REVOLVING GARMENT RACK
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ABSTRACT OF THE DISCLOSURE

A rotatable garment rack including two vertically spaced hangrod frames each provided with a pair of hangrods located on opposite sides of the frames and pivotable to two angular positions whereby one or the other of the hangrods extends parallel to the front of the rack.

This invention relates to revolving garment racks of the type which are initially constructed, or are capable of being readily modified, to include at least two vertically spaced rotatable hangrod frames each comprising a pair of hangrods located on diametrically opposite sides of the frame and arranged to be pivoted into two stable angular positions where one or the other of the hangrods is at and extends parallel to the front of the rack.

Revolving garment racks of the type described above are generally very bulky, costly, unattractive, and/or difficult to assemble or disassemble and operate. For example, in one common form of revolving garment rack, two tiers of hangrod frames are mounted for simultaneous rotation upon a relatively bulky carriage mechanism mounted upon the floor. To rotate the hangrod frames, it is necessary to pull the frames as a unit forwardly on the carriage referred to, which movement releases a rotatable support for the frames and provides clearance for the simultaneous rotation of the frames. This rack is very difficult to service and is costly to manufacture and install. Also, the carriage mechanism takes up a great deal of floor space and substantial effort is required to pull out and rotate the hangrod frames.

One of the objects of the invention is to provide an improved rotating garment rack which initially comprises, or is designed readily to accommodate, at least two vertically spaced hangrod frames which can be independently rotated into diametrically opposite positions with relative ease.

Another object of the invention is to provide a revolving garment rack as described, which occupies little or no floor space and is otherwise compact and attractive.

A further object of the invention is to provide a revolving garment rack as described which is easy to assemble or disassemble and install, and can be readily converted from a single hangrod frame unit to a double hangrod frame unit or vice versa with a minimum of effort.

Still another object of the invention is to provide a revolving garment rack as described which satisfies any one or all of the aforesaid objectives and which further is substantially less expensive to manufacture than comparable revolving garment racks heretofore constructed.

In the most advantageous form of the invention, the main support member for the entire rack is a normally stationary vertical hollow support column which freely rests on a suitable base support which holds the column against lateral but not upward movement and is supported against lateral movement at the top thereof by a suitable collar or the like which permits the column to be vertically raised from the base support upon removal of a nut and bolt or other anchoring means. The normally stationary column has one or more hangrod frames thereon, each including a pair of spaced parallel hangrods on opposite sides thereof and a hollow cylindrical hub portion rotatably mounted around the column upon a support member on the column. The support member and the hub of each hangrod frame have cooperating parts which provide automatic stops at two opposite angular positions of the hangrod frame where one or the other hangrod is at and extends parallel to the front of the rack.

The support member upon which each hangrod frame is rotatably supported is most advantageously a pin removably fitted into a selected pair of horizontally aligned openings in the column so the pin projects beyond opposite sides of the column. The column is provided with a number of pairs of pin-receiving openings to provide for a selection of the elevation of each hangrod frame. The aforementioned stops are each most advantageously a pair of diametrically spaced recesses in the bottom edge of the hub of each hangrod frame which recesses receive the projecting ends of a support pin in the two angular positions of the frame referred to. The hub recesses are preferably shaped so that the hub can, with a modest force, be rotated to remove the recesses of the hub from the pin where the hangrod support frame can be easily pivoted into the other angular position where the recesses fit over the support pin.

A lateral cylindrical thrust bearing may be supported around the column between the hub of each hangrod frame and the column. The thrust bearing can be positioned at different elevations on the column as by means of a pin fitable into a pair of said column openings and supporting the bearing.

The revolving garment rack described above can be made at a cost which is only a fraction of the cost of comparable revolving garment racks heretofore marketed.

Since the hangrod frames are separately rotatable on the column, the user supplies only the force necessary to rotate one hangrod frame at a time. Also, the floor beneath the rack is not encumbered by any bulky support structure, so that the rack base has a slender attractive appearance and the floor beneath the rack is clear for ease of cleaning the floor. Moreover, the rack described needs very little maintenance and is easy to assemble and disassemble and install.

With the rack construction described, if it is desired to remove a hangrod frame from, or to add a hangrod frame upon the column, this can be simply achieved by a few simple operations including release of a nut and bolt from the aforesaid collar and lifting the vertical column from its base support to provide clearance for the sliding of the hub of a hangrod support frame upon or from the column through the space left at the bottom of the column. Where a hangrod frame is being mounted on the column, the frame is fixed in position by merely inserting a support pin in one of the pairs of openings on the column and dropping the hub of the hangrod frame thereupon. Each support pin is preferably fixedly locked on the column by providing outwardly facing shoulders on the projecting ends of each support pin, as by providing reduced ends on each pin, which shoulders are positioned within the hub of a hangrod frame when the frame is dropped into position upon the support pin. The cylindrical inner wall of the hub acts as a stop preventing withdrawal of the pin from the column.

