M. B. HALLIDAY.

SUSPENDED CLOTHES DRIER.

APPLICATION FILED DEC. 30, 1915.

**1,210,932.** Patented Jan. 2, 1917.

Fig. 1

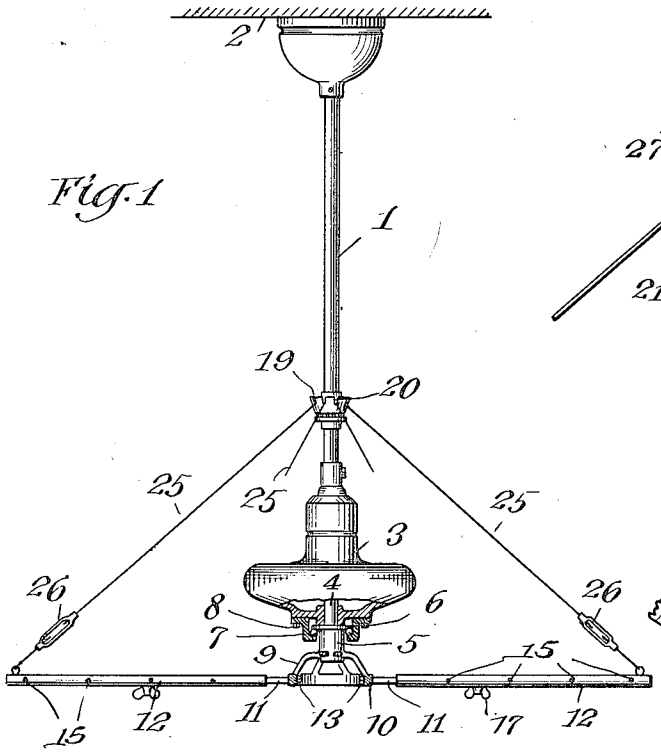



Fig. 3.

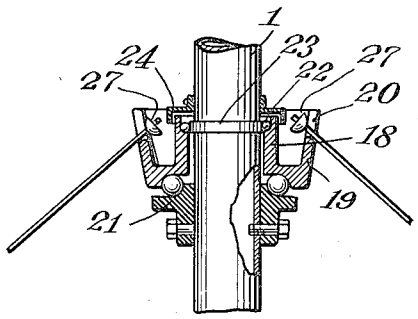



Fig. 4.

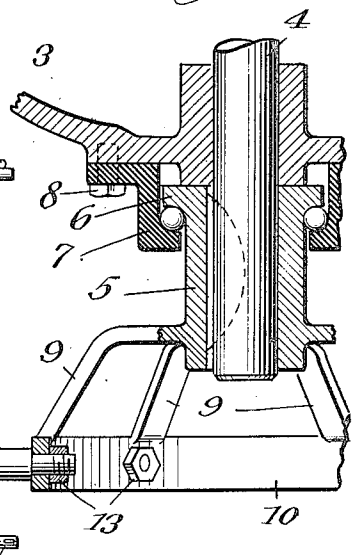



Fig. 2

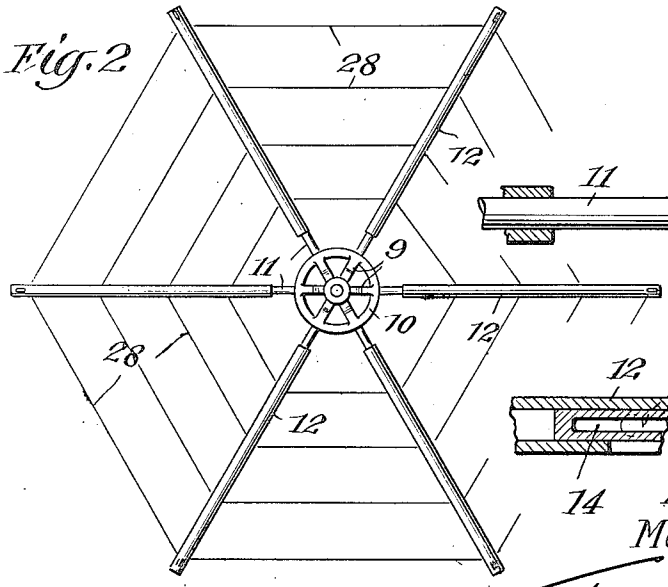
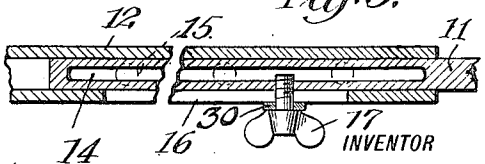



