

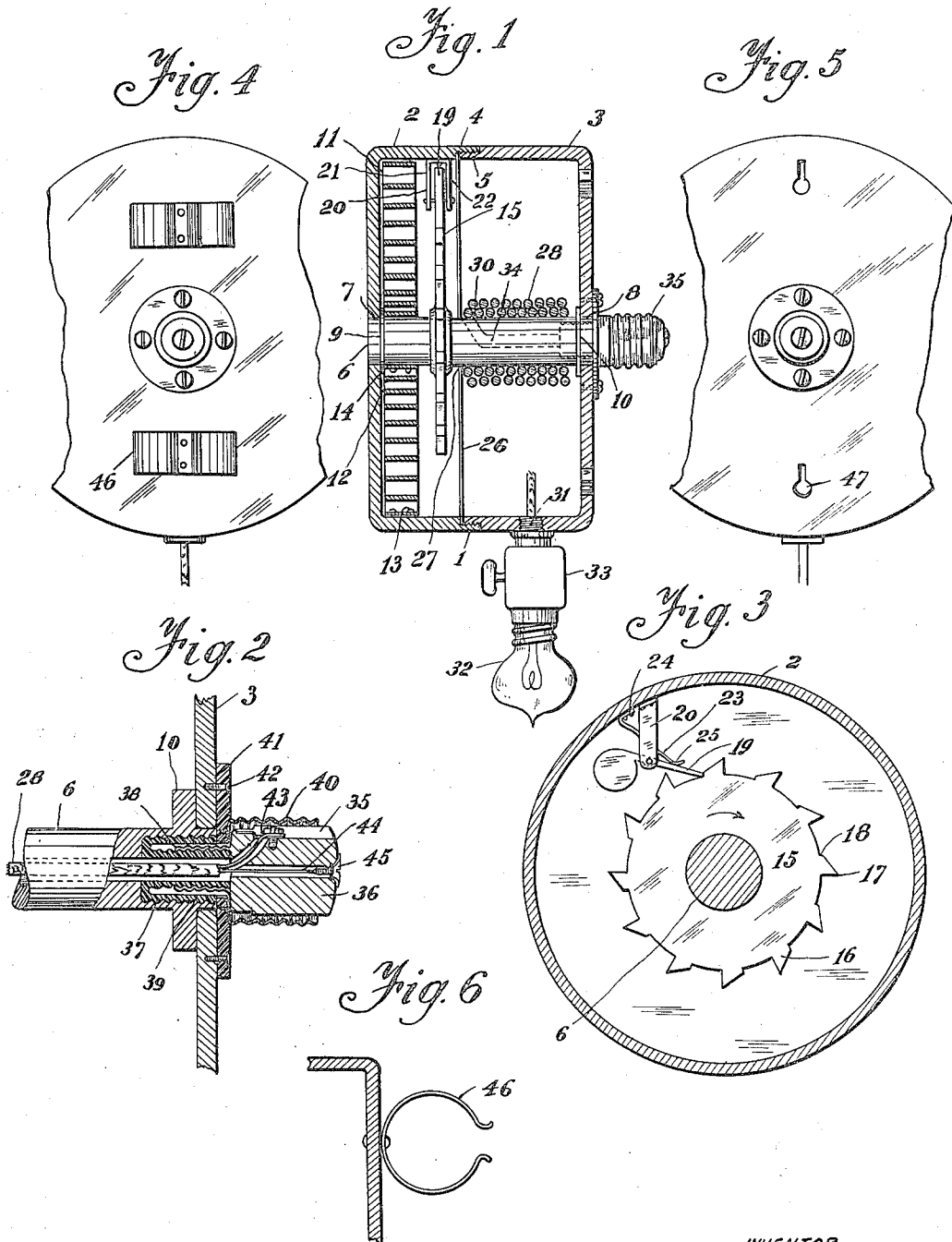
P. HENDERSON.

SPRING REEL.

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1,256,016.

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INVENTOR:

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UNITED STATES PATENT OFFICE.

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SPRING-REEL.

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Specification of Letters Patent. Patented Feb. 12, 1918.

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To all whom it may concern:

Be it known that I, PETER HENDERSON, a citizen of the United States, residing at Burgettstown, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Spring-Reels, of which the following is a specification.

My invention relates to improvements in spring reels and particularly to that type of spring reel adapted for carrying an electric lamp.

An object of my invention is to provide a spring reel of the type set forth, which has simple and effective means for holding the cord after it has been withdrawn the desired distance and for automatically rewinding the cord upon its drum.

A further object of my invention is to provide a device of the character described, in which the lamp, while normally occupying a definite location, may be readily carried from place to place within a considerable range without disturbing its electrical connection.

Other objects of my invention are to provide a device of the type specified which is simple in its construction and arrangement, strong, durable and efficient in its use, and inexpensive to manufacture.

To the accomplishment of these and such other objects as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts herein specifically described, and illustrated in the accompanying drawing wherein is shown an embodiment of the invention.

In the drawing, forming a portion of this specification, and wherein like numerals of reference designate corresponding parts throughout the several views:

Figure 1 is a cross sectional view of a spring reel in accordance with this invention.

Fig. 2 is a cross sectional view showing the arrangement of the rotatable electric connection.

Fig. 3 is a cross sectional view of the device showing the ratchet-wheel and associated parts.

Fig. 4 is a partial rear end view illustrating attaching means for mounting the spring reel.

Fig. 5 is a partial rear end view, showing a modified form of attaching means.

Fig. 6 is a side elevation of the attaching device as shown in Fig. 4.

