G. B. WILLARD.

CLOTHES DRIER.

APPLICATION FILED JULY 27, 1909.

985,485.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 5.

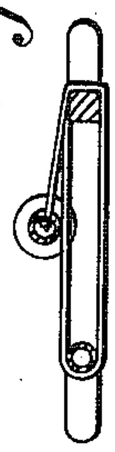

Fig. 3.

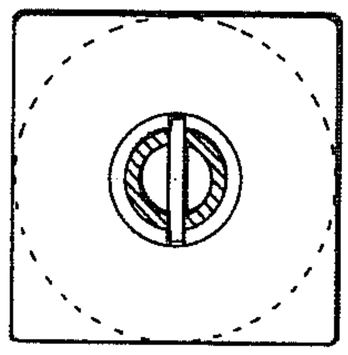

Fig. 4.

Fig. 1.

Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 7.

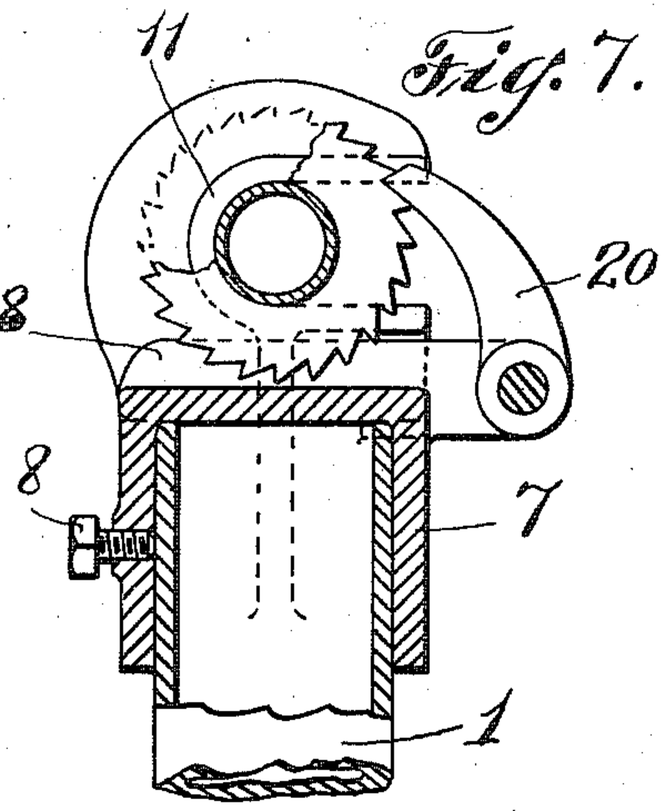


Fig. 6

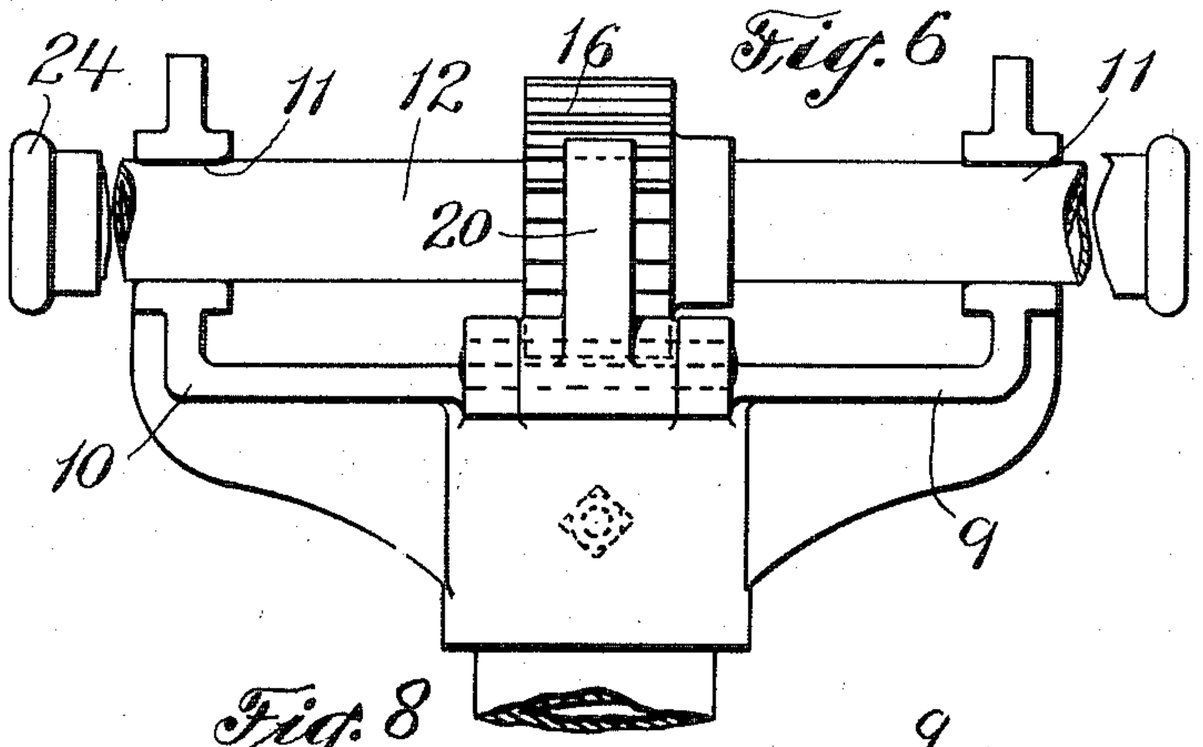


Fig. 8

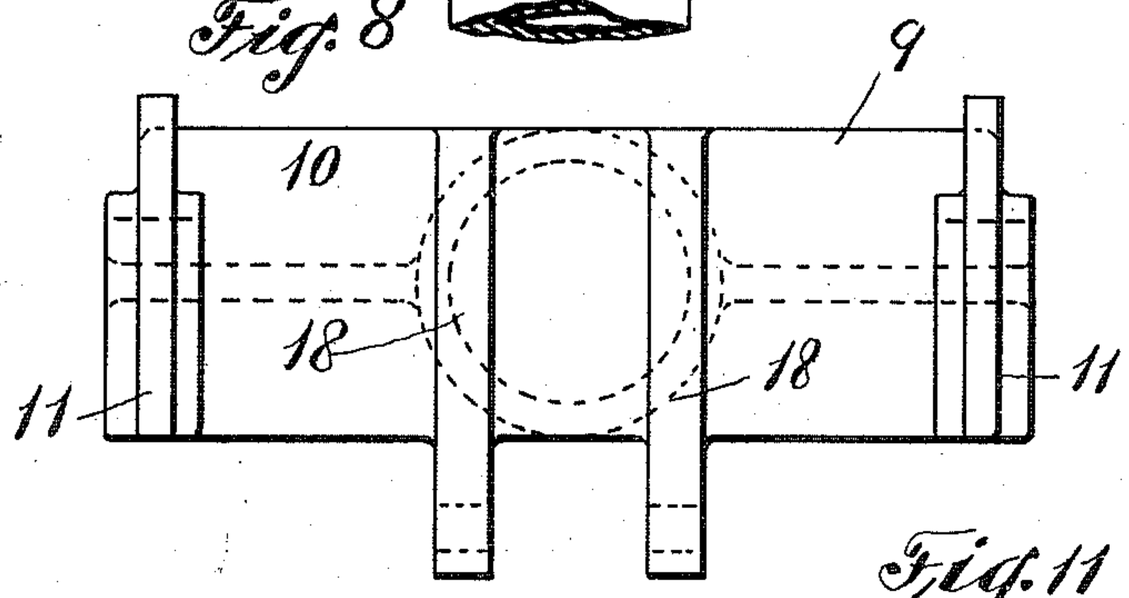


