May 26, 1925. 1,539,685

J. C. MICHAUD

CLOTHES DRIER

Filed July 19, 1924

FIG. 1.

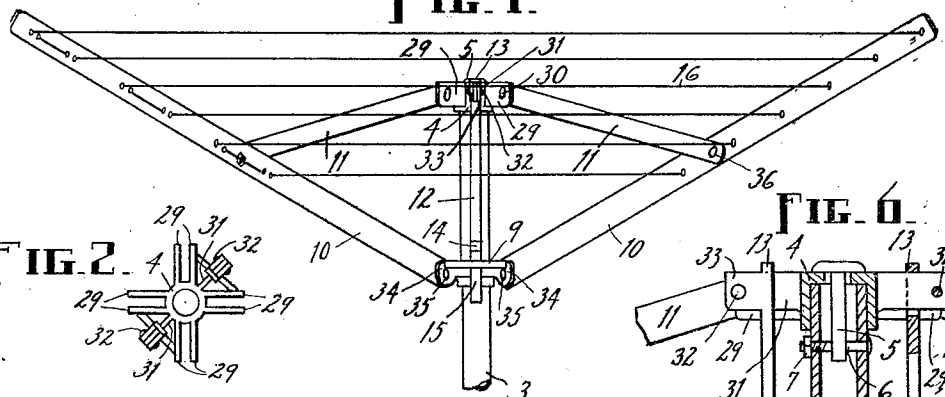
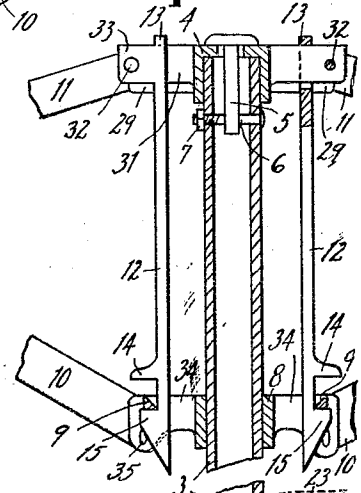
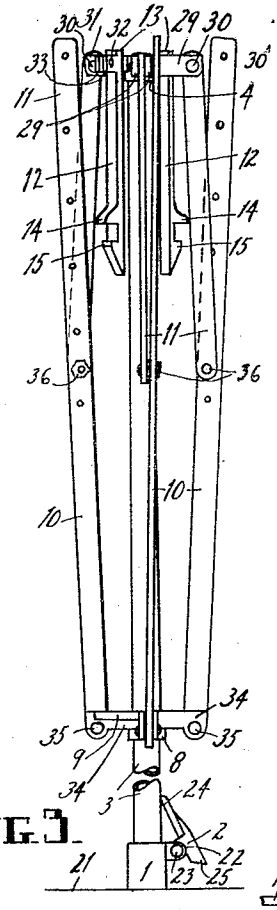


FIG. 2.

FIG. 6.





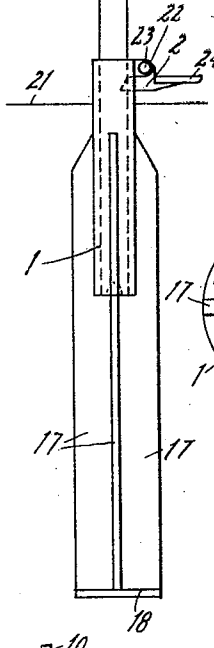
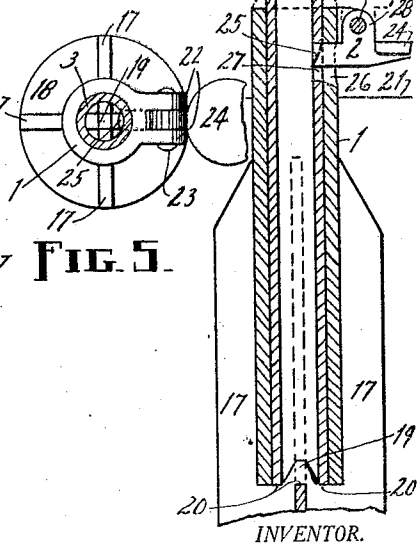


FIG. 3.

FIG. 5.



