C. A. MAXFIELD.

CLOTHES LINE HOUSING AND AUTOMATIC REEL COMBINED.

APPLICATION FILED OCT. 3, 1911.

1,066,132. Patented July 1, 1913.

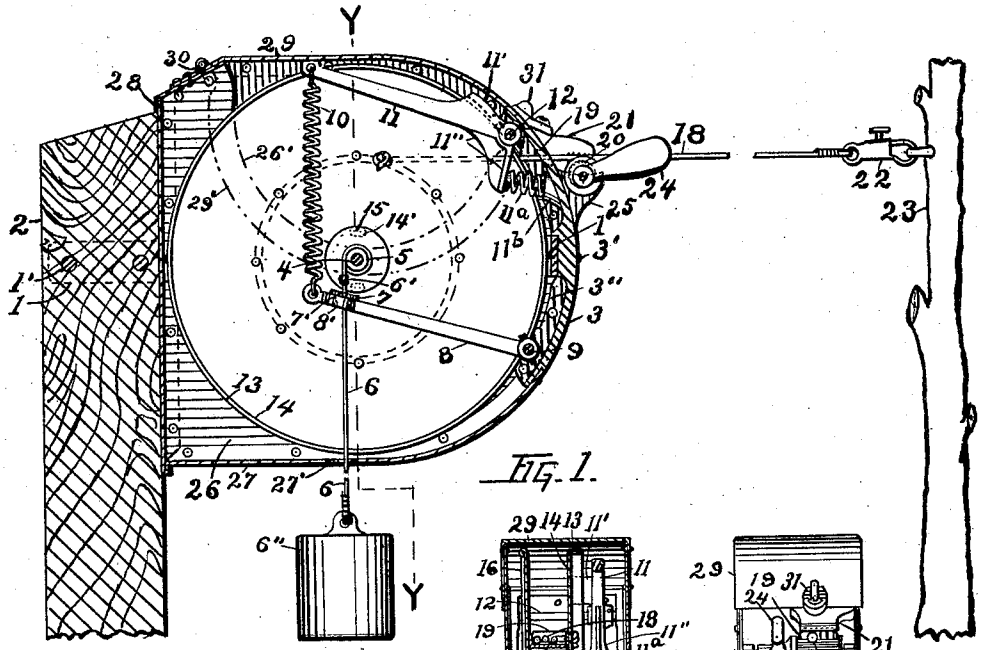


FIG. 1.

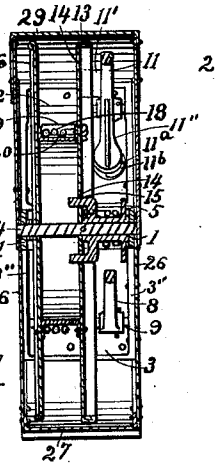


FIG. 2.

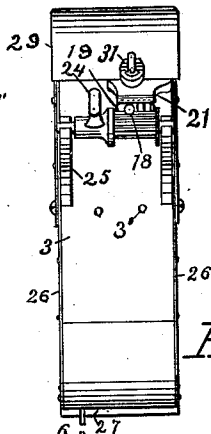


FIG. 3.

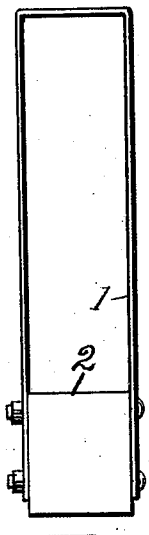


FIG. 4.

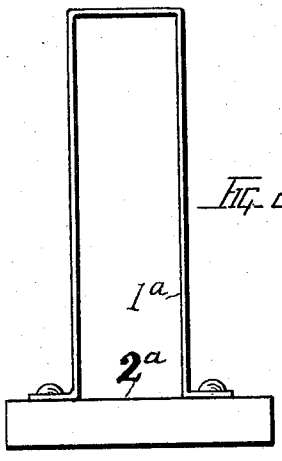


FIG. 5.

