

No. 721,460.

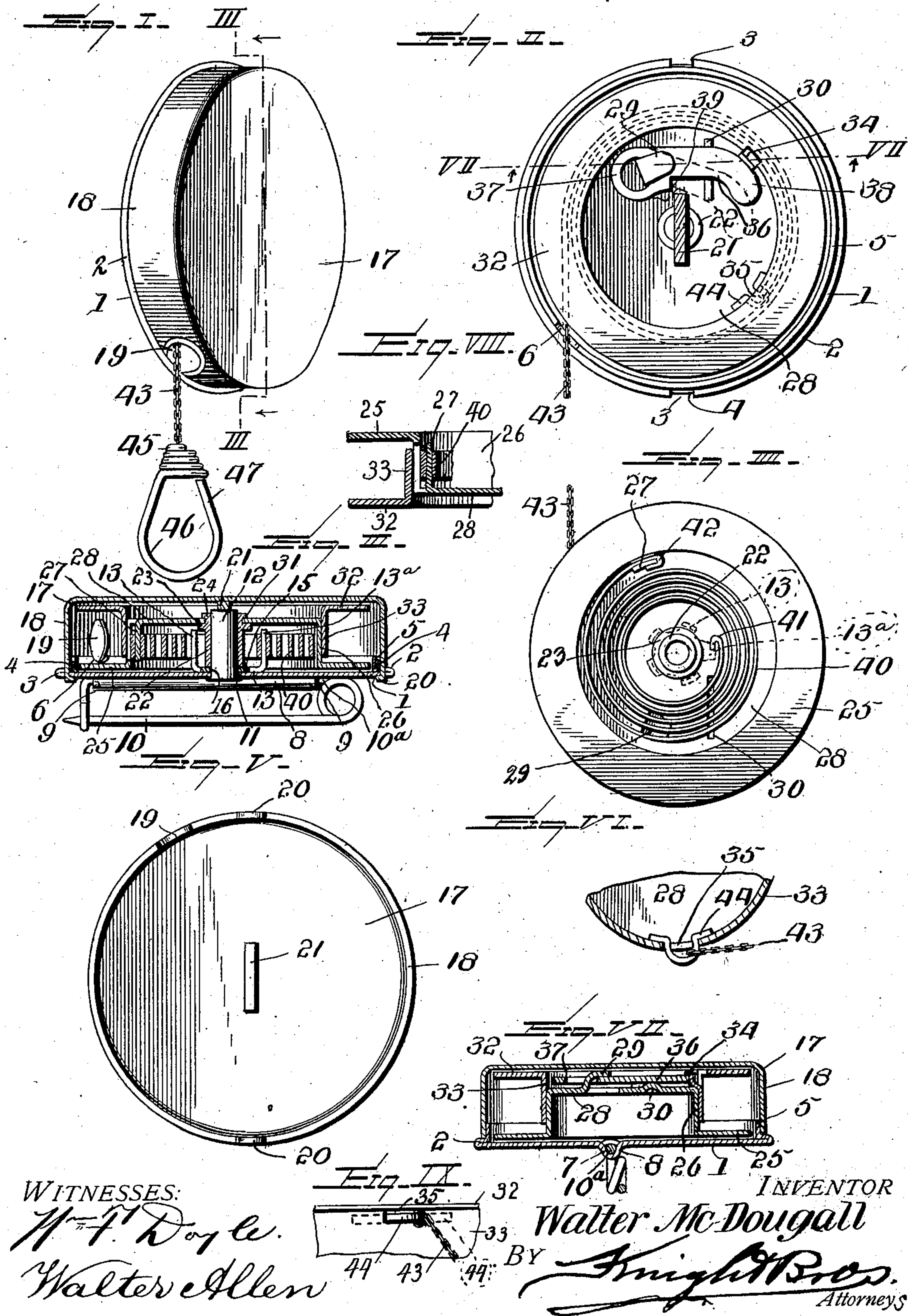
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W. McDOUGALL.

REEL HOLDER.

APPLICATION FILED OCT. 22, 1902.

NO MODEL.





# UNITED STATES PATENT OFFICE.

WALTER McDOUGALL, OF BROOKLYN, NEW YORK.

## REEL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 721,460, dated February 24, 1903.

Application filed October 22, 1902. Serial No. 128,449. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER McDOUGALL, a citizen of the United States of America, and a resident of the borough of Brooklyn, in the city of New York and State of New York, have invented certain new and useful Improvements in Reel-Holders, of which the following is a specification.

