May 3, 1949. E. M. GILMORE, JR 2,469,298

RACK STRUCTURE

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Fig. 1

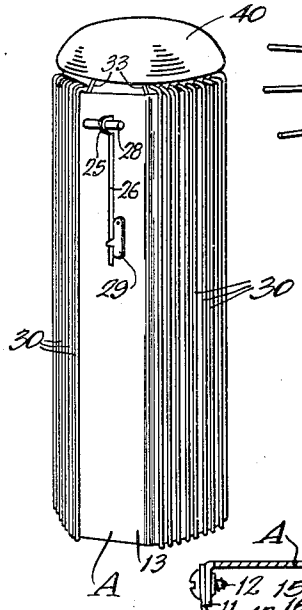


Fig. 2

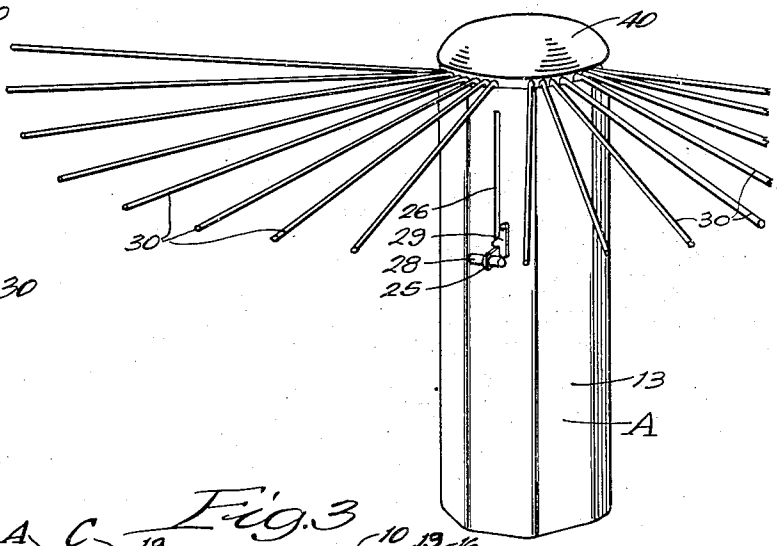


Fig. 3

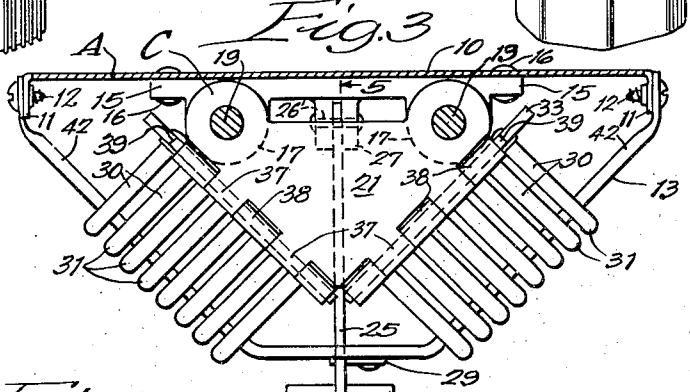
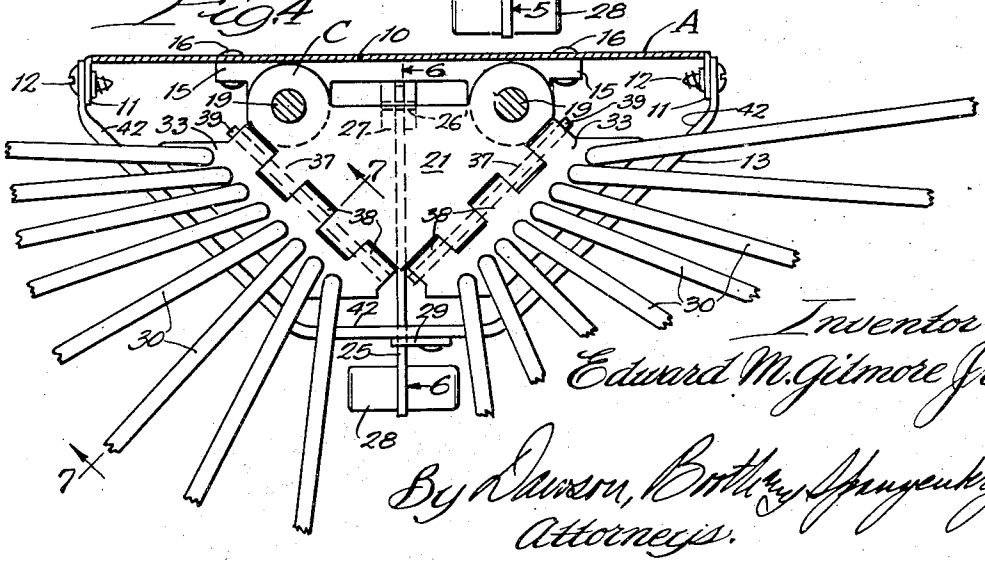