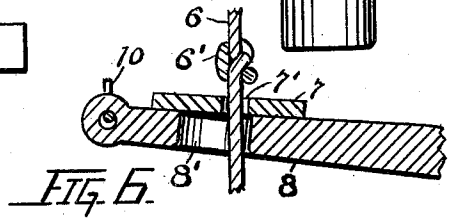


FIG. 6.

WITNESSES

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CLOTHES-LINE HOUSING AND AUTOMATIC REEL COMBINED.

1,066,132. Specification of Letters Patent. **Patented July 1, 1913.**

Application filed October 3, 1911. Serial No. 652,585.

To all whom it may concern:

Be it known that I, CHARLES A. MAXFIELD, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Clothes-Line Housings and Automatic Reels Combined, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in clothes line housings and automatic reels, combined, the objects of which are, first: to provide a simple, substantial and durable mechanism by which any desired length of an ordinary clothes line is held taut, and by which said line is automatically wound on a reel when the outer end of said line is manually released from a fixed object to which it had previously been secured, second: to provide stopping means, whereby the winding of said line is gradually stopped without concussion or injurious strain on any of the parts involved, third: to provide a housing with ready means of access to its interior and with supporting means therein, by which said line and mechanism are substantially supported and safely housed from the action of the elements, such as dust, rain, sleet and the like. I attain these objects by the mechanism illustrated in the accompanying drawing, in which:—

Figure 1 is a longitudinal section on the line X X, seen in Fig. 2, looking toward the left. Fig. 2 is a transverse section on the line Y Y, seen in Fig. 1, looking toward the right. Fig. 3 is a front view of the housing and line clamping means. Fig. 4 is a top plan of the supporting bar. Fig. 5 is a top plan of one of the various forms in which the supporting bar may be shaped. Fig. 6 is an enlarged vertical section of the washer and a portion of the pull lever.

Referring to Fig. 1, the supporting bar 1 has bolts 1′ passed therethrough and through an ordinary post 2, for securing said bar thereon. Front plate 3 is secured on the front portion of said bar by rivets 3′ and forms the front portion of the hereinafter described housing. Said plate and bar 1 form the frame or supporting means whereby the hereinafter described parts are supported.

Each of the two ends of reel shaft 4 is rotatably mounted in the central portion of bar 1. Said shaft has drum 5 secured thereon, on which is wound the weight cord 6, provided with knot 6′ formed in the inner end portion thereof. Said cord has weight 6″ secured on the lower end of the same. Said cord is passed through small aperture 7′ formed through washer 7 which loosely rests on the free end portion of pull lever 8. Said cord is also passed through a larger aperture 8′ formed through the free end of said lever. The other end of said pull lever is secured to shaft 9, the ends of which are rotatably mounted in flanges 3″ formed with front plate 3.

To the free end of pull lever 8 is secured the lower end of pull spring 10, the upper end of which is secured to the free end of brake lever 11. The other end of said brake lever is secured on shaft 12, the ends of the latter being rotatably mounted in flanges 3″. The pivoted end of said brake lever has recover arm 11″ formed therewith. Formed on the intermediate portion of said brake lever is the brake shoe 11′, adapted to be pressed upon the annular friction face 13, formed on the periphery of reel side 14, mounted on reel shaft 4 and provided with apertures 14′, in which are inserted the two studs 15, formed with drum 5, for rotating said reel side. One of the annular edges of reel tie 17 is secured to said reel side while the other edge of said tie is secured to reel side 16, mounted on reel shaft 4, thus forming a reel on which clothes line 18 is wound. The inner end of said line is secured to reel side 14. Said line passes through aperture 19, formed through front plate 3 and is secured at any point thereon by eccentric roller 20, which, by rotation thereof clamps

said line against clamp member 21, formed with front plate 3. The outer end of said line is provided with an ordinary snap hook 22, by which the same is secured to a fixed object, 23. Roller 20 is provided with handle 24, whereby the same is rotated in bearings 25, (formed on front plate 3,) for unclamping and clamping said line.

