of the tubular sleeve 11. An annular ring 16 and a plurality of circumferentially spaced outwardly extending radial arms 15 are preferably formed integral parts of the base member 7, the annular ring 16 interconnecting the outer ends of the arms 15. As most clearly appears in Figures 2 and 3, the arms 15 are each notched, as at 19, to provide a plurality of circumferentially alined shoulders or seats for a purpose to be described.

Formed integrally with the hub member 7, at the top thereof is a circumferential flange 22 which extends outwardly above the inner ends of the arms 15 and the lower face of which constitutes an abutment for the top edges of the inner ends of the drying members 8 in expanded position, as clearly appears in Figures 2, 3 and 4. Also formed integrally with the hub member 7, but at the bottom thereof is a second circumferential flange 29, similar to flange 22, which extends outwardly below the inner ends of the arms 15 and the outer edge of which, along with the outer edge of the flange 22, constitute stops for the top edges of the inner ends of the drying members 8 in collapsed position, as clearly appears in Figure 6, in which position the drying members 8 are positively locked against accidental displacement, as will be explained.

Individual lengthwise extending clothes-supporting drying arms 8, each with an elongated slot 21 adjacent the inner end thereof, are disposed between each pair of the arms 15, these drying arms 8, which are each tapered in cross-section to cooperate specially with the usual type of clothespin, being of any desired length and of any suitable material, such as wood. The slots 21 are arranged at an angle to length of the arms 8 with the upper ends of the slots closer to the inner ends of the arms 8. Each of these arms 8, which rests with its bottom edge in a seat 23 formed in the ring 16 (Figure 3) is held in place by means of a retaining wire 25 which extends commonly through the slots 21 of the several arms 8, the retaining wire 25 being held securely in position within the circumferentially alined seats 19 by drawing the wire tautly thereabout and twisting the ends together, as at 26. It will be noted that when each arm 8 is in expanded position (as shown in full lines in Figure 2), the upper edge of its inner end is engaged beneath the overhanging flange or ledge 22 while the lower edge thereof rests upon the seat 23 in the outer supporting ring 16, the wire retaining ring 25 then occupying a position adjacent the lower end of the elongated slots 21.

When these arms 8 are in the positions shown in full lines in Figure 2, the clothes drying frame

is in its expanded position, providing a maximum length of effective clothes drying arms. To collapse the frame, each arm 8 is pivotally raised about the wire 25 and pulled radially outwardly from the full line substantially horizontal position shown in Figures 2, 3 and 4, to the full line vertical position 27 shown in Figure 5, in which the retaining ring 25 occupies a position adjacent the upper end of the elongated slot 21. Each arm 8 is then moved downwardly and inwardly from the vertical position 27 of Figure 5 to the vertical position 28 of Figure 6 in which the upper edge of the inner end of the arm 8 is in engagement with the outer edges of the flanges 22 and 29, and in which the retaining ring 25 once again occupies a position adjacent the lower end of the elongated slot 21. When the arm 8 is so moved downwardly and inwardly from position 27 to position 28, the edge of the slot 21 a camming action results in the retaining wire 25 forcing the arm 8 inwardly against the stop flanges 22 and 29, this camming action being effective to positively lock the arm 8 in the collapsed vertical position 28 of Figure 6.

To move any selected arm 8 from the collapsed position 28 of Figure 6 to the expanded position of Figure 2, it is only necessary to raise the arm and thus move it outward to the position 27 of Figure 5. Then the arm 8 may be rotated downwardly from the position 27 of Figure 5 to the horizontal position of Figure 4 in which the upper edge of the inner end rests against the underside of the flange 22 and the lower edge rests on the seat 23 in the ring 16. It will be noted that means have thus been provided whereby the arms are retained positively locked in collapsed position against accidental displacement and whereby any arm may be selectively moved from a collapsed inoperative position to a fully extended operative position.

It will be understood, of course, that the present invention is susceptible of various changes and modifications which may be made from time to time without departing from the general principles or the real spirit thereof, and it is accordingly intended to claim the same broadly, as well as specifically, as indicated by the appended claims.

What is claimed as new and useful is:

1. In a collapsible clothes drying frame, in combination, a main supporting member having a plurality of circumferentially spaced radial elements extending outwardly therefrom, each pair of adjacent elements defining a space therebetween, a member extending circumferentially about and interconnecting the outer extremities of said radial elements, annular flanges integral with the frame and respectively overlying and underlying the inner portions of said elements, and a plurality of radially extending clothes supporting arms each having an elongated slot set at an angle to the length of the arm adjacent the inner end thereof, each arm being disposed with the slotted end thereof positioned between a pair of adjacent elements aforesaid, and relatively fixed pivot means for said arms projecting commonly through the slots thereof and supported by said radial elements.

2. In a collapsible clothes drying frame, in combination, a centrally disposed main supporting member having a plurality of circumferentially spaced radially extending wing-like elements, an annular member extending circumferentially about and interconnecting the outer extremities of said elements, annular flanges supported by the frame for respectively overlying and underlying the inner extremities of said elements, a plurality of radially extending clothes supporting arms each disposed between adjacent pairs of said wing-like elements, each of said arms having an elongated slot set at an angle to the length thereof adjacent the inner end of the arm, and a common retainer for said arms consisting of a relatively fixed wire bail extending circumferentially through the slots of said arms and supported by said wing-like elements at points spaced between said annular member and said annular flanges.

3. In a collapsible clothes drying frame, in combination, a centrally disposed main supporting member having a plurality of circumferentially spaced radially extending wing-like elements, an annular member extending circumferentially about and interconnecting the outer extremities of said elements, annular flanges supported by the frame for respectively overlying and underlying the inner extremities of said elements, a plurality of radially extending clothes supporting arms each disposed between adjacent pairs of said wing-like elements, each of said arms having an inclined elongated slot adjacent the inner end thereof, and a common retainer for said arms consisting of a relatively fixed wire bail extending circumferentially through the slot of said arms and supported by said wing-like elements at points spaced between said annular member and said annular flanges, the arrangement of said inclined slot and wire bail being such that lengthwise movement of each arm when in upright position will cause a horizontal movement thereof.

4. In a collapsible clothes drying frame, in combination, a centrally disposed main supporting member having a plurality of circumferentially spaced radially extending wing-like elements, an annular member extending circumferentially about and interconnecting the outer extremities of said elements, annular flanges supported by the frame for respectively overlying and underlying the inner extremities of said elements, a plurality of radially extending clothes supporting arms each disposed between adjacent pairs of said wing-like elements, each of said arms having an inclined elongated slot adjacent the inner end thereof, and a common retainer for said arms consisting of a relatively fixed wire bail extending circumferentially through the slot of said arms and supported by said wing-like elements at points spaced between said annular member and said annular flanges, the arrangement of said inclined slot and wire bail being such that a downward lengthwise movement of each arm when in upright position will effect engagement of the upper edge of each arm at points spaced to either side of the pivot point with the outer edges of said annular flanges.

PAUL BERMAN.

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