Nov. 17, 1936. F. BODE 2,061,499

CLOTHES DRIER

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Fig. 1

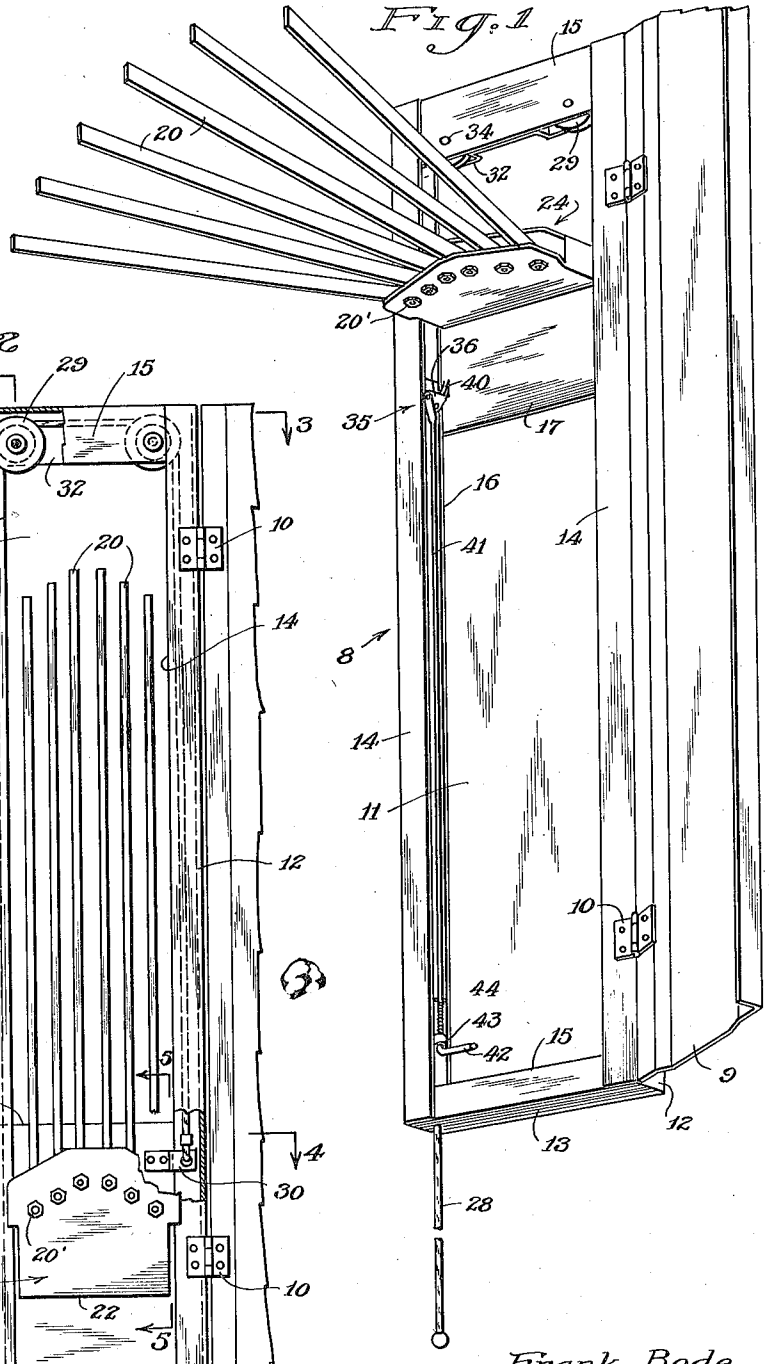


Fig. 2

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Fig. 3

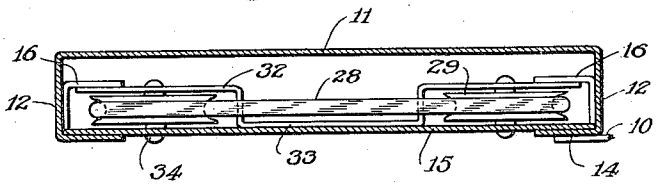


Fig. 4

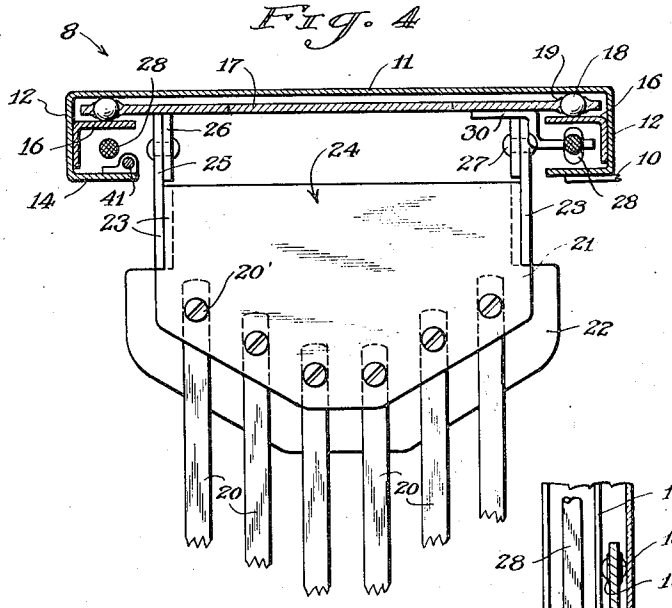


Fig. 5

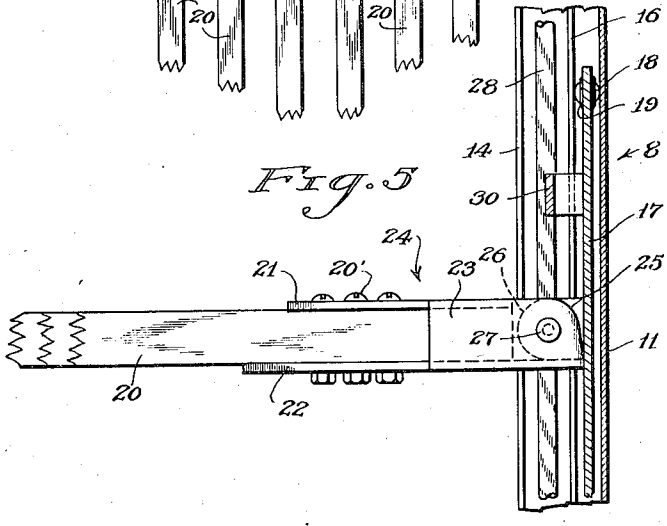
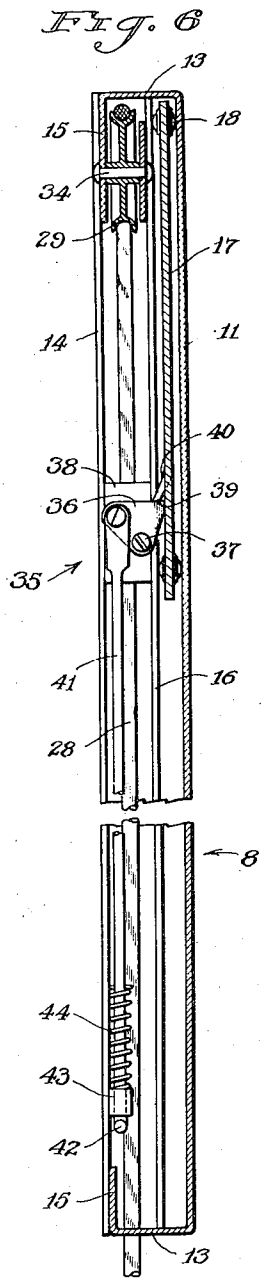


Fig. 6



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CLOTHES DRIER

Frank Bode, New York, N. Y.

Application September 11, 1935, Serial No. 40,152

2 Claims. (Cl. 312—181)

This invention relates to clothes driers and more particularly to devices of this character comprising a foldable rack for the support of the clothes, the rack being slidably mounted on a wall box structure to permit the raising of same to an out of the way position and, being readily contractible, may be folded to within the box structure when not in use.

The general object of my invention is to provide a clothes drier embodying a novel construction and arrangement of elements whereby to facilitate the economic fabrication of the device as well as to present a clothes drier of particularly rugged and durable construction.

My invention has for its further object to provide a device of this character having a cabinet or box for housing the folded clothes rack, the box comprising an improved rack in conjunction with its vertical sides on which a rack supporting carriage may be raised or lowered with comparative ease, the carriage being provided with a novel anti-friction means to assure the easy movement of same.

Another object of my invention is to provide a clothes drier in which the rope for raising and lowering the drier rack is concealed from view, thereby presenting a more neat and attractive appearance.