To bar 1 and flanges 3″, (formed with front plate 3,) are secured the housing sides 26, the edges of which have housing bottom 27 and back 28 secured thereto; see Figs. 1 and 2. One edge of cover 29 is pivotally secured to said back by hinge 30, while the opposite edge of said cover is detachably secured in closed position by thumb button 31, pivotally secured to clamp member 21. Bottom 27 has aperture 27′ formed therethrough, through which weight cord 6 is passed. The shape of one of the two upper edges of housing sides 26 is indicated by dash and dot line 26′, and the shape of one of the two lower edges of cover 29 is indicated by dash and double dot line 29′, seen in Fig. 1.

Recover spring 11^a has one of its ends detachably held on the free end of recover arm 11″ while the other end of said spring is held in like manner on stud 11^b formed on the inner surface of front plate 3.

In installation, clothes line 18 is first manually wound on the previously described reel, weight cord 6 is secured to drum 5 with said cord fully extended from the housing, handle 24 is rotated from the position shown, upward and against front plate 3 while these operations are being performed. The outer end of said line is then drawn from said housing thereby rotating the described reel and drum and winding cord 6 on the latter thus lifting weight 6″ until said free end reaches fixed object 23 to which said free end is secured in any substantial manner, preferably by snap hook 22, as shown. While the parts are in this position, weight 6″, by its gravity holds said line taut, which latter is secured in this position by grasping handle 24 and thereby rotating eccentric roller 20 from the described position back to the position shown, thereby clamping said line between said roller and clamp member 21. After use of said line the same is automatically wound on the previously described reel and housed in the following manner:— The line is unclamped and released from object 23, and the thus liberated line is wound as stated, by action of gravity on the weight 6″, until knot 6′ on cord 6 is thereby moved against washer 7, which depresses pull lever 8, which by spring 10 depresses brake lever 11 which lowers brake shoe 11′ onto and in frictional contact with friction face 13, thereby gradually stopping the rotation of the described reel, the drum 5 and weight 6″, thus preventing concussion or injurious strain on the parts involved.

While line 18 is being drawn out from the described housing, knot 6′ is thereby moved from washer 7 and is wound on drum 5, upon which, recover spring 11^a moves lever 11 and the thereto attached parts from their previously described depressed position to the position shown. The upward movement of the free end of lever 11 is limited by contact with the inner surface of cover 29.

It will be understood that the larger aperture 8′ through the free end of lever 8 allows cord 6 to pass freely therethrough, and that the smaller aperture through washer 7 will not allow knot 6′ to pass therethrough, and that said washer will be moved laterally and longitudinally (on the upper side of lever 8) by said cord, while the same is being unwound from and wound on drum 5, as previously described.

While I have described the supporting bar 1 as being secured to a post 2, as seen in Figs. 1 and 4, it is evident that the end portions of said bar could be of any other shape, adapted to be secured to a fixed object of any other form. One of such other shapes of said end portions is shown in Fig. 5, in which the supporting bar 1^a has its end portions adapted to be secured to the flat face of fixed object 2^a.

I am aware that it is common practice, to stop rotation of a drum or reel, by manual application of a brake, applied by a brake lever, and that additional levers have been used for conveying movement to said brake lever; but I am not aware that any brake mechanism has been invented, in which a weighted cord, by which said reel is rotated, is automatically applied in such manner as causes a gradually increasing pressure of the brake; prior to this my invention thereof. The purpose of this gradually increasing pressure is given in my previously stated second object.

Having fully described my invention, what I claim as new and original is:—

The combination of a housing; a clothes line reel rotatably mounted in said housing; braking means adapted to gradually stop rotation of said reel; a drum connected with one end of said reel; a pull lever having one of its ends pivotally secured to said housing and its other end provided with a large aperture formed therethrough; a washer resting loosely on the apertured end of said lever said washer having a smaller aperture formed therethrough; a weight; a cord having its lower end secured to said weight and its upper end secured to and wound on said drum the intermediate portion of said cord being passed through the said apertures in said washer and said pull lever said cord having a knot formed in its upper end por-

tion said knot being of such size as will not pass through said smaller aperture; a pull spring having one of its ends secured to said braking means and its other end secured to the free end of said pull lever; and elastic recovering means whereby the movements of said braking means and said pull lever are recovered; and holding means on the front of said housing adapted to detachably hold a clothes line.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES A. MAXFIELD.

Witnesses:

FREDERICK NEUDORFF,

FRANK. VOSS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."