E. J. MADDEN.

CLOTHES LINE REEL.

APPLICATION FILED JUNE 4, 1912.

1,235,219.

Patented July 31, 1917.

2 SHEETS—SHEET 1.

Fig. 1

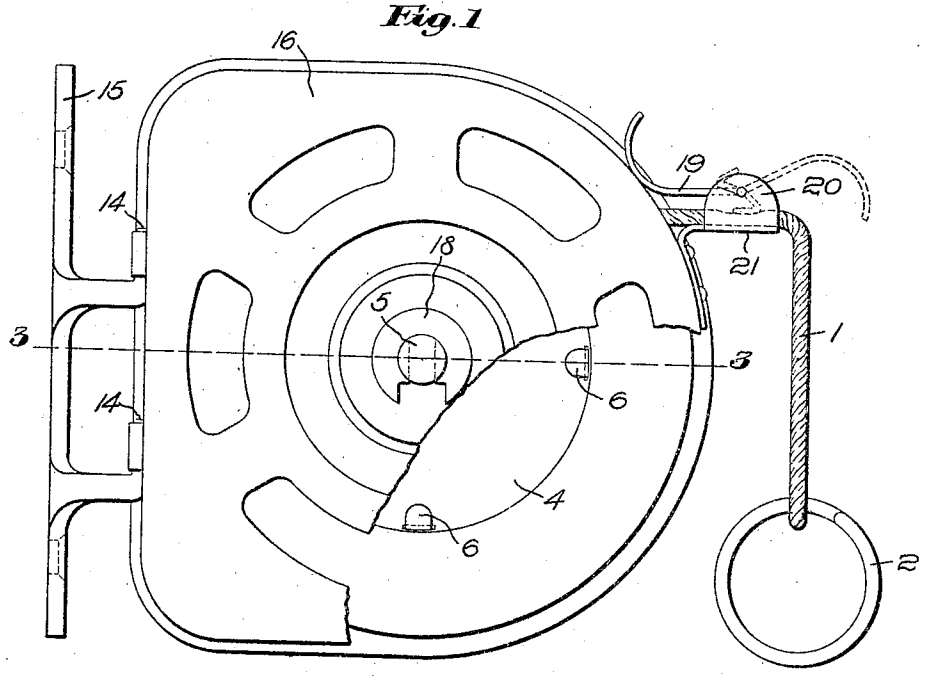
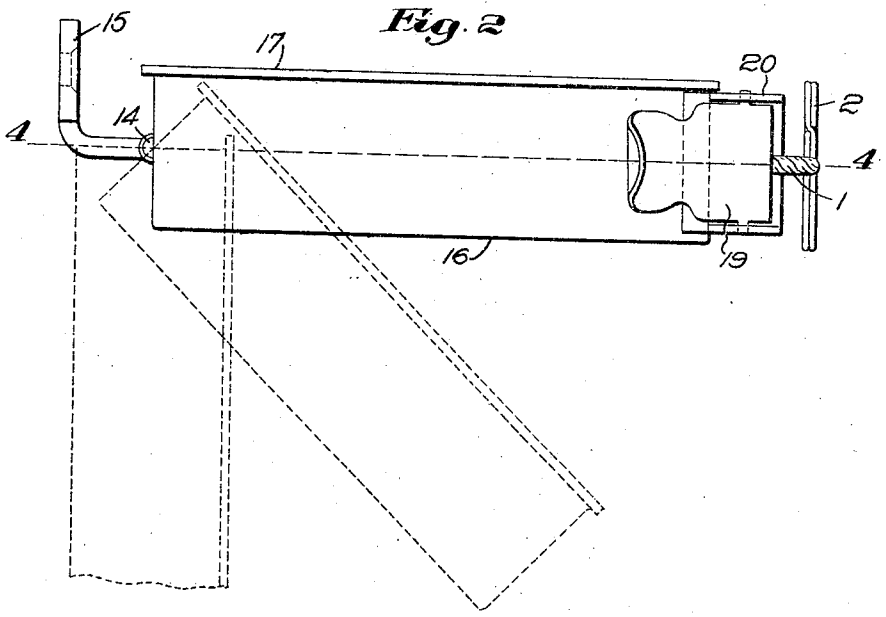


Fig. 2



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2 SHEETS—SHEET 2.

Fig. 3.

