June 12, 1945. J. C. MICHAUD 2,378,150

CLOTHES REEL

Filed Dec. 11, 1943

Fig. 1.

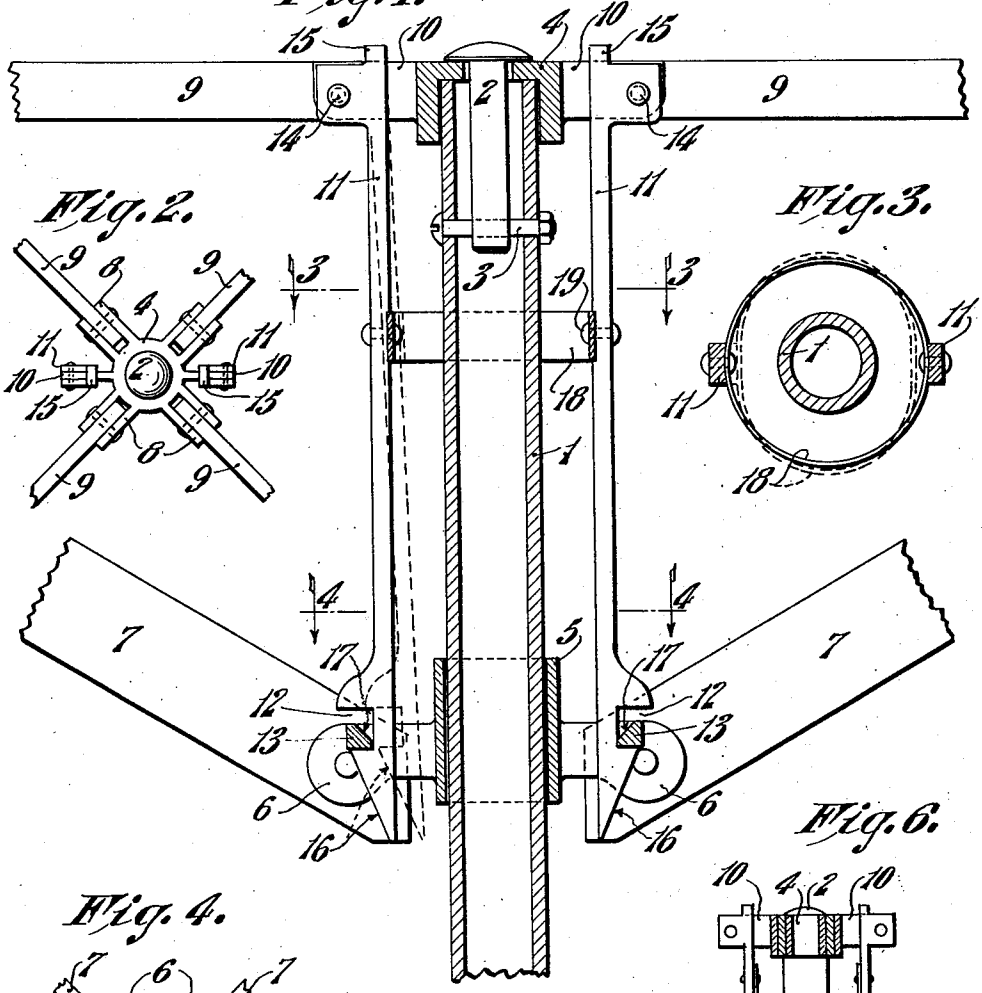


Fig. 2.

Fig. 3.

Fig. 4.

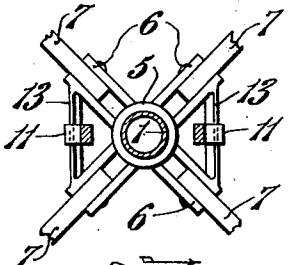


Fig. 5.

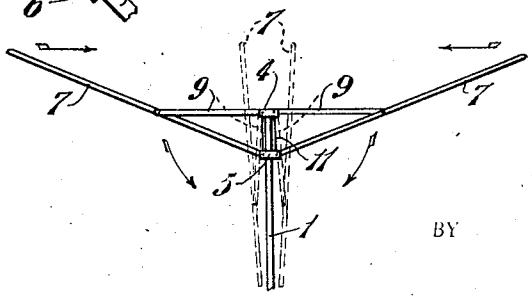
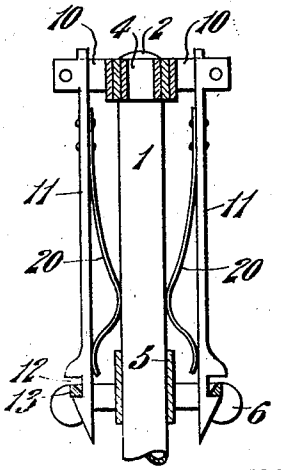


Fig. 6.



INVENTOR,
John C. Michaud,
BY
Blake & Beaver
ATTORNEY.

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CLOTHES REEL

John C. Michaud, Springfield, Mass., assignor to William T. Turner, Charlemont, Mass.

Application December 11, 1943, Serial No. 513,909

2 Claims. (Cl. 211—178)

This invention relates to improvements in clothes reels, and is, particularly, an improvement in the collapsible, revolvable clothes reel disclosed, described, and claimed in U. S. Letters Patent No. 1, 539,685, issued to me on May 26, 1925.

In the construction disclosed in the above patent, latch members pivotally supported on a revolvable cap mounted on a central post engage and support a collar slidably engaged on the post, to which collar the reel bars are pivotally secured. Brace bars pivotally secured on the cap and the reel bars aid in supporting the reel bars in extended or operating position. When the latch members are released from engagement with the collar or sleeve, the reel collapses of its own weight, the sleeve sliding downwardly on the post. The latch members are pivotally secured on the cap member in such a manner that their centers of gravity lie outside of the engaging portions of the sleeve, so that they are maintained in engaging relation with the sleeve by the force of gravity.

