

A LAUNDRY RACK



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Field Of The Invention



G00002

5 The present invention relates to a laundry rack, and more particularly to a laundry rack for use in tall buildings.

Background Of The Invention

10 Laundry racks are used for hanging clothes and other laundry items such as bedding for drying.

 One conventional laundry rack is shown in Figure 1A. This laundry rack comprises a hanger such as a pole 102 made of wood, bamboo or metal, on which clothes may hang. A short rigid pipe 104 made of metal is fixed on the external wall of a building, below a window, at one end and serves to receive and support the pole. To provide sufficient space for hanging clothes the pole is usually at least 2 metres in length.

20 As the pole is fixed into the pipe on the wall of the building, the free end of the pole is beyond the reach of the user at the window. Clothes are therefore fixed to the pole first and the pole with clothes attached is held out through the window for insertion into the pipe. As the pole with attached wet clothes may be heavy, the user may face difficulties inserting the pole in the pipe outside the building, particularly in windy conditions. The pole may not engage correctly with the pipe and this could lead to the pole or clothes from falling from the building. Further there is a risk that when the user leans out of the window to insert or remove the pole from the pipe he may lose balance. Further, one way in which certain clothes such as T-shirts, singlets, vests etc. may be attached to the pole is by placing the pole through the loop portions of the clothes, as shown in Figure 1A. This manner of attaching the clothes is difficult before the pole is inserted in the pole.

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Another conventional clothes rack is shown in Figure 1B. This clothes rack comprises two wall mount supports 202, 204 onto which a plurality of poles are fixed. The poles are mounted parallel and proximate to the window through which the user has access. However, due to structure restrictions the number of poles are limited and therefore the hanging capacity of the clothes rack is insufficient for drying a normal laundry load.

UK Patent Application 9019800.3 to Halson Yuen describes a retractable clothes drying rack comprising a pair of elongate longitudinal members and a pair of elongate lateral members fixed together to define a rectangular frame for attachment to the wall of a building via mounts. Across the two elongate lateral members lie a plurality of rod assemblies for carrying clothes. A plurality of pivot assemblies are provided on the lateral member further from the wall, for adjustably positioning the rod assemblies, the rod may be individually pivoted upwards away from the lateral member further from the wall.

Summary Of The Invention

It is an aim of the present invention to obviate or mitigate any problem associated with the prior art and provide an easy to use and safe laundry rack.

According to the present invention in a first aspect there is provided a laundry rack comprising a support and a rod assembly for attaching laundry, the rod assembly having a proximal end and a distal end, the rod assembly being pivotally connected to the support at the distal end and actuatable between a closed position for hanging laundry, and an open position for loading / unloading laundry, in which the laundry rack comprises releasable locking means for locking the rod assembly in the open position.

Preferably the support comprises a support frame.

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The laundry rack according to the present invention allows a user to access the rod assembly for attaching clothes without having to hold the rod assembly. The rod assembly may be locked in an inclined position without any inconvenience.

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According to a first embodiment of the present invention, the support frame may comprise a pair of longitudinal elongate members having proximal and distal ends and at least one lateral elongate member. The proximal ends of the longitudinal elongate members may be attached either directly or indirectly to a structure, such as a wall of a building, and the distal ends of each longitudinal elongate member attached to the lateral elongate member. The rod assembly is pivotally mounted upon the lateral elongate member. In such an arrangement it is preferred that stopping means are pivoted to prevent the rod assembly from pivoting below the plane of the support frame.

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The term "lateral" refers to, from the users point of view when facing the laundry rack, the orientation of the laundry rack along the line from his left hand to his right hand, the term "longitudinal" refers to that perpendicular to the "lateral" direction. The term "proximal end" refers to the hanging end portion closer to the user, and the term "distal end" refers to another end portion of the rod assembly, away from the user.

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Preferably the support frame comprises a pair of lateral elongate members and a pair of longitudinal elongate members arranged to form a rectangular frame. Preferably a first lateral elongate member is attached, either directly or indirectly to a structure such as a wall of building and the rod assembly pivotally mounted upon the second lateral elongate member. Preferably, the rod assembly extends at least from the second to the first lateral elongate member. In such an arrangement the first lateral elongate member prevents the rod assembly from pivoting below the plane of the support frame.

