CLOTHES DRYING RACK

FIELD OF THE INVENTION

[0001] The present invention relates to clothes drying, and more particularly to a clothes drying rack.

BACKGROUND

[0002] With the increased demand for housing fuelling the rapid development of private housing developments such as apartments, condominiums and executive condominiums, the sizes of private housing units have correspondingly decreased in size. Constraints in space within the private housing unit have led owners attempting to maximize space by utilizing space saving furniture.

[0003] In contrast with public housing, it is common for property developers of private housing developments to prohibit the construction of outdoor clothes drying racks on the exterior wall of the building like those proposed in Singapore Patent Application No. 201205532-3 filed on 25 July 2012, from which this application claims priority from. Such outdoor clothes drying racks damage the façade of private housing developments and are therefore discouraged by property developers and architects. This has led property developers to provide customised clothes drying racks within the housing units.

[0004] Property developers install customised clothes drying rack in each of these housing units with a view to save space. An example of such a customised clothes drying rack is one that is ceiling-mounted and can be folded down when in use. While such clothes drying racks are space saving in nature, folding the rack is cumbersome and inconvenient as a user may require an elevated height to reach the clothes drying rack on the ceiling. Even with the use of an external bar to aid the pulling down of such racks to a usable position, it requires some amount of effort to pull the rack down. Alternative clothes drying rack used by owners are non-wall mounted foldable clothes drying rack, having an X-frame profile which can be folded away when not in use so as to minimize space. However, the disadvantage of the aforementioned clothes drying racks is that the clothes hanging capacity is limited. The

problem is exacerbated when large items such as bedding items are required to be hung for drying which often times, the clothes drying rack is not able to accommodate large clothing items.

[0005] Therefore, the object of the invention is to provide a solution that overcomes the above disadvantages or at least provide a clothes drying rack that addresses the above problems.

SUMMARY OF INVENTION

[0006] According to a first aspect of the invention, there is provided a clothes drying rack comprising a support rod having a mounting means for mounting to a wall surface, a plurality of support members rotatably mounted on the support rod, a plurality of hanging rods each mounted on the support member wherein at least one of the hanging rods includes an extensible arm pivotable about the end of the at least one of the hanging rods, wherein the extensible arm is pivotable between an extended position where the extensible arm is an extension of the hanging rod and a folded position where the extensible arm is adjacent to the hanging rod.

[0007] Preferably, the extensible arm is approximately the same length as the at least one of the hanging rods.

[0008] Preferably, the length of each of the plurality of hanging rods is in the range of 2-5 ft.

[0009] Preferably, the plurality of hanging rods are flat.

[0010] Preferably, the plurality of support members are mounted on the support rod in a stacked arrangement.

[0011] Preferably, the support rod is threaded at each end and secured by a capping member at each end.

[0012] Preferably, the planar surface of each of the plurality of hanging rods is aligned with the central axis of the support rod.

[0013] Preferably, each of the hanging rods includes a plurality of through-holes positioned along the length of the hanging rod.

[0014] Preferably, the plurality of through-holes are equidistant from each other along the length of each of the plurality of hanging rods.

[0015] The invention will now be described in detail with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The accompanying figures illustrate disclosed embodiment(s) and serve to explain principles of the disclosed embodiment(s). It is to be understood, however, that these drawings are presented for purposes of illustration only, and not for defining limits of the application.

[0017] Fig. 1 is a perspective view of a clothes drying rack in accordance with an embodiment of the present invention;

[0018] Fig. 2(a) is a close-up perspective view of A of Figure 1;

[0019] Figure 2(b) is a close-up perspective view of B of Figure 1;

[0020] Figure 3 is a close-up exploded perspective view of how the support rod and support members is assembled;

[0021] Figure 4(a) is a front view of the support rod with support members;

[0022] Figure 4(b) is a side view of the clothes drying rack mounted to the wall surface.

[0023] Figure 5 is a plan view of the clothes drying rack;

[0024] Exemplary, non-limiting embodiments of the present application will now be described with references to the above-mentioned figures.

DETAILED DESCRIPTION

[0025] In the following description, the preferred embodiments of the present invention are described. It shall be apparent to those skilled in the art, however, that the present invention may be practiced without such details. Some of the details are not described at length so as not to obscure the present invention.

