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(54) DRYING MILL PROVIDED WITH A DRIVE FOR ROTATING THE DRYING RACKS

(57) A drying mill 1 has a base 3 in which a drive 5 is located. A mast 11 protrudes from the foot and is mounted in the foot and can be rotated by the drive. Drying racks 19 and 21 are attached to the mast 11 which can be folded in and out. The drying mill 1 further has a drive 5 which rotates the mast 11 with the drying racks

19 and 21 and thereby causes an air flow along the laundry so that it dries faster. Furthermore, the drying mill has a table top. Instead of the drying racks the table top can be coupled to the mast, in which case the mast acts as a table leg.

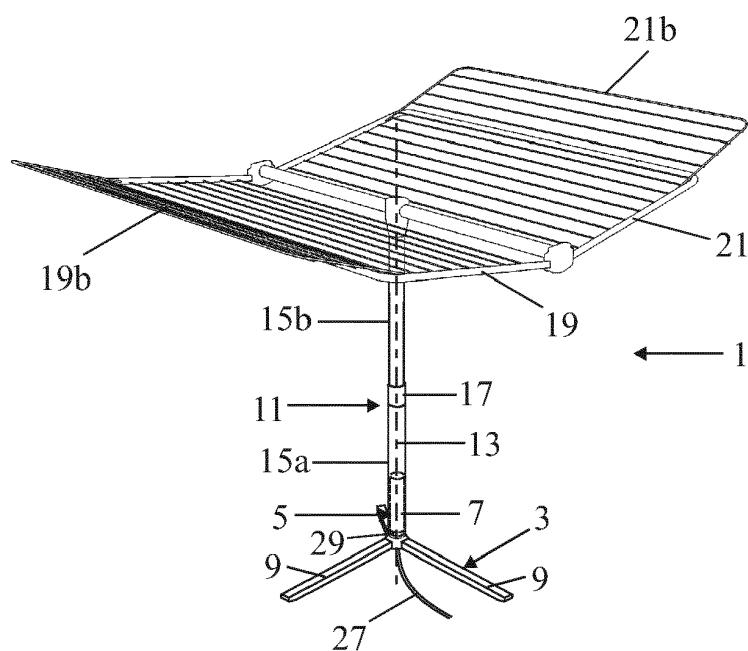


FIG. 1

Description

Technical field of the invention

[0001] The invention relates to a drying mill comprising a foot, as well as a vertical mast rotatably connected to the foot about an imaginary vertical axis, and drying racks connected to the mast and being displaceable between a collapsed position (e.g. folded against the mast) and a folded-out position in which laundry can be hung on the drying rack to dry, which drying mill further comprises drying means for causing a relative movement between the drying racks and the ambient air, which drying means comprise a drive which is present in the foot and is coupled to the mast. Turning the drying racks creates a relative movement between the laundry and the ambient air, as a result of which the air flowing past the laundry results in an accelerated drying of the laundry.

Background of the invention

[0002] Such a drying mill is known from WO2014014179A. The mast of this known drying mill is inseparably connected to the foot. Furthermore, the drying means of this known drying mill have a fan for blowing air out of openings present in the mast in addition to the drive for rotating the mast.

Summary of the invention

[0003] It is an object of the invention to provide a drying mill of the type described in the preamble which, when not used for drying laundry, takes up little storage space and can be used partly for other applications. To this end, the drying mill according to the invention is characterized in that the drying racks are detachably connected to the mast and the mast is telescopically retractable, the mast in extended position with associated drying racks functioning as a drying mill and in retracted position with removed drying racks acting as a leg for a table top. If the laundry dryer is not used for drying, the drying racks can be removed from the mast and stored, for example, stored under a bed. The mast with base can serve as a leg for a piece of furniture. By connecting a tabletop to the mast, the mast with foot can act as a table leg. Because the mast can be retracted and extended, the height of the table top can be adjusted. Due to the presence of the mast, the tabletop does not have to have long protruding parts in order to be able to be coupled to the base, so that the tabletop can easily be stored away during use of the base for drying laundry.

[0004] The mast of the known drying mill is not detachably connected to the foot, so that the drying mill occupies a lot of space if it is not used for drying the laundry. Furthermore, the known drying mill (or parts thereof) cannot be used for other applications if it is not used for drying the laundry.