A more specific object of my invention resides in providing a novel latch means by which to dependably retain the clothes rack in elevated position, the operating means of the latch being readily accessible.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawings which form part of the application, with the understanding, however, that the improvement is capable of extended application and is not confined to the exact showing of the drawings nor to the precise construction described and, therefore, such changes and modifications may be made therein as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claims.

In the drawings:

Fig. 1 is a perspective view of my clothes drier with the rack thereof extended and elevated to position for drying clothes.

Fig. 2 is a front elevational view of the clothes drier with parts broken away, the rack being lowered into folded position.

Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 2 showing the arrangement of the pulleys comprising the clothes rack raising mechanism.

Fig. 4 is a horizontal sectional view taken on line 4—4 of Fig. 2 but with the clothes rack extended.

Fig. 5 is a fragmentary vertical sectional view taken on line 5—5 of Fig. 2 but with the clothes rack extended; and

Fig. 6 is a vertical sectional view taken on line 6—6 of Fig. 2 but with the clothes rack in the position shown in Fig. 1.

Reference is now directed to the accompanying drawings for a more detailed description thereof. The numeral 8 indicates the box or cabinet in which the folded clothes rack is housed when not in use. The box 8 is provided with a pivotally mounted cover 9, mounted preferably at a longitudinal edge of the box 8 as by the hinges 10. The box 8 comprises a back plate 11 from each edge of which is integrally formed the longitudinal sides 12 and the ends 13 of the box. The sides 12 are bent inwardly to form opposed flanges 14 at the front of the box and the ends 13 are likewise bent inwardly to form flanges 15 at the upper and lower ends of the box. The overlapping portions of the flanges 14 and 15 at each of the corners of the box 8 are secured to each other as by welding or other suitable means to form a rigid structure.

In the respective channels formed between the back plate 11 and the longitudinal flanges 14 are secured angle tracks 16, corresponding legs of which are secured to the longitudinal sides 12 of the box, the other legs of the angle 16 being opposed to each other and in spaced parallelism with the back plate 11. Into the channel thus formed is disposed a rectangular carriage plate 17 of a width adapted to easily slide longitudinally within the box 8. At each of the corners of the plate 17 is retained a steel ball 18 which in the novel arrangement shown functions as a wheel or castor during the vertical sliding of the plate 17 between the back plate 11 and the angle tracks 16. The balls 18 are retained in the plate 17 by being disposed in suitable apertures, the bordering portions of which are swagged or upset so as to form converging flanges 19 at each side of the plate 17.

The function of the plate 17 is to provide slidable support for the foldable clothes rack comprising a plurality of pivotally mounted rack bars 20, the latter being arranged substantially as shown in Fig. 4 and being supported between an upper plate 21 and a lower plate 22. Pivotal means for the rack bars 20, such as the screws 20', are inserted thru the rack bars 20 and the respective plates 21 and 22 so that the bars 20 may be arranged in substantial fan shape, as shown in Fig. 1. Each of the plates 21 and 22 have formed at their sides upstanding flanges 23 corresponding portions of which overlap each other and, being suitably joined, form a composite structure referred to as the rack bar bracket 24.

The flanges 23 integral with the lower plate 22 are extended rearwardly to form hinge plates 25 which overlap hinge ears 26, the latter be-

ing extruded from the slide plate 17. Suitable pins 27, the respective ends of which are headed over, are inserted thru the corresponding members 25 and 26 and the pins 27, being in alignment with each other, provide a pivotal means by which the rack bracket 24 and the associated rack bars 20 may be swung from a horizontal position extending beyond the box 8, as shown in Fig. 5, to a vertical position within the box 8, as shown in Fig. 2.

A hinge stop is provided by which to fix the horizontal position of the rack bracket 24 by having the lower plate 22 thereof extend rearwardly so that its edge contacts substantially the face of the slide plate 17. This effect is further assured by having the hinge ears 26 engage with corresponding portions of the lower plate 22 when the bracket 24 is swung to horizontal position, as shown in Fig. 5.

As aforeindicated, the rack bars 20 are swung to horizontal with the rack bracket 24 in lowermost position in the box 8. The clothes to be dried are then hung on the bars 20, after which the entire rack is raised to the position shown in Fig. 1. The raising of the rack is effected by a rope and pulley system comprising a rope 28 projecting thru an aperture in the lower end of the box 8 and extending upwardly thru the channel behind the longitudinal flange 14. The rope 28 passes over a pair of pulleys 29 disposed at the upper end of the box 8 and concealed behind the flange 15, the opposite end of the rope being secured to a lug 30 affixed to the slide plate 17, see Figs. 2 and 4. The novel arrangement of the rope and pulley system provides for the concealment of same, thereby assuring a device of more attractive appearance.

