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(54) **Water storage unit for clotheshorses**

(57) The invention applied for the patent in a particular component is designed to meet a need that regularly occurs every time you use a common clothesline or drying rack: not to pour water from the garments laid out in the various local where we use the drying rack or clothesline, (rooms, verandas, balconies, etc..).

For this purpose the **Universal Under Clotheshorse,** object of the patent application, has been conceived in three-dimensional manner with a central space that satisfies both the support of the drying rack or clotheshorse itself, both to the collection of the water coming from the garments hanging on the same.

In addition to this central space of variable size and shape, it was considered appropriate to add two expandable wings that could also collect the water coming from the arms of the expandable clotheslines or drying and conveying to the central compartment of the **Universal Under Clotheshorse.**

To comply with these functions it has been necessary to conceive a simple and effective way of working, without neglecting the the cost of both production and sales.

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Description

[0001] The invention applied for the patent in a particular component is designed to meet a need that regularly occurs every time you use a common clothesline or drying rack: not to pour water from the garments laid out in the various local where we use the drying rack or clothesline, (rooms, verandas, balconies, etc..). For this purpose the **Universal Under Clotheshorse,** object of the patent application, has been conceived in three-dimensional manner with a central space that satisfies both the support of the drying rack or clotheshorse itself, both to the collection of the water coming from the garments hanging on the same.

[0002] In addition to this central space of variable size and shape, it was considered appropriate to add two expandable wings that could also collect the water coming from the arms of the expandable clotheslines or drying and conveying to the central compartment of the **Universal Under Clotheshorse.**

[0003] To comply with these functions it has been necessary to conceive a simple and effective way of working, without neglecting the the cost of both production and sales.

[0004] Accordingly to this, the object in question has been conceived according to the following detailed description:

a) compartment below the supporting surface, also called **Base,** of equal size of the supporting surface and at different compartments separated and watertight, for the functions that are required from time to time in accordance with the standard **Universal Under Clotheshorse** models. Below this compartment, also called **Base**, can be mounted either wheels to the articulated joint to facilitate the movements, or adjustable legs or in the case of use in a fixed manner (like those used below the washing machines);
In this compartment container, shaped as a parallelepiped, or prism, or other geometric figures, (with chamfers and with more sides depending on the models and of the chosen design), always three-dimensional measurement -possibly variable in height width and in length- flows the water coming from the slits or holes of the upper support panel described in point b), and in a suitable watertight compartment, the water remains, until you want to empty.
On one side of this container, or base, and, well in sight, it is expected to embed a piece of Plexiglas or other transparent material, with notches indicative of the level of the water, this will enable the user to assess whether and when empty the water in the container.
On one side of this container, or **Base,** close to an edge, is placed a hole of suitable diameter, which communicates with the collection compartment water-tight, through which the water collected will drain, after removal of the hermetic cap, expressly conceived to avoid water spill, this cap can be screwed or a pressure cap.
For particular requests and models, the emptying may take place also in semiautomatic or even automatically with appropriate equipment that may be incorporated in the binder compartment described in this paragraph, (eg pumps for windscreen wipers of cars, level switches, buttons, etc..), although in compartments separate from the water compartment, still hermetic, low-voltage:12-24 volts dc and, realized according to the accident prevention regulations governing the matter.
b) **Central body** of material resistant to withstand the weight of the drying rack or clotheshorse plus wet clothing that are laid out above the same, this support surface created with molding system or more profiled laminates existing on the market, constitute a single body with both the **Base,** as described at point a), and the profiled structure described in point c), and, will be provided with slits or holes to allow the passage of the water coming from the garments stretched, to the below **Base** as described at point a);
c) Profile structure overhanging the **Central Body** mentioned at point b) arranged along the edge or outer perimeter of the surface, to ensure that there is no water spill from the plan itself, and therefore able to hold the water inside the plan so that it can go into the compartment below the **Base,** thanks to the slots or holes.
In addition to the function described above, on the same profile structure or adjacent to the one described in point c) with appropriate guides, you will cycle through the two arms described in point d) in case you want to extend in the projection of the arms of the clotheshorse for collecting the water coming from the arms.
d) Two sliding or opening arms, that once opened, should coincide with the projection of the clotheslines arms.
These arms reflect the arms of clotheshorses, but have been designed in such a way to avoid water drains in the two lateral and upper sides thanks to a profile of laminated plastic or resin or board- resulting from the same molding operation of the arm, that surrounds the perimeter of the arm itself, except the side that rests on the **Central Body** of the **Universal Under Clotheshorse** from where the water must pass to reach the **Collection Compartment** as described in point b), and subsequently be able to reach the compartment called **Base,** described at point a):
Furthermore, these arms, have an entire plan that is linked with the edging described above, either molded together or separately made with appropriate laminated and assembled with the frame, which in any case allows water to be collected and conveyed to the **Central Body** of point b).