Fig. 9

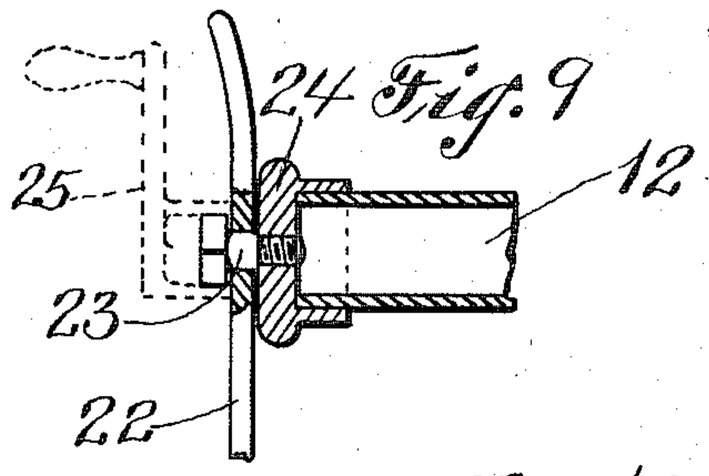


Fig. 10

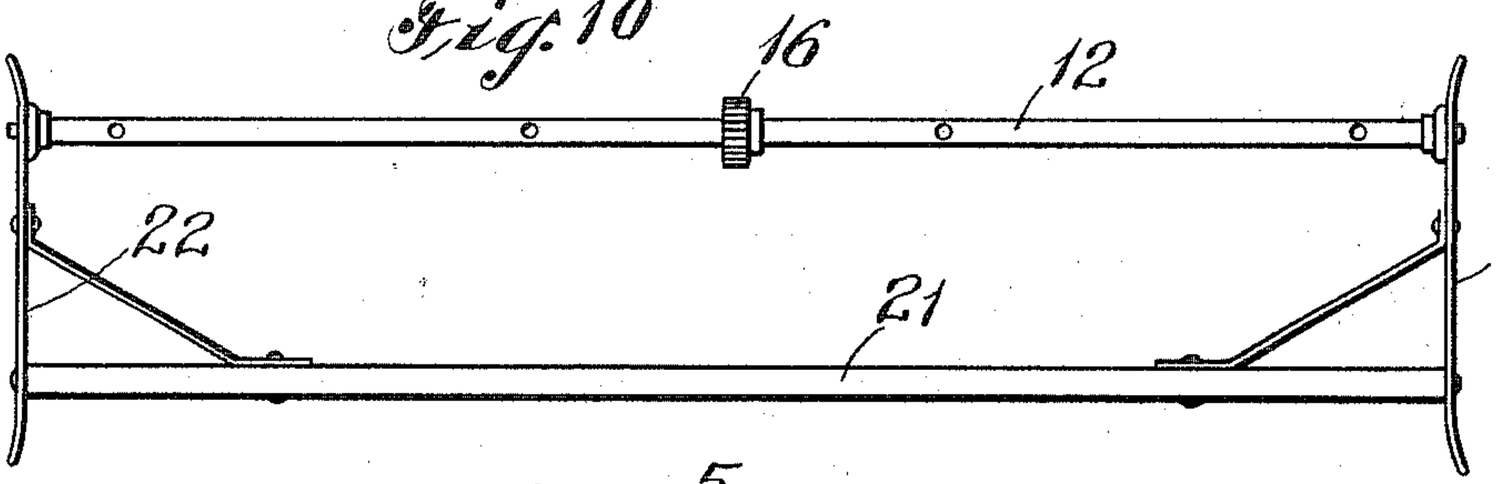


Fig. 11

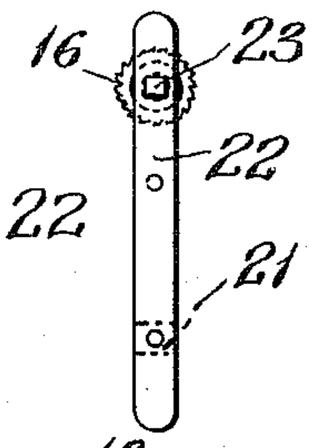


Fig. 12

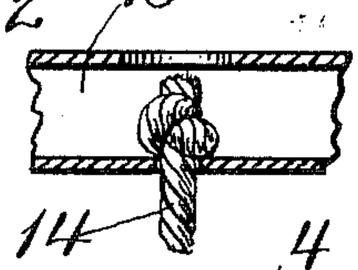


Fig. 13.

