

L. S. STARRETT.
FOLDING TAPE REEL.
APPLICATION FILED MAR. 29, 1912.

1,056,849.

Patented Mar. 25, 1913.

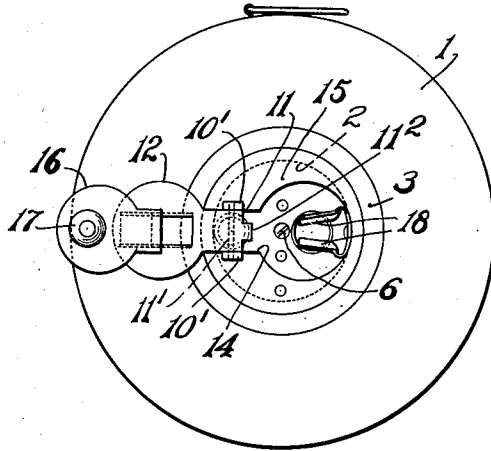


FIG. 1

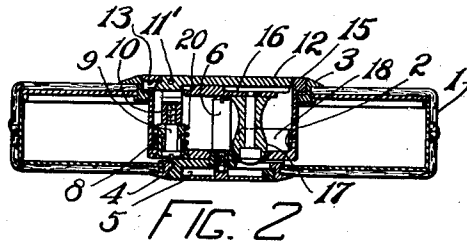


FIG. 2

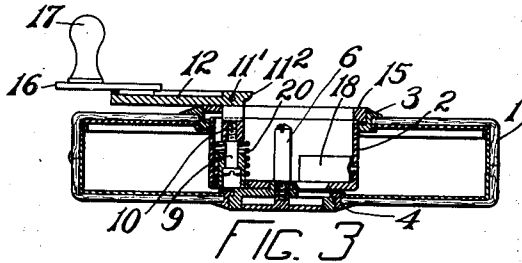


FIG. 3

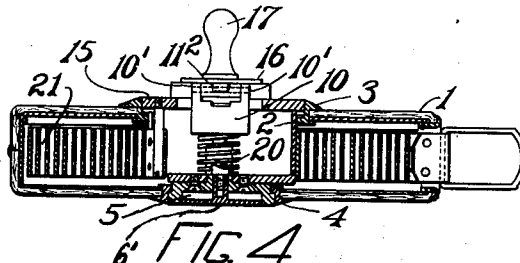


FIG. 4

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FOLDING TAPE-REEL.

1,056,849.

Specification of Letters Patent.

Patented Mar. 25, 1913.

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To all whom it may concern:

Be it known that I, LAROE S. STARRETT, a citizen of the United States, residing at Athol, county of Worcester, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Folding Tape-Reels, of which the following is a specification.

This invention relates to winding devices, and particularly to a winding mechanism for a measuring tape. In devices of this sort it is especially desired that the winding mechanism be capable of being folded absolutely flush with the casing and out of sight and contact, and at the same time capable of instantaneous restoration to facile engagement and operation.

As illustrative of my invention I have selected an embodiment which I have evolved from careful test as representing the features best adapted to practical use. This I have shown in the accompanying drawing and have set forth the same in the following specification.

Throughout specification and drawing like reference numerals are employed to indicate corresponding parts and in the drawings:—

Figure 1 is a plan view of a winding tape in accordance with my invention, Fig. 2 is a central section of the same in folded form, Fig. 3 is a similar section in operative position, and Fig. 4 is a central section of the shell and cover with part removed.

The tape set forth in my drawings comprises a cylindric casing, indicated at 1, which may be of leather or any other suitable material. Centrally of this casing I set a cup or shell 2 held in a ring 3 to which it is soldered. On the opposite face of the casing 1 is set a ring 4 within which is a socket 5 carrying a push button 6¹ in which is set a stud 6. In the bottom of the cup or shell 2 is set a sleeve 8 within which a stem 9 is slidably arranged. On the end of the stem 9 is mounted a block 10 having ears 10¹. The block 10 is supported by a spring 20 coiled about the sleeve 8. Between the ears 10¹ is pivoted a lug 11 of a crank arm 12. The lug 11 pivots 11¹ and a cam shaped spur 11². The spur 11² is adapted to coöperate with the edge 13 of a recess 14 in a plate 15. The plate 15 is soldered in the upper end of the cup or shell 2 and sets within the ring 3. The opening 14 in the plate 15 is shaped to receive the crank arm 12.

The inner face of the crank arm 12 is grooved with a dovetail and in it is slidably set a plate 16 carrying a handle 17. This handle slide plate 16 is suitably stopped but adapted to be thrown outwardly centrifugally, when the crank plate 12 is thrown open. The crank arm plate 12 is held closed, as shown in Fig. 2, by a pair of spring arms 18 between which the swell of the handle 17 passes.