[0005] The result of the assembled components men-

tioned in paragraph a), b), c), d), shall be understood as a single object that will have, with regard to the central part, the dimensional and geometric form of a parallelepiped, or prism, or other geometric figures, (with chamfers and with more sides depending on the models and on the chosen design); Regarding the expandable part, the addition of two wings that will reflect the arms and the shape of the clotheshorse, to collect water coming from the garments hanging on the same.

[0006] To achieve this objective, the **Universal Under Clotheshorse,** will be built in cheap materials, durable and lightweight, like PVC, resin, or special alloys appropriately selected, allowing the efficiency and manageability of use.

[0007] The invention, peculiar and innovative related to the way of collecting the water coming from the garments, described in points a), b), c), d), and also object of the patent application, can be achieved in various ways.

[0008] Regardless of the production decision, subject to market demand, cost, the marketing skills that can be properly assessed tend to produce the product in many different ways, the aim is to produce the simplest, more manageable, and more economic model as possible.

[0009] In this regard, it is thought that the most appropriate materials and production methods, can be the same as the drying racks or clotheshorse currently on the market, (pvc, plastic, resin, sections and rolled pvc, resin, plastic, and similar materials) as show, in the current state that are far more economic and functional than other choices, (ex: wood, plywood, plexiglass, metal profiles, profiles of special alloys, etc..), and allows the containment of production costs due to assembly of the parts that make up the **Universal Under Clotheshorse** This choice is to opt for a production cycle that can be distinguished in different phases depending on the specific model and design that you want to produce.

[0010] The basic model of **the Universal Under Clotheshorse** mentioned, consists of an object in the shape of a parallelepiped or prism, or other geometric figures, (with chamfers and with more sides depending on the models and of the chosen design), of dimensions variable both in height and in width, both in length, suitable to meet the application requirements that will be specified below.

[0011] **Universal Under Clotheshorse** has been conceived with the aim to be used by a large mass of users of clotheshorses to avoid the inconvenient of water drained in the local where the same clotheshorses are used, by limiting the 'operational effectiveness of the clotheshorses themselves.

[0012] This application to which the invention relates, by preventing water coming out from the garments hanging going to the floor, ground, or surrounding base (rooms, balconies, verandas, etc.), it facilitates the normal use the drying racks in all seasons and in every house, in every room, making it less difficult task for people who are subject to the weather conditions to dry clothing.

[0013] Also the advantage of **Universal Under Clotheshorse,** designed as described, has to be lightweight, easy to handle, emptied and closed like a normal drying rack or clothesline, this supports its use for the vast majority of people who are already in possession of the common clothes lines or drying as they'll just lay them above it improving the efficiency and effectiveness.

[0014] As regards the state of the art, such an invention doesn't exist at the present time, however, it is considered valid alternatively and at the same time, also to present the patent for a utility model.

[0015] The **Universal Under Clotheshorse**, reflecting the fundamental concepts and basic, described above, in detail in points a), b), c), d), can be produced in variable manner according to the shape and size of existing clotheshorses or combined with forms of new generation and new models. It performs the task of adapting to any type of existing drying rack, or clotheshorse, or any new model coming on the market. It has the possibility of collecting water coming from the wet clothes and conveys it in the container; it can be securely stored as easily as the normal drying rack or clothesline, water collected in the compartment below can simply be emptied removing the cap and doing a simple maneuver of bending of the light structure, during storage.

[0016] **The Universal Under Clotheshorse,** further than the easy use described above, in case you do not want to have the problem of emptying, and keep it in appropriate places, such as balconies, patios, laundry rooms, bathrooms, bedrooms, attics, etc..a specific model allows to use a semi-automatic or automatic emptying of the container to drain or collect water, adding the necessary equipment, such as pumps, push buttons, selector switches, detectors, water-level in the waste container and necessary pipes to achieve this purpose.

[0017] This latest model, as described above, certainly less commercial than the manual, for both spaces and costs, will be produced at the request of the parties concerned.

[0018] The manufacturing process of the basic model to which we aim at commercial level, is carried out with either system of injection molding or assembly of the individual components commercially available such as profilated and laminated materials suitably selected as pvc, resin, with the aim of achieving the lowest possible cost and higher efficiency, as described in points a), b), c), d) of this Annex.

Claims

1. The type of use of the objet that makes it possible for anyone with a drying rack or clothesline, regardless of the model and manufacturer, to fortify of **"Universal Under Clotheshorses"** with the specific function of gathering water which streams down from wet clothes into a watertight **Storage Unit,** shaped

like a parallelepiped or a prism, in whichever case tridimensional, contained in the **Base.**

2. The structure and the shape of the **"Universal Under Clotheshorses":** it is a one piece light and handy object, with a **Base**, a **Central body,** and **Foldable Arms.** The **Universal Under Clotheshorses** can be easily folded and stored after use.