Fig. 5.




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# UNITED STATES PATENT OFFICE.

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## SUSPENDED CLOTHES-DRIER.

1,210,932. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed December 30, 1915. Serial No. 69,335.

*To all whom it may concern:*

Be it known that I, MARION BORDEN HALLIDAY, a citizen of the United States, and a resident of Wallkill, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Suspended Clothes-Driers, of which the following is a specification.

My invention relates to machines or apparatus for drying clothes and more particularly to that class of clothes driers adapted to be used indoors.

The main object of my invention is the production of a clothes drier of simple construction which shall be operated preferably by an electric motor and which may be suspended from the ceiling or any other overhead suitable support whereby the floor space is kept clear.

A further object of the invention is the production of a clothes drier of the character above described which shall also be provided with an adjustable clothes drying frame which frame may be readily enlarged or made smaller when desired.

A further object of the invention is the production of a clothes drier which shall be provided with a clothes drying frame of the removable and knockdown type, that is, a frame which may be easily and quickly removed from its support and taken apart, thereby clearing away the unsightliness of the device when not in use.

With the above and further objects in view which will appear from the subjoined description, the invention consists in the construction and novel combination of parts hereinafter more particularly described and then specified in the claims.

A practical embodiment of the invention is represented in the accompanying drawing forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

In the drawing: Figure 1 is a front elevation of my improved clothes drier, a portion of the motor casing and adjacent parts being shown in section. Fig. 2 is a plan view of the frame of the clothes drier. Fig. 3 is an enlarged vertical section of the sleeve (and adjacent parts) by which the struts for supporting the frame are held. Fig. 4 is an enlarged vertical section of a portion of the motor casing and shaft and adjacent parts. Fig. 5 is an enlarged vertical section of one of the arms of the frame of the clothes drier.

Referring more particularly to the several figures of the drawing: 1 indicates a spindle fastened in any desirable manner to and depending from the ceiling or other suitable support 2 and from the lower end of which a motor casing 3 is suspended. A motor (not shown) for operating or revolving a clothes drying frame whose construction will be presently described is suitably mounted in the casing 3 and the shaft 4 of the motor extends vertically downward through an opening provided in the base of the casing as illustrated.

5 indicates a hub or collar comprising the body portion of a spider and which is keyed as shown or otherwise secured in any suitable manner to the motor shaft 4 for rotation therewith. The hub or collar 5 is provided with an annular flange 6 supported by a ball-bearing 7 which is preferably attached to the under side of the casing 3 by suitable screws or bolts 8 as illustrated.

9 indicates the spokes or arms of the spider which are preferably integrally united with the hub or collar 5 and with a supporting ring 10.

The arms of the clothes drying frame, of which there are preferably six in number, comprise rods 11 carrying sleeves 12. The inner ends of the rods 11 are provided with reduced portions having threaded ends which are securely held to the supporting ring 10 preferably by the nuts 13. It is obvious that the supporting ring 10 could be dispensed with entirely if found desirable, in which case the rods 11 could be attached directly in any desirable manner to the spokes or arms 9 of the spider. Each of the rods 11 is provided with a slot 14 extending transversely through the body of the rod and the sleeves 12 are provided with a series of holes 15 extending transversely through the walls thereof. Each of the sleeves is also provided with a slot 16 and the shank of a winged nut 17 extends through the slot and is screwed into the body of the rod 11. A washer 30 is compressed between the periphery of the sleeve 12 and nut 11 so that a loosening or unscrewing of the winged nut 17 permits a movement of the sleeve 12 on the rod 11, the movement being limited by the length of the slot 16. Obviously a shortening or lengthening of the arms of

the clothes drying frame may therefore easily be effected when it is so desired.