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The releasable locking means preferably comprises a spring-loaded member movable from a locked configuration where the member is displaced through an

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aperture and the spring extended, and an unlocked configuration where the member is urged against a wall and the spring is contracted.

5 Preferably the releasable locking means are actuatable by a switch at the proximal end of the rod assembly.

Preferably the spring-loaded member is located on the second lateral elongate member.

10 Preferably the second lateral elongate member carries a plurality of rod assemblies. The second lateral elongate member is preferably in the form of a circular cylindrical pipe. Preferably each of the rod assemblies is mounted on the second lateral elongate member by means of a sleeve. Preferably one sleeve carries more than one rod assembly. This allows more than one rod assembly to be pivoted into an open
15 position and locked for receiving clothes at one time.

The laundry rack may further comprise additional lateral elongate members, extending between the longitudinal elongate members. When the rod assembly is in the open position these additional lateral elongate members are accessible for larger items
20 of laundry, such as bedding.

The laundry rack may further comprise a securing means for receiving and releasably locking the rod assembly in the closed position.

25 According to the present invention in a second aspect there is provided a laundry rack comprising a support and a rod assembly for attaching laundry, the rod assembly having a proximal end and a distal end, the rod assembly being pivotally connected to the support at the distal end and actuatable between a closed position for hanging laundry, and an open position for loading / unloading laundry, in which a
30 plurality of rod assemblies are actuatable together.

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Preferably the support comprises a support frame having a pair of longitudinal elongate members and at least one lateral elongate member.

5 The laundry rack according to the second aspect of the invention provides the advantage that more than one rod assembly may be placed in the open configuration for receiving clothes at one time.

Preferably each rod assembly at its distal end is mounted on a sleeve on a lateral elongate member. Each sleeve is attached to more than one rod assembly.

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Preferably the laundry rack according to the second aspect of the invention may comprise all the features of the laundry rack according to the first aspect of the invention.

15 **Brief Description Of The Drawings**

The present invention will now be described, by way of example only, with reference to the following figures in which:

20 Figure 1A and 1B show two prior art clothes hangers;

Figure 2A is a plan view of the clothes rack according to an embodiment of the present invention;

25 Figure 2B is an enlarged exploded view of f the portion shown in dotted lines on Figure 2A;

Figure 2C is a side view of Figure 2A;

30 Figure 3A is a cross sectional view showing the laundry rack in the closed position;

Figure 3B and 3C are cross sectional views showing the laundry rack in the open position;

5 Figure 4A is a plan view showing the securing means, according to a preferred embodiment of the invention;

Figure 4B is an enlarged view showing the securing means when in the closed position; and

10 Figure 4C is an enlarged view showing the securing means when in the open position.

Detailed Description Of The Preferred Embodiments

15 As shown in Figures 2A, 2B and 2C, a laundry rack according to a preferred embodiment comprises a rectangular support frame 10 and a plurality of rod assemblies 20. Each rod assembly 20 has a proximal end 22 and a distal end 24. A sleeve 30 on which the plurality of rod assemblies 20 are fixed, is pivotally connected to the support frame 10, with an end portion 11 of the support frame 10 inserted into the sleeve 30.

To provide sufficient space for hanging laundry, the rod assemblies are preferably at least 1.1 metre and are generally between 1.1 and 2.2 metres in length.

25 The support frame 10 is fixed onto the external wall of a building through two mounting plates 110. In this embodiment, the support 10 is in the form of rectangular cylindrical pipe. The distal end 24 of the rod assemblies 20 are pivotally mounted onto the support 10 via the plurality of sleeves 30. The plurality of rod assemblies 20 are therefore pivotable with respect to the support 10 through their respective sleeves.

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As shown in Figure 3A to 3C, inside the support 10 there are fixed a plurality of locks 40 corresponding to the positions of the plurality of rod assemblies. Each lock 40 includes a locking pin 42, a housing 44 and a spring 46. The locking pin 42 is slideable within the housing 44 through an opening 12 formed on the side wall of the support 10. In the horizontal position shown in Figure 3A the locking pin is urged against the internal wall of the sleeve 30 through the opening 12 by the spring 46.

An aperture 32 is formed on the sleeve 30 for receiving the locking pin 42.