The above and other objects, advantages and features of the invention will become apparent upon making reference to the specification to follow, the claims and the drawings wherein:

FIG. 1 is a perspective view of a pair of revolving garment racks constructed in accordance with the preferred form of the invention;
FIG. 2 is a plan view of the racks shown in FIG. 1;
FIG. 3 is a front elevational view of one of the racks shown in FIG. 1; FIG. 4 is a side elevational view of the rack shown in FIG. 2; FIG. 5 is an enlarged fragmentary view of a portion of the rack shown in FIG. 4; FIG. 6 is a vertical sectional view through the portion of the rack shown in FIG. 5, taken along line 6—6; and FIG. 7 is an enlarged vertical sectional view of the base portion of the rack, taken along section line 7—7 in FIG. 3.

Referring now more particularly to FIGS. 1 and 2, a number of revolving garment rack units 2 are there shown including features of the invention. As illustrated, the rack units are supported next to a vertical wall 4 upon which the upper portion of each rack unit is supported by a wall bracket 5. The bottom of each rack unit is supported from the floor 6 by a base support 7 (FIGS. 3 and 4). Where desired, the upper portion of each rack unit may be supported by an overhead horizontal wall, although most installations would be supported from a vertical wall.

Each revolving garment rack unit 2 illustrated in the drawings comprises a pair of vertically spaced hangrod frames 8—8 which are separately rotatably mounted upon a normally stationary vertical column 9. As previously indicated, the bracket 5 and the base support 7 engage the column 9 in a manner to permit the column simply to be raised from the floor 6 after removal of a nut and bolt assembly 11 which anchors the column to a collar portion of the bracket 5. Each hangrod frame 8 comprises a pair of straight hangrods 14—14 preferably of circular cross section which are anchored to a hollow cylindrical hub 18 by suitable struts or arms 20. The arms 20 and the hub 18 may constitute a single casting. Each hangrod 14 is spaced the distance from the hub 18 which is sufficient to accommodate hanger supported garments 23 (FIG. 1). The ends of the hangrods 14—14 are interconnected by end frame members 15—15 which act as stops preventing the movement of the hooked necks 17 of the garments supported hangers 23 off of the ends of the hangrods 14—14.

The hub 18 of each hangrod frame is rotatably supported on the column 9 at a selected elevation by means most preferably comprising a cylindrically shaped support pin 25 (FIG. 6) projecting from opposite sides of the column. The pin 25 forms a pivot or bearing support for the associated hangrod frame. The support pin 25 can be extended into any one of a number of pairs of opposite holes 26—26 formed in the column 8, which is preferably a hollow column, selectively to vary the elevation of the hangrod frame involved.

In the preferred manner to be described, each hangrod frame 8 can be rotated into two stable positions where one or the other of the hangrods 14 thereof is at the front of and extends parallel to the front of the rack unit, as best shown in FIGS. 2, 3 and 3. After the customer has examined the garments supported on a hangrod 14, the garments supported on the other hangrod 14 then obscured from view may be brought to the front of the rack unit by merely rotating the hangrod frame involved and rotating the same 180 degrees. Automatic stops are provided to stop the hangrod frame in its two angular positions where the hangrods 14 are at the front of the garment rack unit. The stops are preferably shoulders formed by a pair of V-shaped recesses 27—27 formed in the bottom edge of the hangrod frame 18 of each hangrod frame. These are located at diametrically opposite points on the hub and are shaped to receive reduced ends 25a—25a of the support pin 25. Due to the small incline of the recesses 27—27, the associated hangrod frame can be easily moved from a position where the hub recesses 27—27 fit over the associated support pin 25 to a position where the bottommost edge of the hub 18 rides on the ends of the pin 25.

The hollow hub 18 of each hangrod frame has a cylindrical opening therein defined by a cylindrical wall 18a (FIG. 6) which is spaced from the collar 9. A cylindrical support pin 25 has a pair of outwards facing shoulders 33—33 formed by the reduced ends 25a—25a thereof. When the hub 18 of a hangrod frame is dropped into position upon a support pin 25, the pin shoulders 33—33 are located slightly inwardly of the cylindrical wall 18a of the hangrod frame involved so that the pin shoulder pin cannot be removed from the selected column holes 26—26 without raising the hangrod frame from the pin. A suitable cylindrical lateral thrust bearing 35 made of bronze or other suitable bearing material is associated with each hangrod frame and most advantageously loosely supported around the column 9 in an annular space between the hub wall 18a of the associated hangrod frame and the column so the bushing rotates around the column upon rotation of the hangrod frame at an intermediate speed to reduce friction between the bearing and the hub 18.