Fig. 4



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Fig. 5

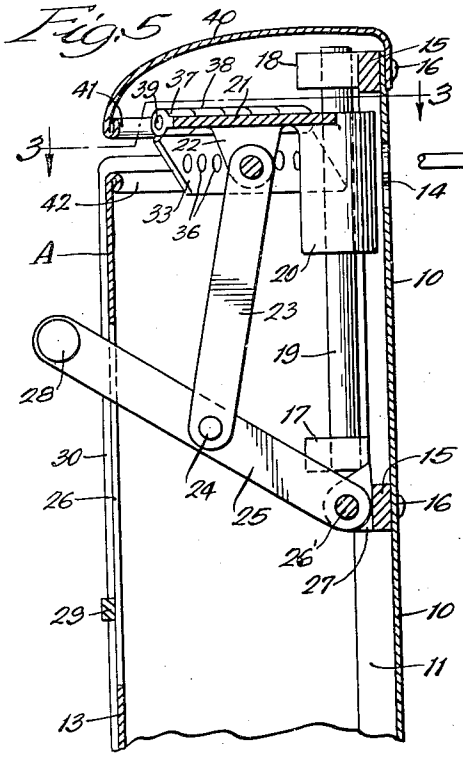


Fig. 6

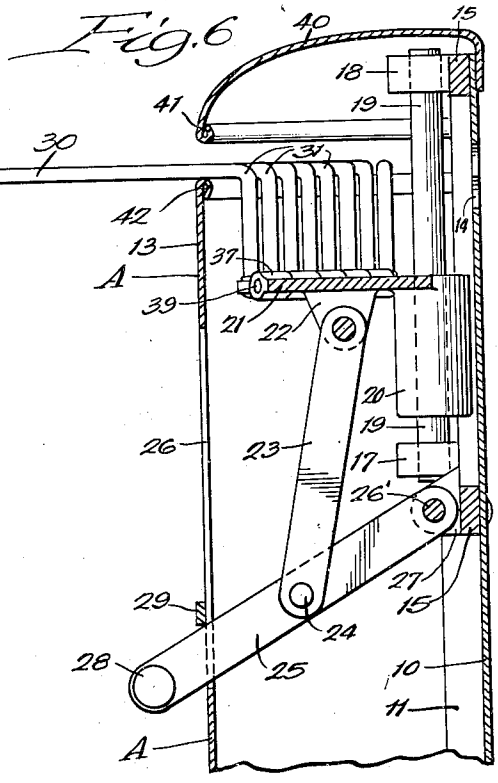
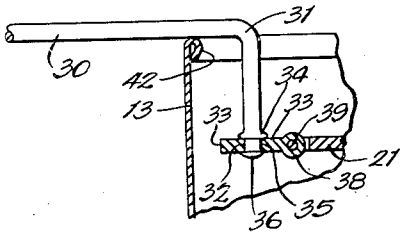


Fig. 7



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UNITED STATES PATENT OFFICE

2,469,298

RACK STRUCTURE

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Application October 4, 1945, Serial No. 620,240

5 Claims. (Cl. 211—171)

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This invention relates to a rack structure which may be adaptable for many uses. The invention is particularly useful as a rack for the drying of clothes, garments, etc.