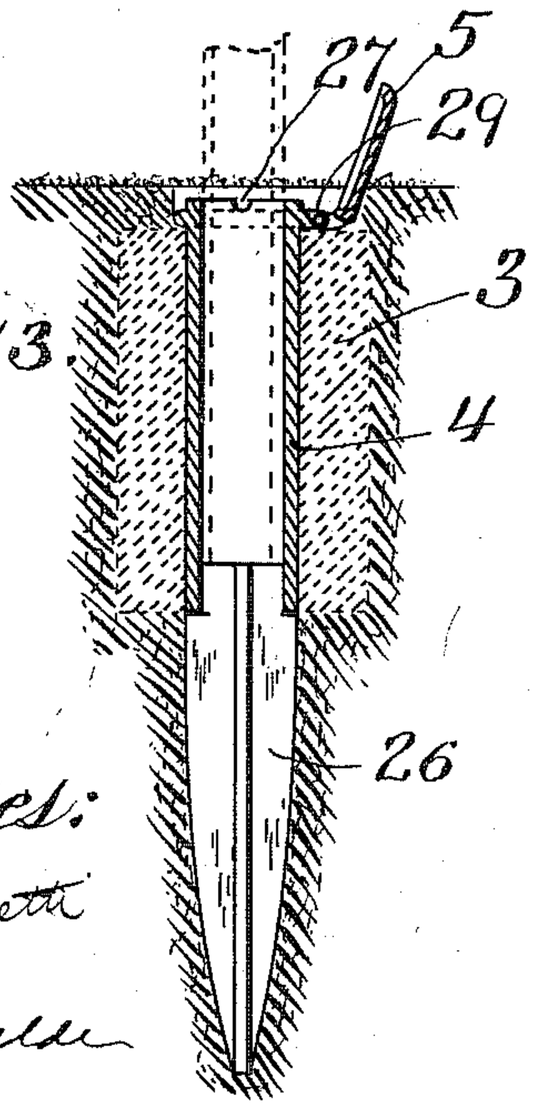


Fig. 14.

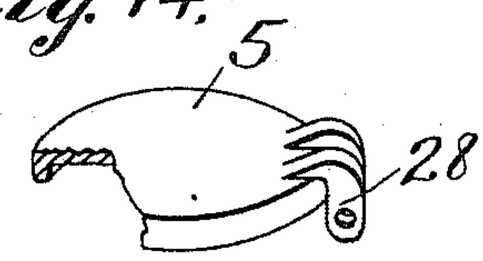
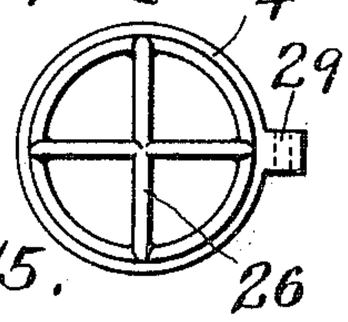


Fig. 15.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE B. WILLARD, OF WALTHAM, MASSACHUSETTS.

CLOTHES-DRIER.

985,485. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed July 27, 1909. Serial No. 509,926.

To all whom it may concern.

Be it known that I, GEORGE B. WILLARD, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a specification.

This invention relates particularly to devices for suspending clothing and other articles of domestic use in an outspread condition to be dried after washing.

The object is to provide a clothes-drying apparatus which can be set up and readily taken down with a minimum expenditure of labor and time and of which no trace will be left when the same is taken down and stowed away.

Another object is to provide a socket in which the foot of the upright portions of such a device may be removably placed and held, which socket will be indestructible and may be set into a lawn without offering any impediment to the passage of a grass-cutting machine.

Still another object is to provide a form of support for a line or lines which may be adjusted to take up the slack and give any desired degree of tension to the lines.

My invention may be embodied in a variety of forms, in any of which the essentials are one or more upright posts, a socket for each post embedded in the ground and a cross bar removably carried by the top of each post to which the line or lines are attached. The socket portion referred to is also designed as a support for posts adapted for any purpose as well as for holding drying lines.

