

H. W. MONK.
CLOTHES DRIER.
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945,793.

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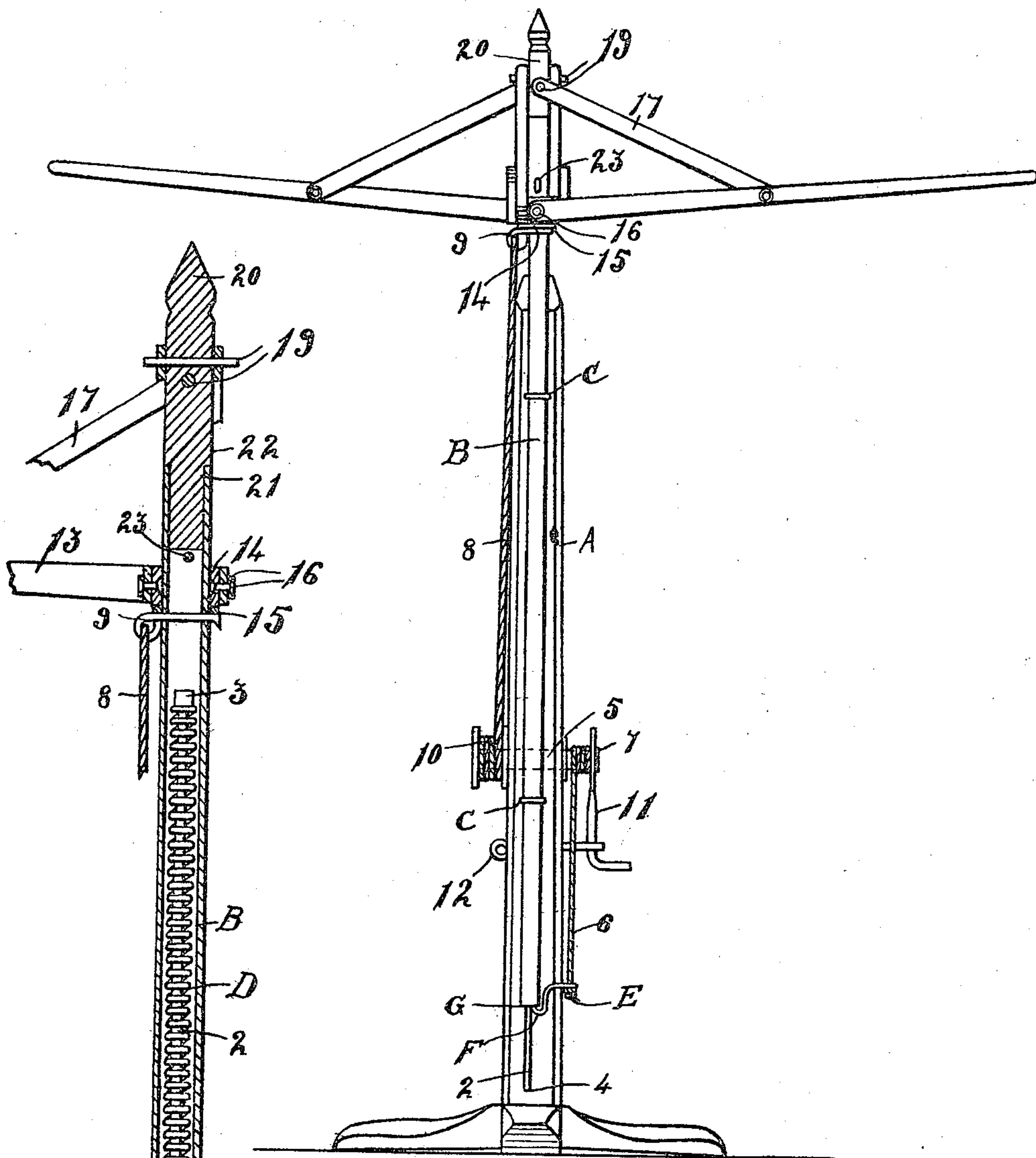


Fig. 1.

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

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CLOTHES-DRIER.

945,793.

Specification of Letters Patent. Patented Jan. 11, 1910.

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To all whom it may concern:

Be it known that I, HERMAN W. MONK, a subject of the King of Great Britain, residing at Malcolm Post-Office, in the county of Bruce and Province of Ontario, Canada, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a specification.

My invention relates to improvements in clothes-driers, and the objects of my invention are; firstly, to provide my clothes-drier with means whereby energy will be stored up by the lowering of the reel-spindle so as to be utilized when the reel-spindle is elevated so that the same may be easily elevated, and secondly, to associate the reel with the drier-spindle in such a manner that it may revolve without moving the reel-spindle.

The construction of my clothes-drier and the parts I claim as new will be hereinafter particularly described and pointed out in the claims forming a part of this specification.

Figure 1 is a side elevation of a clothes-drier constructed according to my invention, showing the reel and reel-spindle lowered. Fig. 2 is a central longitudinal section through the reel-spindle.

In the drawings, like characters of reference indicate corresponding parts in each figure.

In clothes-driers now on the market, the reel and reel-spindle and the clothes carried thereby make quite a weight to be raised up, and in order to overcome this weight as much as possible I combine with the reel-spindle a spiral spring which is extended when the reel-spindle is lowered, thereby storing up energy to be given off during the elevating of the reel-spindle.

Although in the following specification, I describe the illustrated preferred form of construction, still it must be observed that I do not confine myself to this construction, as my broad idea may be embodied in different forms without going outside the scope of my claims.

A is any suitable post, and B the reel-spindle.

C are eyelets or other suitable means carried by the post A and through which the reel-spindle B passes, for the purpose of holding the reel-spindle in position to the post A in such a manner as to allow its vertical movement.