The operation of my device is as follows: With the parts in the closed position shown in Fig. 2, the button 6¹ is pressed. This raises the stud 6 to disengage the handle 17 from the engaging spring arms 18. The spring 20 thereupon becoming effective throws the block 10 upward clear of the plate 15. The crank plate 12 is thus given impetus outwardly and swinging on its pivots 11¹ flips out until it occupies the position shown in Fig. 3. In this position the tape 21 may be wound or reeled in as described. In returning the parts to their closed position after the tape is reeled the crank plate is simply folded in on its pivot 11¹ against the action of the spring 20. In closing the spur of the cover 12 it is caught under the edge 13 of the plate 15 thus forcing down the block 10 within the shell or cup 2. After the parts are seated the handle 17 is within the arms of the spring 18 and thus held in place.

Various modifications of the device herein shown may obviously be made, all without departing from the spirit of my invention if within the limits of the appended claims.

What I, therefore, claim and desire to secure by Letters Patent is:—

1. A device of the class described comprising a casing, a hollow drum rotatably mounted therein, a cover for the top of said drum pivotally mounted in relation thereto, a slideway on the inner face of said cover, an extension slide in said slideway, a handle on the end of said slide, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said cover is in its closed position, a button loosely set at the bottom of said drum and a stud on said button and extending adjacent to the inner face of said cover and adapted to press the same to release the handle.

2. A device of the class described comprising a casing, a hollow drum rotatably mounted therein, a cover for the top of said drum pivotally mounted in relation thereto,

a resilient member effective to open said cover, a slideway on the inner face of said cover, an extension slide in said slideway, a handle on the end of said slide, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said cover is in its closed position, a button loosely set at the bottom of said drum and a stud on said button and extending adjacent to the inner face of said cover and adapted to press the same to release the handle.

3. A device of the class described comprising a casing, a hollow drum rotatably mounted therein, a support vertically movable in said drum, a resilient means effective to raise said support vertically, a cover for the top of said drum pivoted to said support, a slideway on the inner face of said cover, an extension slide in said slideway, a handle on the end of said slide, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said cover is in its closed position, a button loosely set at the bottom of said drum and a stud on said button and extending adjacent to the inner face of said cover and adapted to press the same to release the handle.

4. In a device of the class described, a hollow drum, a support vertically movable in said drum, a resilient means effective to raise said support vertically, a cover for the top of said drum pivoted to said support, a slideway on the inner face of said cover, an extension slide in said slideway, a handle on the end of said slide, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said cover is in its closed position, a button loosely set at the bottom of said drum and a stud on said button and extending adjacent to the inner face of said cover.

5. A device of the class described comprising a casing, a hollow drum rotatably mounted therein, a sleeve eccentrically set in the bottom of said drum, a headed stem in said sleeve, a block on the end of said stem, a spring disposed about said sleeve between said block and said drum bottom and effective to raise said block vertically, a cover for the top of said drum pivoted to said block, a slideway on the inner face of said cover, an extension slide in said slideway, a handle on the end of said slide, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said cover is in its closed position, a button loosely set at the bottom of said drum and a stud on said button and extending adjacent to the inner face of said cover and adapted to press the same to release the handle.

6. In a device of the class described, a casing, a tape drum rotatably mounted

therein, a support eccentrically mounted and vertically movable in said drum, a resilient means effective to raise said support vertically, a crank arm for said drum pivoted to said support and having a portion providing an extension slide, said crank arm having a slideway in one face thereof in which said slide portion may slide, a handle on the end of said slide portion, a pair of oppositely acting spring fingers adapted to yieldingly engage said handle when said pivoted crank arm is in its closed position, a button loosely set at the bottom of said drum, and a stud on said button and extending adjacent to the inner face of said pivoted crank arm.

7. In a device of the class described, a casing, an open-ended winding drum rotatably mounted in said casing, a member mounted in said drum and movable relative thereto, a crank arm pivotally mounted on said movable member and adapted to fold over the open end of said drum, yielding means for moving said movable member, means for holding said crank arm in folded position against said yielding means, and means for releasing said crank arm from said holding means.

8. In a device of the class described, a casing, a winding drum having a recess and mounted rotatably in said casing, an operative mount set in said winding drum, a crank arm for said winding drum pivoted on said mount and having a portion providing an extension slide, said crank arm having a slideway in which said slide portion may slide, a handle on said slide portion adapted to be received in the recess of the winding drum when in closed position, and means for automatically throwing open said crank arm whereby said slide portion thereof will be shifted in said slideway.

9. In a device of the class described, a casing, a winding drum rotatably mounted therein and having a recess, an operative mount set in said winding drum, a cover for said recess pivoted on said operative mount and receivable in said recess to close said recess, said cover having a slideway on one face thereof and having a portion providing an extension slide to work in said slideway, a handle on said slide portion, means for automatically throwing open said cover, means for holding said cover in closed position, and means for releasing said cover from said holding means.

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

LAROY S. STARRETT.

Witnesses:

FRANK E. WING,
FRANK A. BALL.