This latch construction was not entirely satisfactory in operation. If the central post was installed out of plumb, or if the reel was eccentrically loaded and revolved by a strong breeze, the latches sometimes became disengaged with the sleeve, and the reel would collapse with its load of clothing. Vibration incident to the operation of the clothes reel would occasionally disengage the latch members.

This invention is directed to positive means for resiliently maintaining the latch members in engaging relation with the reel bar supporting collar or sleeve.

An object of this invention is to provide, in a collapsible, revolvable clothes reel having latches for holding the reel in extended position, positive mechanical means for holding the latches in engaging position, which means may be manually released to permit collapse of the reel.

A further object of this invention is to provide in a reel construction of the character described, resilient means for maintaining the latch members in engaging relation with the slidable sleeve at all times except when the resilient means are intentionally and manually displaced to permit collapse of the clothes reel.

These, and other objects and advantages of this invention will be clearly disclosed and described in this specification, the accompanying drawing and the appended claims.

Broadly, this invention comprises, in a collapsible clothes reel, in combination with a post, a cap revolvably supported on the post, a sleeve slidably secured on the post, reel bars pivotally supported on the sleeve, brace bars pivotally secured on the cap member and the reel bars, and latch members pivotally secured on the cap and removably engaged on the sleeve for supporting the reel bars in extended position, of a resilient spring member engaging the latch members for holding the latch members in engaging relation with the sleeve.

Preferred embodiments of this invention are disclosed in the accompanying drawing, in which

Fig. 1 is a longitudinal sectional view of the reel post, cap, sleeve, and latches.

Fig. 2 is a plan view of the cap shown in Fig. 1,

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1, looking in the direction of the arrows,

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1, looking in the direction of the arrows,

Fig. 5 is a diagrammatic view of the clothes reel, showing it in extended position in full lines and in collapsed position in dotted lines, and

Fig. 6 is a view similar to Fig. 1, illustrating a modified form of the invention.

Referring now to the drawing in detail, in which like numerals refer to like parts throughout,

A post 1 has revolvably supported on the top thereof, by means of a pin 2 and bolt 3, a cap 4. A sleeve 5 is slidably and revolvably supported on the post 1 below the cap 4. The sleeve 5 is provided with a plurality of slotted lugs 6, in the slots of which lugs reel arms 7 are pivotally secured at one end thereof. The cap 4 is provided with slotted lugs 8 corresponding to the lugs 6 on the sleeve 5, and brace bars 9 are pivotally connected at one end in the lugs 8, and at the opposite end to the reel bars 7, as diagrammatically shown in Fig. 5. The cap 5 is also provided with oppositely disposed lugs 10, to which are pivotally secured latch members 11. The latches 11 are notched near their lower ends at 12 to receive bars 13 connecting opposite pairs of lugs 6 on the sleeve 5. The upper ends of the latches 11 are slotted to engage the lugs 10 and are provided with bridge members or stops 15 which engage the tops of lugs 10. The pivots 14 of the latches 11 are located outside of the bars 13, and also outside of the center of gravity of the latches 11, whereby the force of gravity tends to swing the latches outwardly, and this action is limited by the stop members 15 engaging the lugs 10 on the cap 4 so that the latches 11 are normally maintained in an approximately vertical position. The lower ends of the latches 11, and the bars 13, are formed with cooperating cam surfaces 16 and 17 whereby, when the sleeve 5 is moved upwardly on

the post 1 from its collapsed position, these cam surfaces will move the latches 11 inwardly toward the post 1 until the bars 13 are engaged in the slots 12.

All the above described construction is shown in my Patent #1,539,685.

This invention comprises a spring ring or band 18 encircling the post 1 and secured on the latches 11 by means of rivets, bolts, screws, or other suitable means 19, below the pivot points 14 and stops 15. The band 18, in cooperation with the stops 15, acts to securely hold and maintain the latches 11 in a fixed position in engaging relation with the bars 13 on the sleeve 5. The latches 11 may be manually forced inwardly by distorting the ring or band 18, to disengage the latches from the bars 13, as indicated by dotted lines in Figs. 1 and 3.

A modified form of this invention is illustrated in Fig. 6. Individual strip spring members 20 are secured on the latches 11 and bear against the post 1. The operation is the same as that described for the band 18.

Whereas I have described the latches 11 as an oppositely disposed pair, it will be readily understood by those skilled in the art that more may be used if desired, and that the spring ring 18 or individual springs 20 will operate as efficiently.

Whereas I have described this invention in terms of the particular embodiments thereof shown in the drawing, it will be readily understood by those skilled in the art that various changes may be made in the form, material, and location of the resilient latch engaging means without departing from the scope of this invention as disclosed and claimed.

Having thus disclosed my invention, what I claim is:

1. In a clothes reel construction having a post, a cap revolvably supported on said post, a sleeve slidably and revolvably supported on said post, reel arms pivotally connected to said sleeve, and braces pivotally connected to said cap and said reel arms, the combination of a pair of oppositely disposed latches pivotally connected to and depending from said cap, cooperating means between said latches and said sleeve for releasably supporting said sleeve, a resilient ring encircling said post and engaging said latches for forcing said latches outwardly from said post, and stop means for limiting the outward movement of said latches.

2. In a clothes reel construction of the character described, the combination with a post, a cap mounted on said post, a sleeve slidably supported on said post, and a pair of oppositely disposed latches pivotally mounted on said cap and having notched ends for engaging said sleeve, of a spring ring mounted on said latches and normally urging said latches outwardly against stop means to define a maximum spaced relation.

JOHN C. MICHAUD.