My invention is an improvement on that form of reel-holder described, shown, and claimed in United States Letters Patent No. 529,402, granted to Hugh McDougall, of Brooklyn, New York, dated November 20, 1894, and which comprises a case, a clasp-pin fixed on the back plate of the case, whereby the holder is attached to the clothing, a reel inclosed in the case, a helical spring located within the reel, whereby the reel is actuated, a chain attached to the reel at its inner end and adapted to be wound around the reel by the action of the spring, a hook secured to the outer end of the chain, whereby an article is held, a pawl-check, a check-pawl adapted to engage the pawl-check and thrown out by centrifugal force, and means whereby the spring is so adjusted that the chain is readily drawn out to its full length and the reel retained from movement until by a slight twitch or jerk the reel is released and the chain is automatically rewound around the reel.

One object of my invention is to simplify the construction of such a reel-holder whereby it is rendered more compact and the parts more easily taken apart than those heretofore produced.

Another object of my invention is to so arrange the interior parts of the device as to enable the pivot-post to be shortened, so as to permit of a thinner case being employed.

Another object of my invention is to provide means for securing the cover of the case to the back plate thereof, so that on the removal of the cover the hook and chain are not carried therewith, thus permitting the separation of the cover to be readily accomplished.

Another object of my invention is to provide improved means for connecting the ends of the helical spring to the case and reel, respectively.

Another object of my invention is to so lo-

cate the pawl-check as to support it independently of the pivot-post, thus taking the strain of the check-pawl off the pivot-post.

Another object of my invention is to provide means for preventing the check-pawl from sliding against the face of the reel, and so lessen the binding or friction thereon.

Another object of my invention is to provide means for preventing the check-pawl from binding on the curved side of the reel.

Another object of my invention is to provide improved means for connecting the chain with the reel.

Another object of my invention is to improve the construction of the hook whereby an article is held.

My improvements consist in the novel features of construction hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it in detail with reference to the accompanying drawings, in which—

Figure I is a perspective view of my improved reel-holder arranged in the position in which it is used. Fig. II is a top plan view, the cover being omitted with the exception of the pawl-check, which is shown in section, though secured to the cover, the operative position of the check-pawl being shown in dotted lines. Fig. III is an axial section taken on the line III III, Fig. I, looking in the direction of the arrows. Fig. IV is a view of the reel removed from the casing in Fig. III and looking at it from the under side in Fig. III. Fig. V is an inside view of the cover. Fig. VI is a detail plan view showing the means for connecting the chain or cord with the reel. Fig. VII is a detail section taken on the line VII VII, Fig. II, looking in the direction of the arrows, the spring being omitted. Fig. VIII is a detail radial section of Fig. IV, showing the connection of the spring to the reel. Fig. IX is a detail edge view showing the connection of the chain to the reel.

The case of my improved reel-holder is constructed with a back plate 1, struck up from a disk of sheet metal, with a peripheral flange 2, having diametrically opposite recesses 3, formed by striking up parts 4 of the peripheral flange 2 at 3, and with an inset annular rim



5, having a chain depression 6 for positioning the end of the chain. The back plate is also formed with a transverse depression 7 on the inner side of the back plate, extending across the latter and producing a rib 8 on the outer side thereof, having end openings 9 to enable the inner arm 10<sup>a</sup> of an attaching clasp-pin 10 to be passed therethrough and rigidly secured to the back plate. The back plate is further formed with a central post-hole 11.

12 is a central post rigidly secured to the central post-hole 11 by tapping and also by soldering it to the back plate.

Surrounding the central post 12 is a basket 15 formed with a base-plate 15, having a central opening 16, through which the central post 12 extends and where the basket is soldered to the back plate. The basket is provided with fingers 13, encircling the post, one, 13<sup>a</sup>, of the fingers being slightly offset from the other fingers for a purpose hereinafter described.

17 is the cover of the case, struck up from a disk of sheet metal, with an annular flange 18, having an open chain-eyelet 19 cut through the edge thereof. The cover also has diametrically opposite ears 20, also formed on the edge thereof, which are received by the recesses 3 in the peripheral flange 2 of the back plate 1 and are adapted to be folded inwardly against so as to lap the back plate for detachably connecting the cover 17 to the back plate 1.

21 is a transversely and centrally arranged pawl-check secured to the inner side of the cover 17, extending across the inner end of the central post 12 and seating thereagainst, so as to prevent the cover from being pressed against the reel or adjacent parts and at the same time adapted to check the movement of the reel when it engages a check-pawl 36.