[0026] Figure 1 shows a perspective view of a clothes drying rack 10 in accordance with an embodiment of the invention. The clothes drying rack 10 includes a support rod 19 (shown in Figure 3) having a mounting means 11 for mounting to a wall surface 20. The support rod 19 includes support members 13 which are rotatably mounted on the support rod 19 and capped at each end of the support rod 19 by a capping member 12. Each support member 13 has a hanging rod 14 projecting from the support member 13. On at least one of the hanging rods 14, there is an extensible arm 15 pivotally movable at a proximate end of the hanging rod 14. The mounting means 11 is any form of mounting or combination of mounting members that can be affixed to either the capping member 12 or the support members 13 that allow the support rod 19 to be mounted to the wall surface 20. The mounting means is well known in the art and for the purposes of the description, a detailed description of the mounting means is unnecessary. However, in a preferred embodiment, the mounting means 11 includes a bracket coupled to the capping member 12 at each proximate end of the support rod 19. The bracket includes through-holes for it to be fastened to a corresponding hole in the wall surface.

[0027] Each of the support members 13 includes a hanging rod 14 extending from the support member. The hanging rod 14 can be rotated around the support rod according to use. When the clothes drying rack 10 is mounted to the wall surface 20, the hanging rod 14 can be rotated approximately 180 degrees from end to end, that is, from wall surface to wall surface. However, it is envisaged that the rotation of the hanging rod 14 depends on how the clothes drying rack 10 is mounted on the wall surface 20 as other arrangements may be possible such as when the clothes drying rack 10 is mounted in a corner of a room where the rotation is

limited to less than 180 degrees. The hanging rod 14 is an elongate rod for hanging clothing items from it and its length ranges from 2 feet to 5 feet. The hanging rod 14 has a cross-sectional profile that is flat and is made of metal to provide stability and durability of the clothes hanging rack 10. It will be appreciated that any suitable metals such as stainless steel, aluminum or the like may be used. The cross section of the hanging rod 14 is rectangular and is non-hollow so as to prevent moisture from collecting within the hanging rod 14.

[0028] Figure 2(a) shows a close-up view of the portion A in Figure 1. The hanging rod 14 includes an extensible arm 15 movable at a pivot point 16 at the free end of the hanging rod 15. The pivoting movement of the extensible arm 15 about pivot point 16 allows movement of the extensible arm 15 from an extended position where the arm 15 is an extension of the hanging rod 14 to provide an increased length for hanging of clothes to a folded position where the extensible arm 15 can be folded towards the opposite end of the hanging rod 14 to be adjacent the hanging rod 14. When the extensible arm 15 is in the extended position, this provides the advantage of hanging a large single piece of clothing item or an increased number of clothing items from both the hanging rod 14 and the extensible arm 15. When the extensible arm 15 is in the folded position, the usable length for hanging of clothing items is simply the length of the hanging rod 14. It will be appreciated that although the extensible arm 15 is shown on only one hanging rod 14, it is possible that other hanging rods can have extensible arms.

[0029] Figure 2(b) shows a close-up view of the portion B in Figure 1. Figure 3 shows how the support rod 19 and support members 13 are assembled. The support rod 19 includes support members 13 which are arranged in a stacked manner on the support rod 19. The support members 13 are stacked one on top of each other. Each end of the support rod 19 may have a threaded end from which a capping member 12 with a corresponding threaded hole may be secured onto the threaded end of the support rod 19 to restrict the lateral movement of the support members 13 within the support rod 19. To secure the support members 13 to the support rod 19, the threaded hole of the capping member 12 is screwed to one end of the support rod 19 and each of the support members 13 can be stacked one by one on the support rod 19. The other threaded end of the support rod 19 can then be secured in a similar manner by another capping member 12. The height of the support rod together with the support members 13 and capping members 12 is approximately 8 inches. Each of the support members 13 has a height of approximately 1.5 inches and a diameter of approximately 1.5 inches. The

capping member 12 has a height of approximately 1 inch and a diameter of approximately 1.5 inches. As mentioned above, the height of the support rod 19 can be increased accordingly to accommodate more support members 13. It will be appreciated that the total number of support members 13 to be mounted on the support rod 19 is variable and can be adjusted according to need. Due to the ease of mounting the support members 13 on the support rod 19, assembly of the clothes drying rack 10 can be easily accomplished. The number of support members 13 can be added to the extent the length of the support rod 19 allows or subtracted according to need. Support members 13 without hanging rods 14 may also be rotatably mounted to fill the unused length of support rod 19 should less hanging rods be utilized.