The pulleys 29 are retained in a casing of which the upper flange 15 forms a part. A supporting plate 32 is bent substantially as shown in Fig. 3 to form an offset middle section 33 which is affixed to the flange 15. The free ends of the plate 32, being disposed adjacent the angles 16, are secured thereto. Suitable spindles 34, passing thru the plate 15, the plate 32, and the hub of the pulleys 20, form a supporting shaft for the latter.

To effect the holding of the clothes rack 24 in its elevated position, shown in Fig. 1, a latch mechanism 35 is provided which comprises a latch 36, shown more clearly in Fig. 6, pivoted by a screw 37 onto a plate 38. The plate 38 is secured adjacent the free edges of the longitudinal flange 14 and the adjacent flange of the angle 16.

The latch 36 is preferably of triangular outline with the pivot 37 thereof at the lowermost corner, one of the upper corners presenting an abrupt shoulder 39 for engagement with a projecting lug 40 integrally formed with the plate 17. To the outer corner of the latch 36 is pivotally connected a latch rod 41 which extends downwardly to terminate in a right angle bend providing the handle 42. The bar 41 adjacent the lower end thereof slides in a bracket 43 and is surrounded by a spring 44 to urge the bar 41 upwardly and coactively urge the shoulder 39 of the latch 36 toward the plate 17.

The edge of the latch 36 below the shoulder 39 presents an inclined surface. Similarly the upper surface of the projecting lug 40 diverges outwardly from the plate 17 so that as the latter is raised the latch 36 is caused to swing forwardly until it becomes engaged under the shoulder of the lug 40 with a snap action. The general arrangement of the latch 36 with its pivot 37 arranged adjacent the bottom of the plate assures a more dependable retainment of the plate 17 in its raised position in that the weight of the latter and its associated structure causes the latch 36 to be urged further into locked position. It will be apparent in view of the operation of the latch 36 that the accidental release of same cannot occur in that in order to release the latch 36 it is necessary to first raise the lug 40 appreciably off same before the latch 36 may be disengaged, whence by a downward pull of the handle 42 against the spring 44 the shoulder 39 may be readily moved out of engagement with the lug 40.

What is claimed as new is:

1. A clothes drier comprising a casing having a back wall, side walls, front flanges extending inwardly from said side walls at the front edges thereof, internal flanges extending inwardly from said side walls between said back wall and said front flanges, a vertically movable plate between said internal flanges and said back wall and having rollers contacting said back wall and internal flanges, a pair of spaced pulleys mounted adjacent the top of the casing and adjacent said side walls, means for moving said plate vertically, said means comprising a rope having one end secured to said plate and positioned between said front and internal flanges at both sides of said casing and threaded on said pulleys, a rack bar bracket pivotally connected to said plate and adapted to be swung, from a horizontal position, to a vertical position within said casing, a plurality of bars pivotally secured to said bracket and adapted to be swung, with said bracket, from a horizontal to a vertical position, in which latter position the bars are enclosed by said casing.

2. A clothes drier comprising a casing having a back wall, side walls, front flanges extending inwardly from said side walls at the front edges thereof, internal flanges extending inwardly from said side walls between said back wall and said front flanges, a vertically movable plate between said internal flanges and said back wall and having rollers contacting said internal back wall and flanges, a pair of spaced pulleys mounted adjacent the top of the casing and adjacent said side walls, means for moving said plate vertically, said means comprising a rope having one end secured to said plate and positioned between said front and internal flanges at both sides of said casing and threaded on said pulleys, a rack bar bracket pivotally connected to said plate and adapted to be swung, from a horizontal position, to a vertical position within said casing, a plurality of bars pivotally secured to said bracket and adapted to be swung, with said bracket, from a horizontal to a vertical position, in which latter position the bars are enclosed by said casing, and releasable means for holding said plate in raised position, said means comprising a pivotally mounted latch, said plate having a projection with the lower surface of which said latch is adapted to engage, a rod pivotally secured to said latch and extending downwardly, spring means for moving said rod to effect engagement of said latch with said projection.

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