3. The structure type of the **Base**, consisting of a frame, and C**entral body,** provided with holes or slits, slightly inclined towards the center, molded together with the structure of the **Base**, or added with appropriate processing, is able to ensure the flow of the water in the **Collection Compartment**, described at point 4. The frame structure allows sustaining the weight of both the clotheshorses and wet clothes that could be put on top.

4. The structure and the frame of the **"Universal Under Clotheshorses"** in additional to different watertight compartments mentioned at points 1, 3, and 5, has a **Collection Compartment**, which merge water from the **Central Body** and **Foldable Arms,** to the **Storage Unit.**

5. The possibility that, the **Base**, depending on different models and design, can contain different possibly watertight compartments, with the function of both **Collection Compartment** and **Storage Unit** for water, both of the housing compartment of necessary equipment for the emptying process in semiautomatic or automatic.

6. The structure of the **Base** mentioned at point 3, can be provided of feet or support points, which will hold the structure, avoiding weight overly deforms it, and will also keep it slightly raised from the ground.

7. The possibility that feet or support point mentioned at point 6, could consist in adjustable wheels (as those normally used for washing machines) or swivel wheels with brakes (like those under office chairs).

8. The method used to produce the **"Universal Under Clotheshorse":** industrial processes of injection molding or assembly procedures.

9. The possibility of equipping the structure of the **"Universal Under Clotheshorse"** of handles which may be formed in the molding step or added with appropriate processing.

10. The possibility for emptying water, in the model equipped with a blower 12 0 24 volts (like the one used by wipers of the car), it can accommodate such a pump within a watertight compartment in the **Base**, or, to apply outside the mentioned compartment as an option, which however has the task of emptying water.

11. The possibility that the drain water process , described at point 10, can, where foreseen, happen with appropriate equipment (as circuit breakers, switches, buttons, level switches, proximity switches, etc..) as a semi-automatic or automatic process.

12. The collection mode of the water in the collection central compartment, below the supporting surface of the **Base** described at point 3, 4, and 5 which, thanks to one or two appropriately tilted surfaces, formed in the molding of the **Base** or separately applied, allow merging the water coming from both the **Foldable Arms**, and the **Central body,** in the **Collection compartment,** and, thanks to the duct or tube or hole, water reaches the **Storage Unit** described at point 14.

13. The possibility of performing the emptying manually, opening the cap, which can be screwed or pressure, described in point 15, and allow the escape of water from **Storage Unit.**

14. The mode of holding water in the water watertight **Storage Unit** placed into the Base, where water will remain until time of emptying. That can occur manually as described at points 13 and 15, semi-automatically, or automatically as explained at points 10, and 11.

15. The possibility to empty the water in the watertight **Storage Unit** by removing the pressure cap or unscrewing it. The emptying takes place then when closing the **"Universal Under Clotheshorses",** through a slight inclination.

16. The display of water level contained in the **Storage Unit**, through transparent material and notches; this will allow the user to evaluate, on manual and semi-automatic model - when to empty.

17. The possibility of producing initially the product as described at points 1,2,3,4,5 using the procedures mentioned at point 8, with polymers like resin or similar, without excluding any other method or material which will be considered appropriate to use later, to produce different products, based on the design, product and market costs.

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EUROPEAN SEARCH REPORT

Application Number
EP 13 00 0188

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2003/006206 A1 (JACKSON ANGELA W [US]) 9 January 2003 (2003-01-09) * paragraph [0010] * * paragraph [0015] - paragraph [0017]; figures 1-3 *	1-3,6-8, 17	INV. D06F57/08 D06F57/12
X	US 3 018 899 A (GROO ARTHUR L) 30 January 1962 (1962-01-30) * column 3, line 32 - column 4, line 12; figures 1,4,6,7 *	1-4,6,8, 17	
X	GB 1 232 941 A (DORIS EVA WATSON) 26 May 1971 (1971-05-26) * page 2, line 10 - page 2, line 20; figures 1,2 *	1,2,8,17	
X	US 2005/076530 A1 (KRESSER TERRY LEE [US]) 14 April 2005 (2005-04-14) * paragraph [0010] - paragraph [0011]; figures 1,2 *	1-3,8,9, 15,17	
X	US 3 675 338 A (MAKI JOHN O) 11 July 1972 (1972-07-11)	8	TECHNICAL FIELDS SEARCHED (IPC)
A	* column 1, line 32 - column 2, line 21; figures 1,2 *	1,3,4,6, 14	D06F A47F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	11 June 2013	Fachin, Fabiano

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 13 00 0188

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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11-06-2013

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