Referring more in detail to the drawing, the sheet metal casing 1 comprises the two cup-shaped members 2 and 3, which are provided with the threaded portions 4 and 5, respectively, adapted to be screwed together to form the casing 1.

The shaft 6, extends transversely through the casing 1, and is suitably journaled in the apertures 7 and 8 of the casing. The shoulders 9 and 10 of the shaft 6, are provided to prevent lateral movement of the said shaft, when positioned in the casing 1.

The coiled ribbon spring 11 is positioned adjacent the inner surface 12 of the cup-shaped member 2, and one end 13 thereof is attached to the casing 1, and the other end 14 to the shaft 6.

The ratchet-wheel 15, is mounted on the shaft 6 to turn therewith, and comprises the teeth 16, equally spaced from each other, and shaped to form the point 17 and the shoulder stop 18. The pawl 19 is pivotally mounted in the bracket 20 and is positioned so as to engage the shoulder stop 18, of the ratchet-wheel 15, to permit ratchet-wheel to turn in one direction only until released.

The bracket 20 is secured to the casing 1 and comprises the two arms 21 and 22, between which passes the flat spring 23, one end 24 of which is attached to the casing 1 and the other end 25 bearing upon the pawl 19. By arranging the spring 23 in this manner it will prevent the end 25 thereof from being displaced upon the pawl 19. The spring 23 is provided to permit the use of my improved device, at any angle or position.

A washer or plate 26, having an aperture 27, for the passage of the shaft 6, is placed intermediate the two cup-shaped members 2 and 3, of the casing 1, to prevent liability of entanglement of the cord 28 with the ratchet mechanism.

One end of the cord 28 passes through the aperture 31 in the casing 1 and is attached to the lamp 32 which is normally held in position by the socket 33. The other end of the cord passes through an aperture 34 in the drum portion 30, of the shaft 6 and is attached in a rotatable plug 35.

The plug 35 comprises the porcelain body portion 36 and the threaded insulating shank 37. The shank 37 is attached to the

porcelain body portion 36 by the contact bushing 38 and is mounted in the threaded end 39, of the shaft 6, to turn therewith during the withdrawing or rewinding operations of the cord 28, upon the drum portion 30, of the shaft 6.

The contact sleeve 40, adapted for the reception of an ordinary electric socket attachment, is carried by the insulator collar 41, which is rigidly secured to the casing 1, by means of the screws 42.

By the use of a plug of this design, the terminal 43, connected to the bushing 38, is in contact with the sleeve 40 while rotating therein, and the terminal 44 is connected to the contact 45, which is adapted for frictional engagement, also while rotating, with the contact in the socket attachment used therewith.

It will be obvious that my improved spring reel may be adapted for various uses, as for example, in connection with a desk telephone for taking up the slack in the cord, or by eliminating the electrical connecting elements, for reeling up clothes-lines, etc.

The device may be mounted or positioned in any suitable and desired manner. As shown in Figs. 4 and 6, of the drawings, there is provided the spring clip 46 for mounting the device upon a rod. In the modification shown in Fig. 5, the casing is provided with the slots 47, adapted to be engaged by nails or screws on a wall.

In practice, the operation of my improved reel is as follows: Assuming that the cord 28 is wound upon the drum portion 30, of the shaft 6, the cord is withdrawn, through the aperture 31 in the casing 1, any desired distance, and causes the shaft 6 and the ratchet-wheel 15, mounted thereon, to rotate in the direction indicated by the arrow in Fig. 3. By gently releasing the pull on the cord, the spring 23 will force the pawl 19 into engagement with the shoulder stop 18 of the ratchet-wheel 16, and prevent the turning of the shaft and associated parts in a reverse direction.

When it is desired to rewind the cord within the casing, the cord 28 is pulled slightly forward, causing the point 17 of the ratchet teeth 16, to disengage the pawl 19 from the shoulder stop 18. By suddenly releasing the pull upon the cord, the spring 11, having been wound by the withdrawing operation, will rotate the shaft in the reverse direction, and the speed of the return movement will not permit the pawl 19 to engage the shoulder stop 18, but will slide over the sloped portion 48 of the teeth 16. The

counterweight 49, of the pawl 19, is provided to regulate the action of the pawl movement, by promoting or impeding the said movement, according to the position of the pawl when the device is mounted to a fixture.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while describing the principle of operation of the invention together with the device which is now considered to be the best embodiment thereof, it is to be understood that the device shown is merely illustrative and that various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

What I claim as new and desire to secure by Letters Patent is:

In a device of the character described, the combination, with a casing consisting of two cup-shaped members adapted to be screwed together, a shaft rotatably mounted in the casing having a drum portion and provided with shoulders for holding said shaft in said casing, a coil spring having one end thereof attached to the casing and the other end to the shaft to revolve the said shaft in one direction, a ratchet-wheel mounted on the shaft to turn therewith, a spring actuated pawl pivotally attached to the casing in the path of the ratchet-wheel, a sleeve socket attachment secured to the casing, a contact plug rigidly mounted in one end of the shaft adapted to rotate with the said shaft in the said sleeve socket attachment, a quantity of lamp cord wound upon the drum portion of the said shaft having one end passing through an aperture in the casing and provided with lamp connections and the other end passing through an aperture in the drum portion of the shaft and connected to the said sleeve socket attachment and to the rotatable contact plug, and a plate placed intermediate the two cup-shaped members, substantially as described and for the purpose set forth.

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

PETER HENDERSON.

Witnesses:

R. CLEMENT WEBER,
JENNIE JONES.