The reel-spindle B is tubular in form, and

houses a spiral spring D. E is a bracket suitably attached to the lower end of said spiral spring. The bracket E is provided with a U-shaped portion F which is designed to abut against the lower end of the reel-spindle B so as to anchor the lower end of the said spring in place. One of the legs G of the U-shaped portion F extends up into the reel-spindle and is provided with a hole through which passes the lower end H of the said spring.

2 is a rod extending up into the spiral spring D. Any suitable construction is provided whereby force is applied through the said rod to the upper end of the said spiral spring in order to extend the same, and by means of which the energy stored in the said spring is given off to assist the raising of the reel-spindle. The construction shown for this purpose consists of a block 3 suitably secured to the upper end of the said spiral spring and against which abuts the upper end of the rod 2. The lower end of the said rod is suitably anchored to the post A, and the construction shown for this purpose consists in forming the lower end of the said rod with a bend 4 which is driven into the said post. Journaled in the post A is a drum 5, which projects beyond the sides of the said post. 6 is a flexible connection secured at one end to the bracket E and wound around the end 7 of the said drum. 8 is a flexible connection secured at one end to the eyelet 9 carried by the reel-spindle B, and wound around the end 10 of the said drum. When the handle 11 is turned to the left, it will be understood that by the winding up of the flexible connection 8 the reel-spindle will be lowered, thus causing the spiral-spring D to be extended as shown in Fig. 2.

12 is a bolt carried by the post A designed to prevent the handle 11 from turning. In order to utilize the energy stored up in the spiral spring D to raise up the reel-spindle, the bolt 12 is moved out of the path of movement of the handle 11, and by giving such manual assistance as may be necessary, and through the winding up of the flexible connection 6 and the unwinding of the flexible connection 8, it will be understood that the said reel spindle will be raised. It has been found from actual experience that the energy stored in the said spring very materially assists the raising of the reel-spindle.

The internal support given to the lower

portion of the reel-spindle B by the spiral spring D and rod 2 prevents any lateral movement thereof.

It will be understood that the bolt 12 may be used, if necessary, to prevent the lowering of the reel-spindle and reel. It is conceived that the spiral spring D will be strong enough to ordinarily prevent the lowering of the reel-spindle.

It will be noticed that the flexible connections 6 and 8 wind around and unwind from, the drum 5 from the same side, thus insuring the operation of the device.

Any suitable reel may be associated with my reel-spindle, but I prefer the following construction of reel; said reel consists of the usual reel-arms 13 provided after any suitable construction with the usual wires or ropes (not shown), to which the clothes are secured. The construction shown for associating the spiral spring D with the reel-spindle B will not allow of the rotation of said reel-spindle, and therefore my reel must be free to rotate on said reel-spindle. For this purpose I provide a collar 14 which loosely fits around the reel-spindle near its upper portion and rests upon a collar 15 supported by the eyelet 9. By means of the rivets and washers 16 the inner ends of the reel-arms 13 are attached to said collar. The brace arms 17 are pivoted at 18 to the said reel-arms, and are provided with holes at their upper ends so that they may be slipped on the pins 19 projecting from each side of the rotary head 20. This rotary head 20 is provided with an extension 21 reduced to loosely fit within the upper end of the reel-spindle B. The formation of this lower end forms an angular shoulder 22 which rests upon the upper end of the reel-spindle B and so supports the rotary head 20.

23 is a short rod passed through the reel-spindle B above the collar 14 to prevent the same from being raised up.

From the construction just described it will be understood that the reel will be free to rotate on the reel-spindle without interfering with the operation of the same.

The pins 19 are headless, and it will be therefore understood that the brace-arms 17 may be easily disconnected therefrom and folded down against the reel-arms 13 which in turn can be moved around the pivot 16 and so fold down around the reel-spindle B and post A, thus providing a very compact form of the clothes-drier for shipment.

It will of course be understood that the

spring used may be made strong enough to raise up the reel-spindle and parts carried thereby without the assistance of the handle 11. In such a case, however, the handle 11 would be used more as a governor in order to prevent a too rapid movement of the said reel-spindle under the influence of the spring.

It will be understood that the lower end of the reel-spindle B rests in the U-shaped portion F of the bracket E.

What I claim as my invention is:

1. In a clothes-drier, the combination with the post; a reel-spindle slidably mounted thereon, and means for raising or lowering said reel-spindle, of a spiral spring attached to said reel-spindle, and means carried by said post and engaging said spring so that when the said reel-spindle is lowered, the said spring will be extended, thus storing up energy which will be utilized when the said reel-spindle is being raised up so as to assist in this operation.

2. In a clothes-drier, the combination with the post; a tubular reel-spindle slidably mounted thereon, and means for raising and lowering said reel-spindle, of a spiral spring housed by said tubular reel-spindle; means for anchoring the lower end of said spiral spring to said reel-spindle; a rod carried by said post and extending through said spiral spring, and a stop carried by said spiral spring which is adapted to contact with said rod whereby the spring is extended when the spindle is lowered.

3. In a clothes-drier, the combination with the post; a tubular reel-spindle slidably mounted thereon; a drum carried by said post, and flexible connections attached to said drum, one of which is attached to said reel-spindle near its lower end, and the other to said reel-spindle near its upper end, whereby the spindle may be raised or lowered by operating the drum, of a spiral spring housed by said reel-spindle; means for anchoring the lower end of said spiral spring to said reel-spindle; a rod carried by said post, and extending through said spiral-spring, and a stop carried by said spiral spring which is adapted to contact with said rod, whereby the spring is extended when the spindle is lowered.

In testimony whereof I have affixed my signature in presence of two witnesses.

HERMAN W. MONK.

Witnesses:

N. LANGFIELD,
WM. S. JORDAN.