[0005] EP3088595A discloses an apparatus for drying

laundry which comprises a platform rotatably connected to a foot on which an existing drying rack can be fitted. The foot is also provided with a drive. The platform is hereby fixedly connected to a rotatable shaft which is mounted in the foot. Even with the drying rack removed, the foot with the platform requires a lot of storing space. The platform could be used as a table top, but then it is at an impractically low level and, due to the presence of coupling means for coupling to a drying rack, there is no flat table top.

[0006] To keep the energy required for drying the laundry low, the drying means are only formed by the drive for rotating the drive shaft and they do not comprise any further means, such as for instance heating and / or ventilating means.

[0007] Preferably, the drying mill further comprises a table top provided with a coupling element which can be releasably connected directly to the mast in order to be able to use the foot of the drying mill as a table leg if no laundry is dried. This is of great advantage, especially in homes with limited space.

[0008] The mast is preferably formed by a lower tube into which a lower part of the upper tube is slid, which lower tube is provided with securing means for securing the mast or the coupling element in the tube.

[0009] An embodiment of the drying mill according to the invention is characterized in that the drying mill is provided with a safety switch which switches off the drive if the drying mill has fallen over and / or the drive experiences a too high resistance. Furthermore, the drive is preferably provided with a slip coupling to prevent it from causing major damage in the event of malfunction.

Brief description of the drawings

[0010] The invention will be further elucidated below on the basis of drawings. These drawings show an embodiment of the drying mill according to the present invention. In the drawings:

Figure 1 is the drying mill in the unfolded position;
 Figure 2 is the drying mill in the collapsed position;
 Figure 3 is the foot of the laundry dryer with a tabletop on top; and
 Figure 4 is the drying mill during use with laundry hung on the mill.

Detailed description of the drawings

[0011] Figures 1 and 2 show an embodiment of the drying mill according to the invention in the folded-out and collapsed position. The drying mill 1 has a mast 11 and a base 3 with collapsible legs 9. In the mast there is a drive 5 in the form of a tubular motor 7 with a transmission. A mast 11 protrudes from the foot and is mounted in the foot and can be rotated by the drive about the center line 13 of the mast. The mast 11 has a lower tube 15a and an upper tube 15b which can be partially slid into the

lower tube. The lower and upper tubes can be fixed relative to each other by means of a known clamp construction 17 for fixing parts of an extendable tube relative to each other.

[0012] Drying racks 19 and 21 are releasably connected to the mast 11. These drying racks 19 and 21 can be folded in and out and are preferably directly coupled to the mast. In the folded-out position shown in Figure 1, laundry can be hung on the drying rack. In the collapsed position the drying racks 19 and 21 are present against the mast 11, see figure 2. The lower tube 15a is preferably at least 30 cm long and the upper tube 15b preferably extends into the lower tube over this distance, so that the upper tube over this relatively large length is supported.

[0013] The drying mill 1 has drying means to speed up the drying of the laundry. These drying means are formed by the drive 5 which rotates the drying racks 19 and 21 about the center line 13 of the mast 11 and thus creates an air flow (wind) along the laundry, so that it dries faster. Optionally, fold-out smaller drying racks 19b and 21b can be hingedly connected to the drying racks 19 and 21 in order to be able to hang more laundry.

[0014] The drying mill 1 further has a table top 23 which is provided with a coupling element (not visible in the figure) which can be coupled to the upper tube 15b. Figure 3 shows the base 3 of the drying mill with the table top 23 on the mast 11. The lower tube 15a is preferably between 50 and 100 cm long so that the table top 23 is present at a suitable height to act as a table. The coupling element is formed by a short piece of pipe that can be slid into the upper tube 15b of the mast and can be fixed relative to the mast 11 by a further clamping structure present on top of the upper tube 15b (also not visible in the figure).

[0015] By way of illustration, in Fig. 4 the drying mill 1 is shown during use with laundry 25 hung on the drying racks 19 and 21. The drive 5 in the base 3 is connected to a socket via a cord 27 with plug. The tumble dryer also has a remote control (not shown) for switching the electric motor on and off and controlling its speed. The drying mill 1 is provided with a safety switch 29, see figure 1, which switches off the drive 5 if the drying mill has fallen over and / or the drive experiences a too high resistance. Furthermore, there is a slip coupling (not visible) between the electric motor 7 and the mast 11 to prevent the electric motor from being overloaded.