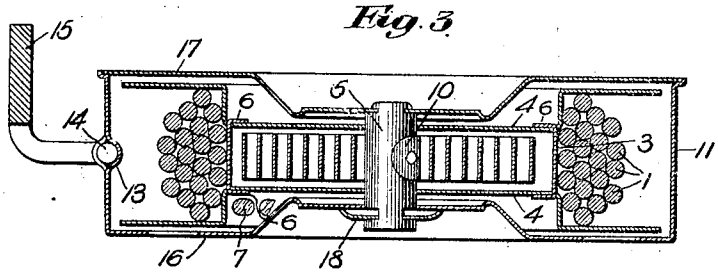


Fig. 4.

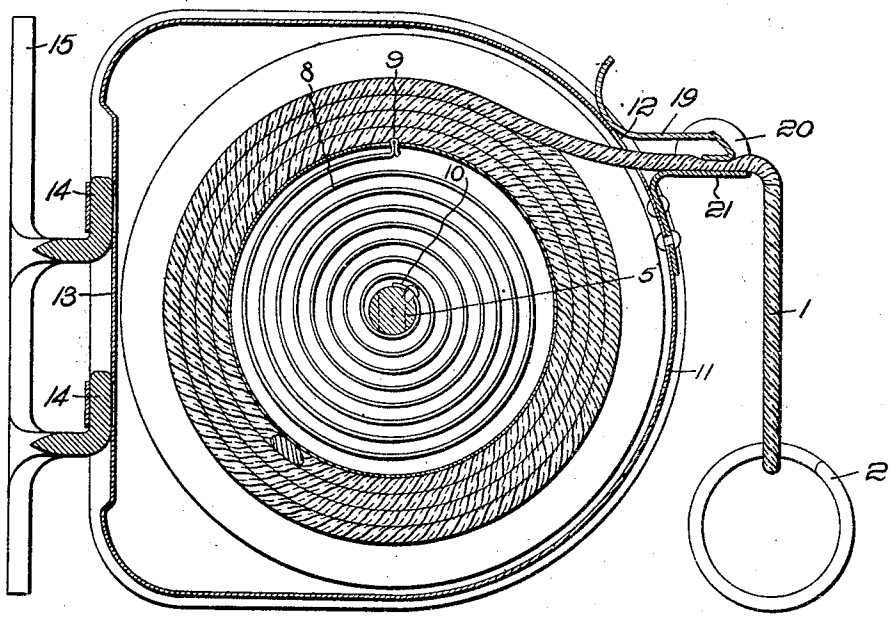
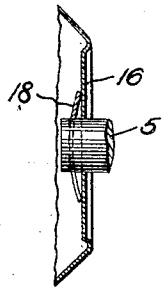


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CLOTHES-LINE REEL.

1,235,219. Specification of Letters Patent. Patented July 31, 1917.

Application filed June 4, 1912. Serial No. 701,700.

To all whom it may concern:

Be it known that I, EDWARD J. MADDEN, a citizen of the United States, and a resident of Bridgeport, county of Fairfield, State of Connecticut, whose post-office address is 35 Spruce street, Bridgeport, Connecticut, have invented an Improvement in Clothes-Line Reels, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to clothes line reels and has for its object the provision of a clothes line reel compact and simple in structure, but efficient in operation.

The invention will be best understood by reference to the following description when taken in connection with the accompanying illustration of one specific embodiment thereof, while its scope will be more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a side elevation of a clothes line reel embodying one form of the invention, the casing being partly broken away to show the side of the winding drum within;

Fig. 2 is a plan view of the reel shown in Fig. 1;

Fig. 3 is a section in plan on the line 3—3 in Fig. 1;

Fig. 4 is a sectional elevation on the line 4—4 in Fig. 2; and

Fig. 5 is a detail in sectional elevation.

Referring to the drawings and to the embodiment of the invention therein illustrated, the clothes line 1, the end of which is attached to the ring 2, is adapted to be wound upon a drum member, the latter composed of the cylinder 3 preferably formed of a strip of sheet metal and the side plates 4, journaled upon the fixed shaft or pin 5. The side plates which are centrally dish-shaped or concaved so as to reduce the thickness of the drum within the periphery of the cylinder 3 while still affording ample winding capacity, are fixedly secured to the cylinder by means of tongues 6 formed on the edges of the cylinder and passing through slots in the side plates over which they are bent flat. The interlocking of these tongues with the side plates unites the three pieces into a unitary winding drum.