When the clothes are ready to be placed on the laundry rack the rod assemblies can be pivoted into an open position. When the aperture 32 moves fully facing the locking pin 42, the locking pin 42 will pop outwardly through the aperture 32 and engage with the sleeve and the distal end of the rod assembly. The rod assembly 20 is accordingly locked in position as shown in Figure 3B, with its proximal end 22 accessible to the user for attaching clothes.

When the clothes are placed on the rod assembly 20, the user can press a knob 26 on the rod assembly which will push the reset pin 28 against the locking pin 42. The locking pin 42 is then pushed back to its housing 40, thereby releasing its engagement with the sleeve and the distal end of the rod assembly. The rod assembly 20 may thus be pivoted back to the closed position and rest on a seat 50 (see Figure 2).

The rod assembly 20 can be pivoted up again to unload clothes once they are dry.

To securely hold the rod assemblies 20 on the seat 50 a locker 60 is provided. The locker 60 is slidable along the seat 50 between a locking position for holding the rod assembly within the seat 50 and a release position for freeing up the rod assemblies as shown in Figures 4A, 4B and 4C.

To maximise the usage of the laundry rack, a plurality of rod assemblies 120 (Figure 2A) can be provided which are connected to and movable together with rod assemblies 20.

- 5 Separate poles 70 (Figure 2A) can also be provided at the proximal end 22 of the rod assembly 20. When the rod assemblies 20 are lifted, the poles 70 are available for putting larger pieces of laundry such as bed sheets for drying.

CLAIMS

1. A laundry rack comprising a support and a rod assembly for attaching laundry,
the rod assembly having a proximal end and a distal end, the rod assembly
5 being pivotally connected to the support the distal end and actuatable between a
closed position for hanging laundry, and an open position for loading /
unloading laundry, in which the laundry rack comprises releasable locking
means for locking the rod assembly in the open position.
- 10 2. A laundry rack according to claim 1 in which the support further comprises a
support frame.
3. A laundry rack according to claim 2 in which the support frame comprises a
pair of longitudinal elongate members having proximal and distal ends and at
15 least one lateral elongate member.
4. A laundry rack according to claim 2 in which the support frame comprises a
first and a second lateral elongate members and a pair of longitudinal elongate
members arranged to form a rectangular frame.
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5. A laundry rack according to claim 4 in which the first lateral elongate member
is attached, either directly or indirectly to a structure such as a wall of a building
and the rod assembly is pivotally mounted upon the second lateral elongate
member.
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6. A laundry rack according to claim 5 in which the rod assembly extends at least
from the second to the first lateral elongate member.
7. A laundry rack according to claim 1 in which the releasable locking means
30 comprises a spring -loaded member movable from a locked configuration where
the member is displaced through an aperture and the spring extended and an

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unlocked configuration where the member is urged against a wall and the spring is contracted.

- 5 8. A laundry rack according to claim 7 in which the releasable locking means are actuatable by a switch at the proximal end of the rod assembly.
9. A laundry rack according to claim 4 in which the second lateral elongate member carries a plurality of rod assemblies.
- 10 10. A laundry rack according to claim 9 in which each of the rod assemblies is mounted on the second lateral elongate member by means of a sleeve.
11. A laundry rack according to claim 10 in which one sleeve carries more than one rod assembly.
- 15 12. A laundry rack according to claim 3 further comprising additional lateral elongate members, extending between the longitudinal elongate members.
13. A laundry rack according to claim 1 in which the laundry rack comprises a
20 securing means for receiving and releasably locking the rod assembly in the closed position.
14. A laundry rack comprising a support and a rod assembly for attaching laundry,
25 the rod assembly having a proximal end and a distal end, the rod assembly being pivotally connected to the support at the distal end and actuatable between a closed position for hanging laundry, and an open position for loading / unloading laundry, in which a plurality of rod assemblies are actuatable together.

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15. A laundry rack according to claim 14 in which the support further comprises a support frame having a pair of longitudinal elongate members and at least one lateral elongate member.
- 5 16. A laundry rack according to claim 15 in which each rod assembly at its distal end is mounted on a sleeve on a lateral elongate member.
17. A laundry rack according to claim 15 in which each sleeve is attached to more than one rod assembly.