[0016] Although the present invention is elucidated above on the basis of the given drawings, it should be noted that this invention is not limited whatsoever to the embodiments shown in the drawings. The invention also extends to all embodiments deviating from the embodiments shown in the drawings within the scope of the invention defined by the appended claims.

vertical mast (11) rotatably connected to the foot about an imaginary vertical axis (13), and drying racks (19, 21) connected to the mast and being displaceable between a collapsed position and a folded-out position in which laundry (25) can be hung on the drying rack to dry, which drying mill (1) further comprises drying means for causing a relative movement between the drying racks (19, 21) and the ambient air, which drying means comprise a drive (5) which is present in the foot (3) and is coupled to the mast (11), **characterized in that** the drying racks (19, 21) are detachably connected to the mast (11) and the mast is telescopically retractable, the mast (11) in extended position with associated drying racks (19, 21) functioning as a drying mill and in retracted position with removed drying racks acting as a leg for a table top (23).

2. Drying mill according to claim 1, **characterized in that** the drying means only comprise the drive (5) for rotating the mast (11).
3. Drying mill according to claim 1 or 2, **characterized in that** the drying mill further comprises a tabletop (23) provided with a coupling element that can be detachably connected directly to the mast (11).
4. Drying mill according to claim 1, 2 or 3, **characterized in that** the mast (11) comprises a lower tube (15a) into which an upper tube (15b) from the mast (11) is slid, and **in that** the mast (11) comprises securing means (17) for securing the upper tube (15b) or the coupling element in the lower tube (15a).
5. Drying mill according to any one of the preceding claims, **characterized in that** the drying mill is provided with a safety switch (29) which switches off the drive (5) if the drying mill has fallen over and / or the drive encounters a too high resistance.
6. Drying mill according to any one of the preceding claims, **characterized in that** the drive (5) is provided with a slip coupling.