The reel is constructed with a central sleeve 22, whereby it is journaled so as to rotate on the central post 12, having an inner flange 23 and an outer flange 24, fixed to the drum of the reel by tapping them thereto. This drum consists of an inner member and an outer member sleeved fixedly onto the inner member. The inner member of the reel is struck up from a disk of sheet metal with a peripheral flange 25, with an annular rim 26, having a transverse tongue 27 cut therein and set inward and with a head or platform 28, having pivot-lip 29 cut therein and raised therefrom, a transversely-arranged rib 30, elevated therefrom, and a central hole 31, adapted to fit around the end of the sleeve 22, to which it is secured by the inner and outer flanges 23 and 24, formed on the latter. The outer member of the reel is struck up from a disk of sheet metal with a peripheral flange 32 and a rim 33, having a lip cut therefrom and set inward to provide a seat 34 and a hole 35, punched therethrough at a distance from the seat 34.

36 is a check-pawl formed with an eye 37, whereby it is received on the pivot-lip 29. The check-pawl 36 is adapted to rest against

the rib 30 and has an inwardly-curved end 38, adapted to bear against the seat 34, and a shoulder 39, adapted to contact with the pawl-check 21 on the cover when not thrown out of the path thereof by centrifugal action.

40 is a helical spring coiled within the annular rim 26 and having an inner hooked end 41, engaging the offset finger 13<sup>a</sup> of the basket, and an outer hooked end 42, engaging the transverse tongue 27 of the annular rim 26.

43 is the chain or cord, providing a flexible connection, automatically coiled upon the reel by the spring. It is secured at its inner end to a retaining-eye 44, fastened through the hole 35 in the annular rim 33 and passed to and from the reel through the chain-eyelet 19 in the cover 17, and is provided at its outer end with a spiral continuous wire snap 45, having a hook 46, whose free end 47 is straight and abuts directly against the outer coil of the spring-wire.

By placing the pawl-check 21 on the cover 17 instead of, as heretofore applied, upon the central post 12 the central post 12 by removing the support for the pawl-check can be shortened. The strain caused by the check-pawl bearing on a pawl-check on a central post is taken therefrom, while the parts are by this new arrangement more easily taken apart for repair. In the present construction when the cover 17 is taken off the chain remains in place, owing to the chain-eyelet being open at the edge of the rim 18, and the reel can be removed bodily with the chain after the cover 17 is removed. The back plate 1 and the cover 17 being fastened together by ears 20, which are readily folded down into position, enables me to make the inset annular rim 5 on the back plate 1 shorter than heretofore made and provides more room on the inside of the case. The chain-eyelet 19 being cut through the edge of the annular flange 18 of the cover, the parts can be more conveniently assembled, the chain depressions 6 providing a guide for positioning the chain-eyelet 19.

The rib 30 on the platform 28 is provided for keeping the check-pawl 36 from bearing against the head or platform 28 of the drum, and thus lessens the binding or friction between these parts. The curved end 38 of the check-pawl 36 conforms somewhat to the curve of the annular rim 33 of the outer member of the drum, and to avoid friction with the inset annular rim 5 I provide the seat 34, against which the curved end 38 of the check-pawl 36 is adapted to impinge. The free end 47 of the hook 46 of the spiral snap 45 abutting against the outer coil of the wire, there is no liability of the eye of the article connected therewith becoming accidentally dislodged, as it must be positively removed from the snap 45.

The parts are readily taken apart for the reason that the cover 17 can be removed from the back plate 1 independently of the reel and chain 43.



In assembling the parts the reel, with the chain 43 wound thereon, is placed on the central post 12 and the inner hooked end 41 of the spring 40 engaged with the finger 13<sup>a</sup> of the basket, care being taken to locate the outer end of the chain 43 in the depression 6 of the inset annular rim 5 of the back plate 1. The check-pawl 36 is placed in its outer position and the cover 17 placed over the reel with the chain-eyelet 19 and ears 20 registering with the chain depression 6 and recesses 3, respectively. The ears are next folded inward against the back plate.