[0030] Figure 4(a) shows a front view of the assembled drying rack with support members 13 stacked on top of each other and capped by the capping members 12.The hanging rod 14 has a flat cross-sectional profile which allows through-holes 18 to be formed along the length of the hanging rod 14. The planar surface of each of the hanging rod 14 is aligned with the central axis of the support rod 19. Figure 4(b) shows a side view of the clothes drying rack 10 with the extensible arm 15 fully extended. The through-holes 18 can be equidistant from each other along the length of the hanging rod 14 so that hangers with clothing items can be hung onto the hanging rod 14 in an orderly manner. Preferably, each through-hole 18 is arranged approximately 4 inches apart from the next through-hole 18. Each of the through-holes 18 is dimensioned to allow the hook of a clothes hanger to be received by the through-hole 18 so that lateral motion of the hook will be impeded thereby securing the clothes hanger to the hanging rod. Each through-hole 18 has a diameter of approximately 10-15mm. On each hanging rod 14, each through-hole 18, except for the first through-hole 18 at one end of the hanging rod 14, is positioned approximately midway between two through-holes on the adjacent hanging rod 14. In other words, the through-holes 18 on each hanging rod are arranged alternately to the adjacent hanging rod 14 such that the through-holes 18 on the adjacent hanging rod will not be aligned with one another. Similarly, the extensible arm 15 includes a plurality of through-holes arranged in a similar manner to that of the hanging rod 14. Figure 4(b) shows the side view of the clothes drying rack 10 with the through-holes 18 arranged on the hanging rods 14 and the extensible arm 15 as described above.

[0031] Figure 5 shows the plan view of the clothes drying rack 10 mounted to the wall surface 20. When in use, each of the hanging rods 14 is rotatable about the support rod 19. As mentioned above, the hanging rods 14 can be rotated approximately 180 degrees from each

end of the wall surface 20. A user can arrange the hanging rods 14 such that they are angularly spaced apart from each other. This allows clothing items to be hung on the hanging rods 14 so that efficient drying of the clothing items can be achieved. Alternatively, if only one or more of the hanging rods 14 are used, the unused hanging rods 14 can be rotated towards the wall surface 20 such that the hanging rods 14 are aligned substantially parallel to the wall surface 20 so as not to cause undue obstruction. When not in use, all the hanging rods 14 can be rotated to be aligned substantially parallel with the wall surface 20 and against the wall surface 20 so that space is saved.

[0032] It will be apparent that various other modifications and adaptations of the application will be apparent to the person skilled in the art after reading the foregoing disclosure without departing from the spirit and scope of the application and it is intended that all such modifications and adaptations come within the scope of the appended claims.

Claims

1. A clothes drying rack comprising:

a support rod having a mounting means for mounting to a wall surface;

a plurality of support members rotatably mounted on the support rod;

a plurality of hanging rods each mounted on the support member wherein at least one of the hanging rods includes an extensible arm pivotable about the end of the at least one of the hanging rods;

wherein the extensible arm is pivotable between an extended position where the extensible arm is an extension of the hanging rod and a folded position where the extensible arm is adjacent to the hanging rod.

2. The clothes drying rack according to claim 1, wherein the extensible arm is approximately the same length as the at least one of the hanging rods.

3. The clothes drying rack according to any of the above claims, wherein the length of each of the plurality of hanging rods is in the range of 2-5 ft.

4. The clothes drying rack according to any of the above claims, wherein the plurality of hanging rods are flat.

5. The clothes drying rack according to any of the above claims, wherein the plurality of support members are mounted on the support rod in a stacked arrangement.

6. The clothes drying rack according to any of the above claims, wherein the support rod is threaded at each end and secured by a capping member at each end of the support rod.

7. The clothes drying rack according to any of the above claims, wherein the planar surface of each of the plurality of hanging rods is aligned with the central axis of the support rod.

8. The clothes drying rack according to any of the above claims, wherein each of the hanging rods includes a plurality of through-holes positioned along the length of the hanging rod.

9. The clothes drying rack according to claim 8, wherein the plurality of through-holes are equidistant from each other along the length of each of the plurality of hanging rods.