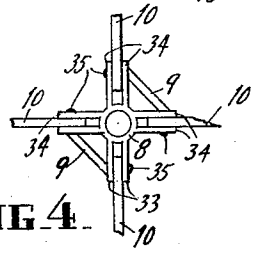


FIG. 4.

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UNITED STATES PATENT OFFICE.

JOHN C. MICHAUD, OF SPRINGFIELD, MASSACHUSETTS.

CLOTHES DRIER.

Application filed July 19, 1924. Serial No. 726,925.

To all whom it may concern:

Be it known that I, JOHN C. MICHAUD, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Clothes Drier, of which the following is a specification.

My invention relates to improvements in clothes driers of the folding reel type which are adapted to be set in sockets in the ground and removed therefrom at will, and resides in certain peculiar base elements, including a combination cover and lock, of and for a clothes drier of the aforesaid type, and in certain peculiar supporting and releasing means for the expanding and collapsing or folding reel proper, together with such other parts and members as may be necessary or desirable in order to render the drier complete and serviceable in every respect, all as hereinafter set forth.

One object of my invention is to furnish, for the removable parts and members of a clothes drier, a comparatively simple but highly efficient ground support and centering means for the post of said drier, and to provide such support with means for closing the top of the same when said post is removed, and for locking the latter in place in the former when introduced therein. This support, centering means, and combined cap and lock are all comparatively simple in construction, function, and operation, and may be produced economically. This statement also applies to the other parts and members of the invention.

The combination cover and lock or cover-lock, of which mention has been made, serves the double purpose of covering the top of the ground support, when the drier post is removed therefrom, and thus excluding dirt, rain, and snow from the interior of said support, and of locking said post in place in said support, when the former is inserted in the latter, so that the post can not be accidentally lifted out of the support, as by a gust of wind acting against the reel when full of clothes.

Another object is to afford means, in a clothes drier, for easily and quickly effecting the collapse of the reel by a simple manual operation which releases said reel and enables the vertically movable parts thereof to drop by gravity.

A further object is to provide means for limiting the upward movement of the folding parts of the reel, when said reel is expanded, in order to prevent an excessive amount of such movement, or an amount which might result in the locking of the reel in an expended position in such a manner as to render it quite difficult to restore the parts to normal positions again.

Other objects and advantages will appear in the course of the following description.

I attain the objects and secure the advantages of my invention by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a clothes drier which embodies a practical form of my invention, the reel being expanded, and a portion of the post being broken out; Fig. 2, a top plan of the top fixture or head of said drier or of the reel itself; Fig. 3, a side elevation of said drier showing the same disposed in collapsed or folded position, and without the clothes line, a portion of the post being broken out as in the first view, and also in Fig. 6; Fig. 4, a top plan of the bottom fixture or sleeve of said reel; Fig. 5, an enlarged top plan of the ground support and cap-lock, the post being shown in cross section, and, Fig. 6, an enlarged, central, vertical section through so much of the drier as includes the new features thereof.

Similar reference characters designate similar parts throughout the several views.

Fragmentary portions only of the arms and braces of the reel appear in Figs. 4 and 6, and the bottom portion of the ground support is broken off in that view.

This clothes drier comprises a ground support which includes a socket 1, and is equipped with a cover-lock 2, a tubular upright or post 3, a top fixture or head 4 mounted on said post and secured thereto by means of a headed pin 5, a bolt 6, and a nut 7, a bottom fixture or sleeve 8 slidingly arranged on said post, and having oppositely-disposed stop and supporting bars 9, a plurality of arms 10, a plurality of braces 11, and a pair of latches 12 each having a stop 13 at the top and upper and under projections or lugs 14 and 15, respectively, at the lower terminal to engage and release said bars. A clothes line 16 connects the arms 10 in the usual manner.

In addition to the tubular member or socket 1, the ground support consists of four, more or less, wings or ribs 17 which radiate from said socket and are provided

with an annular base 18. The socket 1 is open at the top, and also at the bottom except at the four points where said socket and the wings 17 join, and across this open bottom and a short distance upwardly into the same project extensions from said wings which extensions form a center-piece 19. The socket 1 extends above the wings 17, but said wings extend some considerable distance below said socket. The center-piece 19 has four inclined sides or edges at the bases of which are horizontal parts 20, Fig. 6, which are flush with the bottom edge of the socket 1. The bottom edge of the post 3 is received on the parts 20 when said post is in place.