In the accompanying drawings Figure 1 represents in perspective a device adapted to hold clothing and washable fabrics in an outspread suspended condition for drying, in which the essential principles of my invention are embodied. Fig. 2 is a sectional view illustrating a socket for the upright portions of the device. Fig. 3 is a sectional view of one of the uprights or posts of the device, showing in plane view a socket in which the latter is detachably held. Fig. 4 is an elevation of one of the rails of the device. Fig. 5 is a cross-section view illustrating the manner in which the lines are wound up when the device is taken apart. Fig. 6 is a detailed elevation of the upper part of one of the uprights showing the manner of mounting the cross rail therein. Fig. 7 is an end elevation of the same partial end section. Fig. 8 is a plane view of the same. Fig. 9 is a sectional view of one end of the cross-rail. Fig. 10 is a front elevation of one of the cross rails with a winding wheel attached thereto. Fig. 11 is an end view of the same. Fig. 12 is a detailed sectional view illustrating a mode of attaching the line to the supporting rail. Fig. 13 is a vertical sectional view of a form of socket for the upright of the apparatus. Fig. 14 is a perspective view of a cover for such socket. Fig. 15 is a plan view of the socket.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings the characters 1 and 2 represent two uprights or posts which are set into sockets embedded in the ground. One form of such socket is shown in Figs. 2 and 3 and is preferably a concrete block 3 having a metallic lining 4; in other words, the socket is formed of a metal tube large enough to receive the foot of the post and set centrally in a hole in the ground, plastic concrete being filled in the hole around the tube and being allowed to set. The socket so formed has sufficient body and weight to hold the post upright against any lateral force which may be applied under the usual conditions of drying garments and other fabrics and is practically indestructible. The top is flush with the surface of the ground or possibly a little below the surface so that a lawn mower or other grass-cutter may be run over it without being obstructed or injured. At the bottom of the socket it opens so as to allow drainage therefrom of any water which may flow in and if desired a cap may be provided to cover the hole of the socket when the post is removed. Such a cap is designated by 5 and shown in Figs. 1, 13 and 14.

Preferably the post or posts are made of wrought iron in tubular form and each post is of such a size at its foot that it may be readily slipped into the socket. Some distance above the lower end of the post a pin 6 is passed through it, such pin projecting at its ends from opposite sides of the post and being adapted to occupy notches in the upper edge of the lining or sleeve 4 of the socket for the purpose of preventing rotation of the post. Mounted on the upper

end of the post is a cap 7 which is prevented from rotation by suitable means such as a set screw 8 or the like. This cap has laterally projecting arms 9 and 10 formed with sockets 11 to receive a cross-bar or horizontal rail 12. Each of the posts has such a cap provided with sockets which are open on the side away from the other or opposite post. The cross rail carried by the post 2 is designated by 13. One of a number of lines 14 is stretched between the two rails for the purpose of supporting the fabrics 15 to be dried. The tension of these lines holds the rails in the sockets. Endwise movement of the rails is prevented by enlargements on their central portions, such enlargements being respectively ratchet wheel 16 on the rail 12 and a disk 17 on the rail 13. This ratchet and disk are respectively contained between ribs 18 and 19 on the caps of the two posts. The enlargement 16 on the rail 12 is made in the form of a ratchet so as to enable tension to be given to the lines. When the rail 12 is rotated the lines are wound up on it to the desired degree and the tension is maintained by the ratchet 16 and coöperating pawl 20 which is pivoted to the cap 7.

When it is desired to take the device apart the pawl 20 is disengaged from the ratchet and the lines allowed to unwind far enough to enable the rails to be removed from the sockets. The lines are then wound up on either or both of the rails or upon a reel to be presently described, the posts are removed from the sockets and all the parts may then be put away in a very small space. When thus removed no trace of the apparatus is left, for the sockets are practically covered by the ground or sod in which they are embedded.

In setting up the apparatus the posts are set into the sockets, the rail 13 into the arms of the post 2 and the lines are unwound until the rail 12 can be set into the openings 11 of the arms 9 and 10. The pawl 20 is then engaged with the ratchet 16 and the rail turned until the slack of the line is taken up.