An object of the invention is to provide a rack structure which will upon actuation provide a large number of drying supports or rods spaced at convenient angles for drying garments, etc., while, when the device is not in use, the supporting members hang in vertical position against the main support. A further object is to provide a simple structure wherein the supporting members lie in a compact position where they are out of the way, and upon actuation by means of a single handle swung to horizontal supporting position covering a fairly wide area. A further object is to provide a frame structure adapted to be supported upon the wall and equipped with a plurality of supporting rods, simple means being provided for collapsing the rods upon the frame so that they remain out of the way and for raising them quickly to horizontally spaced position for use as drying supports when desired. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated, in the preferred embodiment, by the accompanying drawings in which—

Figure 1 is a perspective view of a rack structure embodying my invention; Fig. 2, a view similar to Fig. 1 but showing the supporting members in extended horizontal position; Fig. 3, a sectional view, the section being taken as indicated at line 3 of Fig. 5; Fig. 4, a view similar to Fig. 3 but showing the support members in expanded or horizontal position; Fig. 5, a broken vertical sectional view, the section being taken as indicated at line 5 of Fig. 3; Fig. 6, a broken vertical sectional view, the section being taken as indicated at line 6 of Fig. 4; and Fig. 7, a detailed sectional view, the section being taken as indicated at line 7 of Fig. 4.

In the illustration given, A designates a casing member which may be of any suitable shape or construction. The casing A comprises a back strip of metal 10 with side flanges 11 secured by screws 12 to a front sheet of metal 13 which is generally or roughly semi-circular in shape. The back strip 10 may be provided with openings 14 enabling it to be conveniently supported upon a wall or the like.

Within the casing A is a carriage member C supported for vertical movement. The structure C may be of any suitable construction or shape. In the illustration given, a frame member 15 is

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secured by screws 16 to the back wall 10 and provides at its bottom spaced ears 17 and at its top spaced ears 18, the ears being aligned vertically in pairs so as to support in each pair a vertical guide rod 19. Mounted upon the guide rods 19 are the sleeve members 20 of the carriage C. The carriage C preferably consists of the sleeves 20 which are formed integrally with a horizontal plate 21. Depending from plate 21 is a flange 22 to which is pivotally secured a lever 23. At its lower end, the lever 23 is connected by pivot 24 to an actuating lever 25. The pivot 24 is at an intermediate point of lever 25. The inner end of lever 25 is connected by a pivot 26' to a flange 27 formed integrally with the frame member 15. The forward end of the actuating lever 25 extends through a horizontal slot 26 and the lever at its end may, if desired, be provided with a transverse handle 28. If desired, the actuating bar 25 may be latched in its lowermost position by the pivoted latch member 29, as shown more clearly in Fig. 2.

The support members or rods 30 are adapted to be actuated by the carriage C so as to raise them to horizontal position, as indicated in Figs. 2, 4 and 6. In the illustration given, each of the bars 30 is bent at right angles at 31 and the end of each rod is passed through an opening 32 in a plate 33. The plate 21 is triangular in shape and there are two plates 33, each pivotally connected to the plate 21 on one of the triangular sides. Each rod is provided with a collar 34 and a reduced shank portion 35. The end of the rod is preferably secured against the plate by riveting thereon a head 36, as shown more clearly in Fig. 7. The plates 33 and 21 may be pivotally secured together by any suitable means. In the illustration given, the plate 21 is provided with spaced tubular sockets 37 and the plate 33 is provided with spaced tubular sockets 38. The sockets 37 of plate 21 are received between the sockets 38 of plate 33 and the two are connected in a hinge structure by a pivot rod 39.

If desired, the casing A may be provided with a hood member 40 which is preferably welded to the rear casing wall 10. The forward lower edge of the hood is preferably turned at 41 to form a bead spaced above the wall 10. If desired, the front wall 13 may be turned downwardly to form a bead 42 which supports the rods 30.