A hangrod frame 8 can be repositioned along the column 9 by using one person to raise the hangrod frame and bushing involved to a point where it does not interfere with the removal of the pin 25, and another person to remove the support pin and reposition the same at the new location on the column 9. The hub 18 of the column after removal of the associated pin 25 by raising the column 9 from its base support 7 after removal of the associated frame and the associated bushing involved is then dropped into position upon the repositioned support pin 25. A hangrod frame can be removed from the column 9 if it is the lowermost frame on the column after removal of the associated pin 25 by simply raising the column 9 from its base support 7 after removal of the associated frame and the associated bushing involved.

The base support 7 for the column 9 most advantageously comprises a base plate 7a anchored to the floor by bolts or screws 40 (FIG. 7) and an adjustable plug 7b which is integrally secured to the base plate 7a. The plug 7b has a threaded Shank 7c projecting upwardly from the base plate 7a. Turning of the plug 7b then raises the column 9 for adjusting the elevation of the column by placing a suitable tool (not shown) in one or more openings 7e in the plug 7b and turning the same.

It should be apparent that the revolving garment rack unit 2 described above is of simple and economical construction. The mounting of the hangrod frames 8—8 so that they are independently rotatable about a normally stationary column 9 minimizes the effort required in rotating a hangrod frame between its opposite extreme positions. Moreover, except for the limited area occupied by the base plate 7a, the design is unencumbered and may be readily kept clean and neat in appearance. Also, with the simplicity of the construction of the invention, little or no maintenance is required to keep the same in operation and it can be readily assembled, disassembled and installed and hangrod frames added or removed from the column 9 with relative ease.

It should be understood that numerous modifications may be made in the most preferred form of the inven-
We claim: 1. A revolving garment rack comprising: a normally stationary supported vertical column having vertically spaced hangrod frame support means thereon, a pair of vertically spaced hangrod frames having hollow hubs separately rotatably mounted around said column upon said respective support means, each of said hangrod frames including a pair of parallel straight hangrods located on diametrically opposite sides of the frame and spaced about the same distance from the hub thereof to leave room for hanger supported garments to be hung on said hangrods, the hub of each hangrod frame having a cylindrical opening therein having an axis centered with respect to the axis of said column, the cylindrical defining wall of said cylindrical hub opening being spaced from the periphery of the column to provide an annular space therebetween, and the ends of said support pin when mounted on the column having upwardly projecting portions forming outwardly facing shoulders at each end thereof and located beyond the periphery of the column and within said hub wall, to prevent withdrawal of the pin from the associated column openings when the hangrod frame hub is seated upon the pin.

2. A revolving garment rack comprising: a normally stationary supported vertical column having vertically spaced hangrods openings, a support pin extendable into selected ones of said openings of the column, a hangrod frame hub having a hollow hub rotatably mounted around said column and upon said support pin, said hangrod frame hub having a cylindrical opening therein having an axis centered with respect to the axis of said column, the cylindrical defining wall of said cylindrical hub opening being spaced from the periphery of the column to provide an annular space therebetween, and a lateral thrust bearing for each hangrod frame supportable on said column at various elevations along said column to be located within said annular space in each hangrod frame hub and engaged by said cylindrical hub wall during the rotation of the hangrod frame, and said support means and the hubs of said hangrod frames having engageable stepping means for stopping the rotation of the hangrod frames in two angular positions spaced 180 degrees from one another, where said hangrods are at the front of and extend parallel to the front of the rack where access to the rack is obtained.

3. A revolving garment rack comprising: a normally stationary supported vertical column, a hangrod frame having a hollow hub rotatably mounted around said column upon said support means, said hangrod frame including a pair of parallel straight hangrods located on diametrically opposite sides of the frame and spaced about the same distance from the hub thereof to leave room for hanger support garments to be hung on said hangrods, said support means and the hub of said hangrod frame having engageable stopping means for stopping the rotation of the hangrod frame in two angular positions spaced 180 degrees from one another, where said hangrods are at the front of and extend parallel to the front of the rack where access to the rack is obtained, and said stopping means comprising a pair of diametrically oppositely located V-shaped recesses on the bottom edges of the hub of said hangrod frame and curved portions of said support means which portions fit into said hub recesses to leave room for hanger supported garments to be hung on said hangrods, and means on one of said hubs of said hangrod frame and said hangrod support means which engage the other of same to stop and hold the hangrod support frame in opposite angular positions where said frames are respectively at the front of the garment rack, and the hangrod frame being removable from the column upon the removal of said hangrod frame support means from its operative position and raising the column to provide a clearance at the bottom thereof for removal of the hangrod frame from the bottom of the column.

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