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Claims

1. A drying mill (1) comprising a foot (3), as well as a

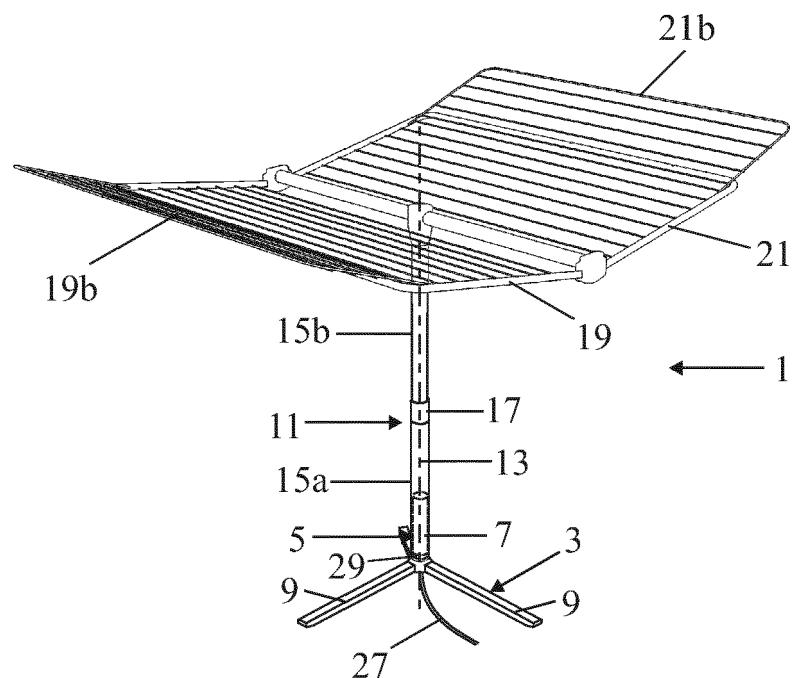


FIG. 1

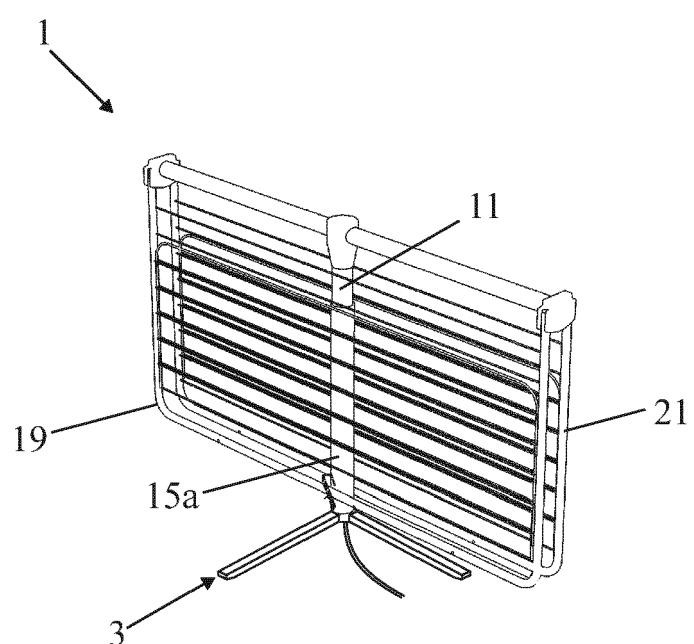


FIG. 2

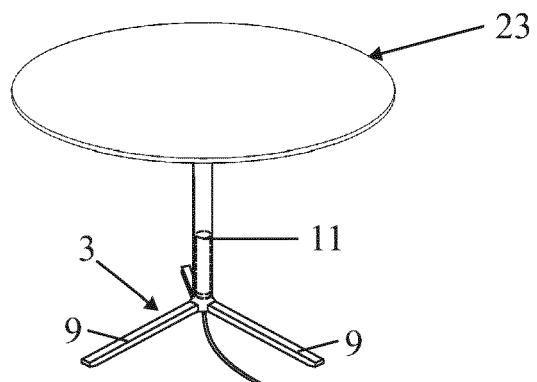


FIG. 3

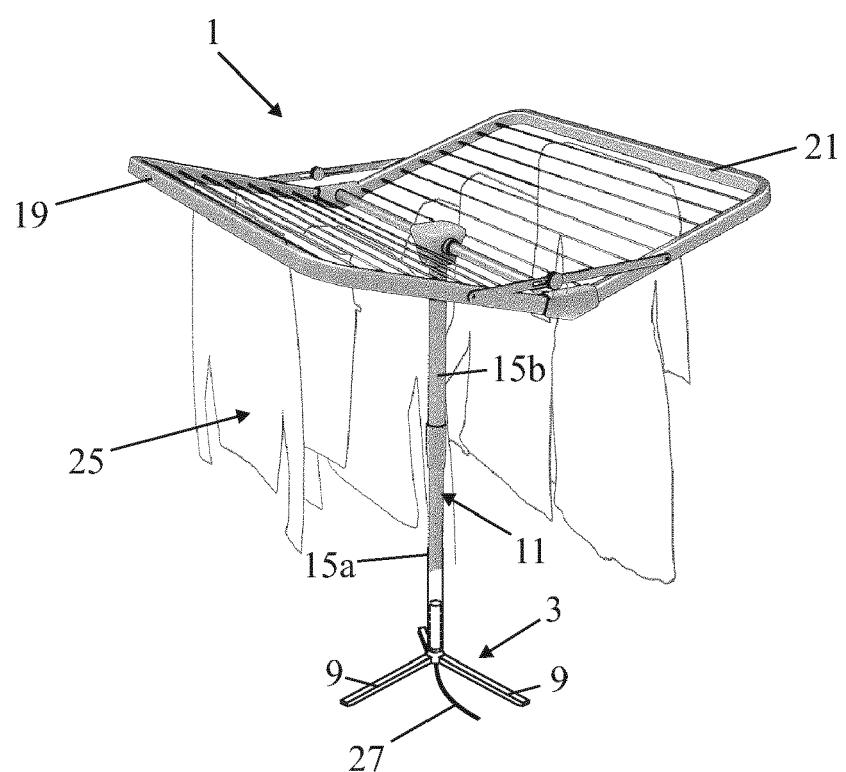


FIG. 4



EUROPEAN SEARCH REPORT

Application Number

EP 19 21 1290

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50	3 The present search report has been drawn up for all claims		
55	Place of search Munich	Date of completion of the search 12 March 2020	Examiner Werner, Christopher
EPO FORM 1503 03-82 (P04C01)			
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