The ground support is designed to be inserted in a hole in the ground to within a short distance of the top of the socket 1, and to have the dirt packed in on top of the base 18 and around said socket and the wings 17, the ground line appearing at 21 in Figs. 1, 3, and 6. Thus it is seen that the ground support must be very firmly and securely held in place by the surrounding earth.

A pair of lugs 22 extends outwardly from one side of the socket 1 adjacent to the top thereof, and the cover-lock 2 has a lug 28 which is pivotally connected at 23 with said lugs 22. One terminal of the member 2 constitutes a cover 24 which is adapted to be received on and close the top of the socket 1 when said member is rocked on its pivot 23 in one direction, and the other terminal of said member forms a lock 25. There is a vertical slot 26 in the socket 1 below the lugs 22 to receive the lock 25, when the member 2 is rocked on its pivot 23 in the other direction, and there is a vertical slot 27 in the post 3 at the proper distance above the bottom edge of said post then to receive said lock, when said post is in said socket and in position to have the post slot register with the socket slot. The cover-lock 2 is located a sufficient distance above the ground line 21 to enable said cover-lock to be actuated into either one of its operative positions. The inner edge of the lock 25, when said lock is in operative position, inclines from below upwardly and outwardly to receive the bottom of the post 3, when such bottom is introduced into the socket 1, and be thereby thrust out of the way and prevented from interfering with the descent of the post into the socket.

When the cover 24 is in place over the top of the socket 1, as represented by broken lines in Fig. 6, such top is closed against the entrance of dirt, water, and other substances, and the lock 25 is out of the slot 26, but, when said cover is actuated out of such position, said lock is caused to enter said slot 26 and project into the socket 1. Then, when the post 3 is inserted in the socket 1, it encounters the lock 25 and pushes the same outwardly. The post 3 comes to rest on the parts 20 of the wings 17, and is partially rotated, if necessary, to cause the slot 27 to be in registry with the slot 26, when the lock 25 enters said first-named slot and so holds the post against upward displacement, and against rotation as well. The member 2 assumes either one of its operative positions by gravity, after being rocked on its pivot 23 until either the cover 24 or the lock 25, as the case may be, passes the center of gravity. The slot 26 is of sufficient length to afford the necessary amount of clearance for the lock 25, as is also the slot 27.

When it is desired to remove the post 3 from the socket 1, the cover 24 is first swung upwardly against said post to withdraw the lock 25 from the slot 27. Upon the removal of the post 22 the cover 24 immediately drops down into place over the top of the socket 1.

The cap 4 is adapted to fit over the top of the post 3, where it is held by means of the pin 5 which passes down through an opening in the top of said cap, and the bolt 6 and nut 7, said bolt being passed through the sides of said post and through said pin to receive said nut outside of the post. Four pairs of lugs 29 radiate from the cap 4, and one end of each of the braces 11 is pivotally connected at 30 with one pair of such lugs. The four pairs of lugs 29 are spaced equidistant apart, and extending from the cap 4 into two of the spaces between said pairs of lugs, which spaces are opposite to each other, are two lugs 31.

The latches 12 are suspended by means of pivots 32—32 from the lugs 31, each of said latches being slotted at the top to receive the outer terminal of one of said lugs, as best shown in Fig. 2. The upper terminal portion of each latch 12, which portion is slotted to receive one of the lugs 31, extends outwardly from the main body of said latch and forms a pair of projections or ears 33, and it is through such ears near their outer ends that one of the pivots 32 passes. Owing to the fact that the ears 33 are pivotally connected adjacent to their outer ends with the lugs 31, the tendency of the latches 12 is to swing outwardly at the bottom, and such movement is limited by the stops 13. The stops 13 are horizontal members that extend over the tops of the slots provided in the latches 12 to receive the lugs 31, at the inner ends of such slots. The ears 33 are so pivoted to the lugs 31, and the stops 13 are so located relative to said lugs, that, when the latches 12, after being swung inwardly on their pivots 32, are released, they swing outwardly on said pivots by gravity until said stops encounter the upper edges of said lugs. The latches 12 are normally supported by their pivots and stops in an approximately vertical position.