In the operation of the structure, the casing A may be supported in any desired way for supporting the drying or extension elements 30. The casing A may be employed as a stand resting upon the floor or upon a table, etc., but preferably

it is suspended from a wall by any hook means which will extend through openings 14 of the rear wall of the casing. Normally the carriage plate 21 is in the raised position shown more clearly in Figs. 1, 3 and 5, and the actuating handle 28 extends toward the raised position illustrated. In this position, the support members or rods 30 hang in vertical position, lying closely around the roughly semi-circular casing of body 13. In this position the rods are out of the way and present no obstruction in the room. When it is desired to employ the rack as a drier or for any other purpose, the handle 28 is drawn downwardly to the position shown in Fig. 2 in which position it is locked by the latch 29. As the lever 25 swings downwardly, it draws the plate 21 by means of the intermediate link 23 down to the position shown in Fig. 6. The downward movement of plate 21 causes plate 33 also to swing upwardly and to carry the rods 30 to operating position. In this movement, the plate 33 swings from the vertical position shown in Fig. 5 to the substantially horizontal position shown in Figs. 6 and 7 and the rods 30 assume the horizontal position shown. After the rods have moved to the horizontal position, they may be swung laterally upon the bead 42 of the casing so as to provide a spacing of any desired degree, the swivel connection provided between the reduced end 35 of the rod and the opening 32 of plate 33, permitting such movement.

For returning the rods or support members 30 to their normal vertical position, it is only necessary to swing the pivoted latch 29 laterally to clear the bar 25 and the bar 25 is swung to the raised position shown in Figs. 1 and 5. As the carriage plate 21 is swung upwardly, the rods 30 move to vertical position and the hinge plate 33 also swings to vertical position as illustrated best in Fig. 5. In the latter position, the actuating lever 25 is maintained in its raised position by the weight and angular position of the rods 30.

While in the foregoing description, I have set forth a large number of details as illustrative as one mode of the invention, it will be understood that considerable variation may be made in such details by those skilled in the art without departing from the spirit of my invention and the claims herein should be properly looked to as definitive of the scope of the invention.

I claim:

1. A rack structure comprising a frame providing a generally semi-circular track at its top, a carriage member slidably mounted in said frame for vertical movement, a plurality of support members having portions bent at right angles and connected by pivotally supported means to said carriage member, portions of said support members resting upon said semi-circular track, and means for raising and lowering said carriage member to move said support members to vertical and horizontal positions.

2. A rack structure comprising a frame providing a generally semi-circular track, a carriage member slidably mounted in said body for vertical movement, support members having their inner ends bent at substantially right angles and their ends connected by pivotally supported means to said carriage member, and means for moving said carriage member to raised and lowered positions to bring said supporting members to vertical and horizontal positions respectively, said supporting members, when in vertical position, engaging said track at about the point of bend in said support members.

3. A rack structure comprising a frame providing an arcuate track at its top, a carriage member slidably mounted in said frame for vertical movement, a plurality of rods resting upon said track and having their inner portions bent to form short angular members, means for pivotally connecting the short angular portions of said rods to said carriage member, and means for raising and lowering said carriage member.

4. A rack structure comprising a frame providing an arcuate track at its top, a carriage member slidably mounted in said frame for vertical movement, a plurality of rods resting upon said track and having their inner portions bent to form short angular members, means for pivotally connecting the short angular portions of said rods to said carriage member, and means for raising and lowering said carriage member, said last-mentioned means comprising a pivotally mounted actuating member extending beyond said frame and a link member connecting said actuating member and said carriage member.

5. A rack structure comprising a frame providing a generally semi-circular track, a carriage member slidably mounted in said frame for vertical movement, said carriage member having angular sides, plates hingedly connected to the angular sides of said carriage member, means for raising and lowering said carriage member, and support members resting upon said track and having their inner ends bent at substantially right angles and connected to said hinged plates.

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