As a means for rapidly winding up the lines when the apparatus is taken apart I find it convenient to provide in connection with the rail or bar 12 a reel 21. This reel consists of a bar connected at its end by transverse pieces 22 with the ends of the rail 12. These transverse pieces 22 are pivotally hung from studs 23 set or screwed into caps 24 on the ends of the cross rail 12 as shown in Fig. 9. With the device as in use, the reel 21 hangs from the cross-bar 12 clear of the lines, but when the device is to be taken apart it is swung over upon the clothes lines 14 into the dotted position shown in Fig. 1. The rail or cross-bar 12 is then removed from its socket and the whole then used as a reel for winding up the lines as shown in Fig. 5. For giving tension to the lines a socket wrench shown by dotted lines at 25 in Fig. 9 may be employed. Such a wrench is set over the head of one of the studs 24 and turned to wind up the lines around the rail or cross-bar 12. By this means a greater tension can be given than when the rail or cross-bar is grasped and turned by the hands alone.

Not only the posts 1 and 2, but also the cross rails 12 and 13 are preferably made of metal tubes and a convenient way of attaching the lines thereto is that shown in Fig. 12. Each line is passed through an orifice in the side of the tube and its end knotted so that it is prevented from being drawn from the rail. The holes made pass entirely through the rail; in other words there may be alining openings in opposite sides of the rail as shown in Fig. 12 or only one opening may be provided and the end of the line passed from the same to the end of the rail in order to have the knot tied thereto.

A form of socket for the uprights of the device which I term a socket stake is shown in Figs. 13 and 15. The use of such a socket requires very little digging of the ground in order to have it made and set in place. The socket consists of a metal tube 4 as previously described, in the lower end of which is set a pointed stake 26. A hole of sufficient depth to provide for the concrete or cement backing 3 is dug and the stake 26 with the socket tube is driven into the bottom of this hole. The stake steadies and holds the bottom of the socket, while the concrete secures the top. Fig. 13 also illustrates the notches 27 in the upper edge of the socket, in which the ends of the pin 6 previously described as being carried by the post are placed. This figure further shows the manner of attaching the cap to the socket. This cap has arms 28 which embrace a lug 29 on the side of the socket tube near its top, to which lug they are united by a pivot pin.

It will be understood that a clothes-drying apparatus of the character described, which is entirely of metal, is very strong and durable. By having the parts made tubular a sufficient stiffness can be given to them without excessive weight whereby they may be readily taken down and set up. The ready attachability and removability of all the parts avoids the necessity of having a permanent, unsightly and inconvenient clothes-drying apparatus near the dwelling of the user.

The expense and labor of using a device such as described may be diminished by providing only one upright bar and having the same mounted near the wall of a house or outbuilding, that is not further away than the length of the lines. One of the rails with the lines connected thereto may be

attached to the building and the other to the post. In this case the post 2 can be omitted.

A socket consisting of a metal-lined tube and a surrounding anchorage of concrete or cement may be used not only for the purpose heretofore described, but also for holding posts adapted for other purposes as for fences, hammock supports, tennis net supports, etc.

I claim—

1. A clothes drier comprising in combination a plurality of posts, a member on each post having opposite laterally-extending arms provided on their free ends with alined sockets open at one side, a horizontal rail removably contained in the sockets of each post, lines connected at their opposite ends to, and extended between, the several rails, an enlargement on the central part of each bar, ribs between the arms of the member of each post flanking the enlargement of the respective rail, the enlargement of one of said rails being provided with ratchet teeth, and a pawl on the member carrying this rail for engaging the ratchet teeth and holding the rail against rotation due to the pull of the lines when the latter are wound up thereon.

2. A clothes drier comprising an upright post, a cross-bar detachably and rotatably mounted upon the said post transversely of the length thereof, transverse arms hung pivotally from said cross bar, and a bar secured to said transverse arms parallel with the cross bar and constituting, with the latter, a winding reel.

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

GEORGE B. WILLARD.

Witnesses:

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ARTHUR H. BROWN.