The lugs 14 are below the ears 33 and may be termed stop lugs, and the lugs 15 are below said stop lugs and may be termed supporting lugs. Each stop lug 14 is longer than the supporting lug 15 below. The outer edge of each latch 12 below its supporting lug is inclined from above downwardly and inwardly, and the inner side of each bar 9 is similarly inclined. The inclined surfaces just mentioned come into contact with each other when the sleeve 8 is raised, since the inclined bottom terminals of the latches 12 are then in the paths of the bars 9, and the operation of the parts is thus facilitated. The latches 12 are caused by the bars 9 to swing inwardly at their bases, when the sleeve 8 is raised, until said bars pass the lugs 15. The lugs 14 are also in the paths of the bars 9 when elevated, and limit the upward movement of said bars and of the sleeve 8.

The sleeve 8 is provided, like the cap 4, with four pairs of lugs 34, which pairs of lugs are spaced equidistant apart. One terminal of one of the arms 10 is pivotally connected at 35 with one pair of the lugs 34. Each bar 9 extends between two lugs 34 of adjacent pairs, and said bars are directly beneath the cap lugs 31. The bars 9 are the proper distance from the post 3 to engage the inclined edges at the bottom of the latches 12, when the sleeve 8 is elevated, and to cause said latches to be swung inwardly, as previously observed.

Each brace 11 is pivotally connected at 36 with one of the reel arms 10, the pivot being at the end of the brace which is opposite that through which one of the pivots 30 passes, and said first-named pivot passes through said arm intermediate of its ends. The clothes line 16 is threaded through openings in the arms 10 in the usual manner.

When the sleeve 8 is raised from the position shown in Fig. 3 to that shown in Fig. 1, the arms 10 and braces 11 are thrust outwardly, the bars 9 swing the latches 12 inwardly until said bars encounter the lugs 14, or, in any event, pass above the lugs 15, when said latches swing outwardly again, and said collar is permitted to descend until said bars come to rest on said last-named lugs. The sleeve 8 is now securely supported in its elevated position, with the arms 10 and braces 11 extended outwardly. The lugs 14, being in the path of the bars 9 when the sleeve 8 is raised, prevent said sleeve from being carried upwardly far enough to cause the same to approach too closely to the cap 4 and thus cause the arms 10 to be locked by the braces 11 in expanded position.

When it is desired to fold the reel, the latches 12 are grasped between their extremities and swung inwardly to disengage the lugs 15 from the bars 9. Immediately upon the support for the bars 9 being thus withdrawn, the sleeve 8 descends by gravity on the post 3, and carres with it the arms 10 and the braces 11, thus causing said arms and braces to be folded. The downward movement of the parts continues until the arms 10 and the collar 8 are supported from the folded braces 11, substantially as shown in Fig. 3.

After the reel has been folded, if it be desired to carry the same into the house, the cover-lock 2 is actuated from the position shown in full lines in Fig. 6 into the position shown in Fig. 3, to withdraw the lock 25 from the post 3, and said post is lifted out of the socket 1. As soon as the post 3 is removed from the socket 1, the cover 24 drops down on the top of said socket and closes the same—see broken lines in Fig. 6. Upon removing the cover 24 from the top of the socket 1, and actuating the member 2 into the position which causes the lock 25 to extend through the slot 26 into the support 1, as shown in Fig. 5 and in full lines in Fig. 6, the post 3 can have its base reinserted in the socket 1. As the base of the post 3 descends in the socket 1, it encounters the inclined edge of the lock 25 and forces said lock outwardly until the slot 27 in said post is in position to receive the lock, when the latter swings inwardly to assume its operative position relative to the post. The post 3 is now locked in the socket 1 and remains locked therein until the cover-lock is swung outwardly and upwardly again to withdraw the lock 25 from the slot 27.

More or less change in the shape, size, construction, and arrangement of some or all of the parts of this clothes drier may be made, without departing from the spirit of my invention or exceeding the scope of what is claimed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a clothes drier, with a ground support consisting in part of a slotted socket, and a member pivotally connected with said socket, and comprising at one end a cover to close the top of said socket, and at the other end a lock to enter the slot in said socket, according to the position of said member, of a slotted reel post receivable in said socket, and adapted to receive in its slot said lock.