The operation of the device is as follows:  
 15 The holder is attached to the garment with the clasp-pin 10 in vertical position, so that the holder will have the position shown in Fig. I. In this position the chain 43 is shown drawn into the holder. To use the  
 20 holder, the chain 43 is drawn out by its snap 45. It will be seen from Fig. II that the check-pawl 36 will revolve to the left, not being prevented from doing so by the pawl-check 21. As soon as the chain 43 is held to  
 25 a certain place and then slightly released the shoulder 39 on the check-pawl 36 will after a slight revolution of the reel to the right catch with the pawl-check 21 in its path, assuming again the position shown in dotted lines in  
 30 Fig. II. Thus the chain 43 may be drawn out entirely or to any intermediate point and be held from retrograde movement. To permit the chain 43 to be drawn in by the spring 40, a slight jerk is given to the chain 43, and  
 35 then it is released. In consequence of this the check-pawl 36 is by centrifugal force thrown outward, and the reel turning to the right by the action of the spring 40 the chain 43 is wound up. If the chain 43 be stopped  
 40 at any point, the check-pawl 36 will drop back, and its shoulder 39 engaging with the pawl-check the chain will be held in this position, or if the chain 43 be slightly pulled out and let go again it will be entirely wound  
 45 up to the position shown in Fig. I.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A reel-holder comprising a back plate  
 50 constructed with a peripheral flange having recesses, and an inset annular rim, and a cover having an annular rim seating on the peripheral flange and formed with ears at its free edge adapted to fit in the recesses and  
 55 to lap the back plate.

2. A reel-holder comprising a back plate constructed with a peripheral flange having struck-up lips leaving recesses, and with an annular rim, and a cover having an annular  
 60 rim formed with ears at its free edge adapted to fit in the recesses and to lap the back plate.

3. A reel-holder comprising a back plate constructed with a peripheral flange and an annular rim having a chain depression, and  
 65 a cover having an annular rim formed with an open chain-eyelet cut through its free edge and registering with the chain depression.

4. A reel-holder comprising a back plate, a central post secured to the back plate, and a cover having a pawl-check secured to the inner side thereof, and bearing against the post for preventing the cover from bearing against the reel or the adjacent parts. 70

5. A reel-holder comprising a back plate having a central post-hole, and a central post fitted in the post-hole and tapped and soldered thereto whereby it is secured to the back plate and a cover having a pawl-check seating on the free end of the central post. 75

6. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the central post, a helical spring located within the reel having its ends connected with the back plate and the reel respectively, a check-pawl having a shoulder and pivoted to the reel, and a cover having a pawl-check. 80

7. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a basket surrounding the central post having an offset finger, a reel having a sleeve journaled on the central post, a helical spring located within the reel having its ends connected with the offset finger and the reel respectively, a check-pawl having a shoulder and pivoted to the reel, and a cover having a pawl-check. 85

8. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the central post and a drum having a transverse tongue, a helical spring located within the drum, having its ends connected with the base-plate and the transverse tongue respectively, a check-pawl having a shoulder and pivoted to the drum, and a cover having a pawl-check. 90

9. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve formed with inner and outer flanges and journaled on the central post, and a drum having a head secured between the flanges, a helical spring located within the drum, having its ends connected with the back plate and the drum respectively, a check-pawl having a shoulder and pivoted to the drum and a cover having a pawl-check. 95

10. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the central post and a drum having a head formed with a pivot-lip and secured to the sleeve, a helical spring located within the drum having its ends connected with the back plate and the drum respectively, a check-pawl having an eye whereby it is connected with the pivot-lip, and a shoulder, and a cover having a pawl-check. 100

11. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the central post and a drum having a head formed with a transverse rib and secured to the 105



sleeve, a helical spring located within the drum having its ends connected with the base-plate and the drum respectively, a check-pawl having a shoulder and pivoted to the head and supported by the rib, and a cover having a pawl-check.

12. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the central post and a drum having a head secured to the sleeve, and an outer member formed with a seat, a helical spring located within the drum having its ends connected with the base-plate and the drum respectively, a check-pawl pivoted to the head and having a shoulder, and a curved end impinging against the seat, and a cover having a pawl-check.

13. A reel-holder comprising a back plate, a central post rigidly secured to the back plate, a reel having a sleeve journaled on the cen-

tral post and a drum having a head secured to the sleeve and an outer member formed with an eyehole, a helical spring located within the drum having its ends connected with the base-plate and the drum respectively, a check-pawl having a shoulder and pivoted to the head, a cover having a pawl-check, an eye secured to the eyehole and a flexible connection secured to the eye and coiled around the drum.

14. A reel-holder comprising a flexible connection having a spiral continuous wire snap formed with a hook having a straight free end abutting directly against the outer coil of the spiral wire.

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Witnesses:

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