18 indicates a sleeve provided with an upturned annular flange 19 having a series of slots 20 cut in the edge thereof and 21 indicates a ball-bearing, fastened to the spindle 1 preferably by the bolts as illustrated, and which supports the sleeve 19. The inner wall of the sleeve 18 is preferably slightly cut away, as shown, to provide an annular runway for the anti-friction balls 22 which preferably contact with a steel wearing-ring 23 encircling the spindle 1. A fixed collar 24 having a downwardly depending annular flange provides a cover or inclosing wall for the runway which receives the anti-friction balls 22.

25 indicates strut members preferably made of wire and each comprising two sections joined together by turn-buckles 26. One end of the strut members 25 is fastened to the free ends of the arms of the clothes drying frame and the other end, which is preferably threaded, engages the slots 20 and is held to the annular flange 19 by buttons 27 which are screwed on the ends of the strut members. The wires or ropes on which the clothes are hung are indicated at 28 and pass through the holes 15 of the sleeves 12 and through the slots 14 of the rods 11 and their ends are then fastened together in any suitable manner.

It is manifest from the foregoing description that the whole framework of the apparatus may be easily and quickly removed from its support by simply unscrewing the nuts 13 and disengaging the strut members 25 from the annular flange 19 either by simply lifting them out of their respective slots 20 or by unscrewing the buttons 27. It is also apparent that the size of the clothes drying frame may be increased or diminished by unloosening or untying the ends of wires or ropes 28, adjusting the length of the supporting struts 25 by means of the turn-buckles 26 and adjusting the position of the sleeves 12 on the rods 11 in the manner heretofore described. Obviously also the distance between the wires or ropes 28 may be varied or the distance of the wires or ropes from either end of the arms of the frame may be varied by passing the wires or ropes through any desired holes 15 in the sleeves 12. It will be obvious also that any desirable manner of supplying current to the motor may be employed and also of controlling the operation of the motor. For instance, the current-supplying wires connecting with the motor could be run up through the spindle and the operation of the motor controlled by a wall switch.

It will be understood that my invention is not limited to the exact details of construction herein shown and described such being for the purpose of illustration only, but various modifications may be resorted to without departing from the spirit of the invention as set forth in the appended claims.

What I claim as my invention is:—

1. A suspended clothes drier comprising a motor, a stationary vertical spindle supporting said motor and fastened to an overhead support, a clothes drying frame having horizontally adjustable radiating arms to permit regulating of the size of the frame, the inner ends of said arms being detachably secured to the motor shaft, and struts fastened to the free ends of said arms for supporting the same.

2. A suspended clothes drier comprising a motor, a vertical spindle supporting said motor from its lower end and fastened to an overhead support, a spider secured to the motor shaft, a clothes drying frame having adjustable radiating arms to permit regulating of the size of the frame and detachably secured to said spider, a sleeve loosely carried by said spindle and struts for supporting said arms and detachably secured to said sleeve.

3. A suspended clothes drier comprising a motor, a vertical spindle supporting said motor and fastened to an overhead support, a spider secured to the motor shaft, arms secured to said spider, a clothes drying frame having adjustable radiating arms to permit regulating of the size of the frame and detachably secured to said spider arms, a sleeve carried by said spindle, struts for supporting said radiating arms and detachably secured to the free ends of said radiating arms and to said sleeve and means carried by said struts for adjusting the length of the same.

Signed at Wallkill, in the county of Ulster and State of New York, this 27th day of December, A. D. 1915.

MARION BORDEN HALLIDAY.

Witnesses:

G. E. HALLIDAY,

FRED CODDINGTON.