2. The combination, in a clothes drier, with a reel post, a cap mounted on said post, a sleeve arranged to slide on said post, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and said braces, of latches suspended from said cap and adapted to gravitate outwardly to engage said sleeve, and when actuated inwardly to release said sleeve, the points of suspension of said latches being

outside of the vertical centers thereof, and means to limit the outward movement of the latches.

3. The combination, in a clothes drier, with a reel post, a cap mounted on said post, said cap being provided with lugs, a sleeve arranged to slide on said post, said sleeve being provided with engaging members, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and with said braces, of latches pivotally connected with said lugs, and themselves having lugs which are in the path of said engaging members and adapted to be engaged by the latter and to support the same with said sleeve in elevated position, and having other lugs above the first which limit the upward movement of said members and sleeve.

4. The combination, in a clothes drier, with a reel post, a cap mounted on said post, said cap being provided with lugs, a sleeve arranged to slide on said post, said sleeve being provided with engaging members, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and with said braces, of latches having at one terminal outwardly-extending parts which are pivotally connected with said lugs, and stop members to engage said lugs and limit the outward movement of said latches, and having at the other terminal lugs which are adapted to be engaged by and support said engaging members with said sleeve in elevated position.

5. The combination, in a clothes drier, with a reel post, a cap mounted on said post, said cap being provided with lugs, a sleeve arranged to slide on said post, said sleeve being provided with engaging members, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and said braces, of latches having at one terminal outwardly-extending parts which are pivotally connected with said lugs, and stop members to engage said lugs and limit the outward movement of said latches, and having at the other terminal lugs which are adapted to be engaged by and support said engaging members with said sleeve in elevated position, and with means to limit the upward movement of said engaging members.

6. The combination, in a clothes drier, with a reel post, a cap mounted on said post, said cap being provided with lugs, a sleeve arranged to slide on said post, said sleeve being provided with engaging members, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and said braces, of latches having at one terminal outwardly-extending parts which are pivotally connected with said lugs, and stop members to engage said lugs and limit the outward movement of said latches, and having at the other terminal lugs which are adapted to be engaged by and support said engaging members with said sleeve in elevated position, and with lugs above said last-named lugs and in the path of said engaging members to limit the upward movement of the same.

7. The combination, in a clothes drier, with a reel post, a cap mounted on said post, a sleeve arranged to slide on said post, said sleeve being provided with radial lugs and with bars which extend between certain of such lugs, braces pivotally connected with said cap, and reel arms pivotally connected with said lugs and with said braces, of latches pivotally connected with said cap, and having lugs in the path of said bars to limit the upward movement of said sleeve, and other lugs in the path of said bars to be engaged by and support said bars with said sleeve in elevated position.

8. The combination, in a clothes drier, with a reel post, a cap mounted on said post and provided with radial lugs, a sleeve arranged to slide on said post and provided with radial lugs, said sleeve also being provided with bars which extend between certain of its lugs, braces pivotally connected with certain of said cap lugs, and reel arms pivotally connected with said sleeve lugs and with said braces, of latches having at the top outwardly-extending ears which are pivotally connected with others of said cap lugs, whereby said latches have a tendency to gravitate outwardly, and also having at the top stops to engage said last-named lugs and limit said movement of the latches, and the free terminals of said latches being in the path of said bars and provided with limiting and engaging means therefor.

9. The combination, in a clothes drier, with a reel post, a cap mounted on said post and provided with lugs, a sleeve arranged to slide on said post and provided with bars, said bars being under said lugs, braces pivotally connected with said cap, and reel arms pivotally connected with said sleeve and with said braces, of latches having at the top outwardly-extending ears which are pivotally connected with said lugs and give to the latches a tendency to gravitate outwardly, and also having at the top stops to engage said lugs and limit such movement of the latches, and said latches having below said ears outwardly-extending stop lugs and outwardly-extending engaging and supporting lugs for said bars.

JOHN C. MICHAUD.

Witnesses:
F. A. CUTTER,
THEO. F. DWIGHT.