To turn the drum and automatically wind on the line, the end 7 of which is fixed to the winding drum, there is provided a flat spiral spring 8, one end 9 of which is fastened to the fixed shaft 5, the spring being so disposed that it tends to wind in the line.

The drum is inclosed by a casing 11 which is provided with an opening 12 through which the line 1 protrudes. The forward part of the casing is cylindrical in form, following the contour of the winding drum, the rear part however, terminating in a substantially flat wall formed as at 13 to provide the knuckle member of a hinge and receiving the two upright pins 14 carried by the bracket 15. This provides a hinge support for the reel on which its casing may be turned to present the line at any desired angle. Preferably, though not necessarily, the casing is hinged along a central plane and at its rear edge.

The casing 11 has a centrally concaved side 16 covering the drum space at one side thereof, the opposite side being covered by a similarly shaped plate 17 to which the shaft 5 is keyed and also riveted. The casing, the parts of which, as well as those of the drum, are preferably of sheet metal, may be held together by any suitable means, but herein they are held by the shaft 5 itself. The latter, as shown in Figs. 1, 3 and 5, where it projects through the side 16 of the casing 11 is necked down to receive the U-shaped spring washer 18 (Fig. 5) which latter pressing against the side 16 locks the casing to the plate 17.

To fix or anchor the line at the reel when the required length has been drawn out, means are provided which preferably engage directly with the line itself. This result is secured by providing adjacent the opening 12 a line clamping member 19 which herein consists of a clamping lever pivoted on the bracket 20, and having a long and short arm, the bracket having a wall 21 between which and the short arm or clamping end of the lever the line passes. When the clamping lever is in ineffective position shown (Fig. 1) in dotted lines, the line may be drawn out to the required length and the opposite end fastened as by placing the ring 2 over a fixed hook or other anchor support. The slack in the line can then be taken up by drawing the line taut at or adjacent the clamping lever, the reel automatically winding in the slack. The lever may then be swung to the full line or clamping position,

thereby clamping the taut line tightly between its V-shaped resilient end and the wall 21 of the bracket. Any pull on the line 1 to the left of Fig. 1 would tend to turn the lever in a clockwise direction, but the short arm is formed to present a diagonal portion which in the course of such rocking would tend to press the line more firmly against a wall of the bracket 21 and effectively resist such pull of the line. On the other hand, if the line 1 is drawn toward the right of Fig. 1 it would tend to turn the lever in a contra-clockwise direction, but this movement would be prevented by the engagement of the long arm of the lever with the casing and thereby prevent any releasing of the line.

By a clamping device like that described, I am enabled to clamp the line in any position, irrespective of the exact length withdrawn from the reel and am enabled to take up all slack at the reel by the automatic winding in movement of the drum itself. Furthermore, such clamp relieves the drum of all strain, and, the line is wound upon the reel at no time under any greater tension than that exerted by the spring 8. In the case of reels where the line is drawn taut by positively turning the drum, the outer convolutions of line tend to be drawn tightly into the more loosely wound inner convolutions. By pivoting the casing upon its supporting bracket shown, the reel may be swung about the pivot to adapt itself to any direction in which the line is required to run. It also makes it possible to fasten the reel in an inconspicuous position close to the wall as indicated by dotted lines in Fig. 2, or even behind an open door, the reel when in use being swung out away from the wall at the required angle.

While I have herein shown and described for illustrative purposes one specific embodiment of the invention, it is to be understood that extensive deviations may be made from the illustrative form herein shown without departing from the spirit of the invention.

Claims.

1. A clothes reel comprising a casing, a drum mounted therein, a spring tending to rotate said drum to wind a line thereon, said casing presenting an abutment, and a clamping member pivotally mounted on said casing and movable to opposed off-center positions for pinching the line against said abutment and releasing the same, said casing having provision for positively limiting the overthrow of said member beyond its active line-holding position.

2. A clothes reel comprising a casing having opposed side plates; a pin connecting the latter; a drum on said pin between said plates; a spring tending to wind a line on said drum; a bracket on said casing; and a clamping lever having a short arm for directly engaging and pinching said line against said bracket to lock said line thereto against pull in opposite directions and an operating arm for said short arm for engagement with said casing to limit movement of said short arm.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDWARD J. MADDEN.

Witnesses:

ELLSWORTH A. HAWTHORNE,

E. HORACE HAWTHORNE.

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