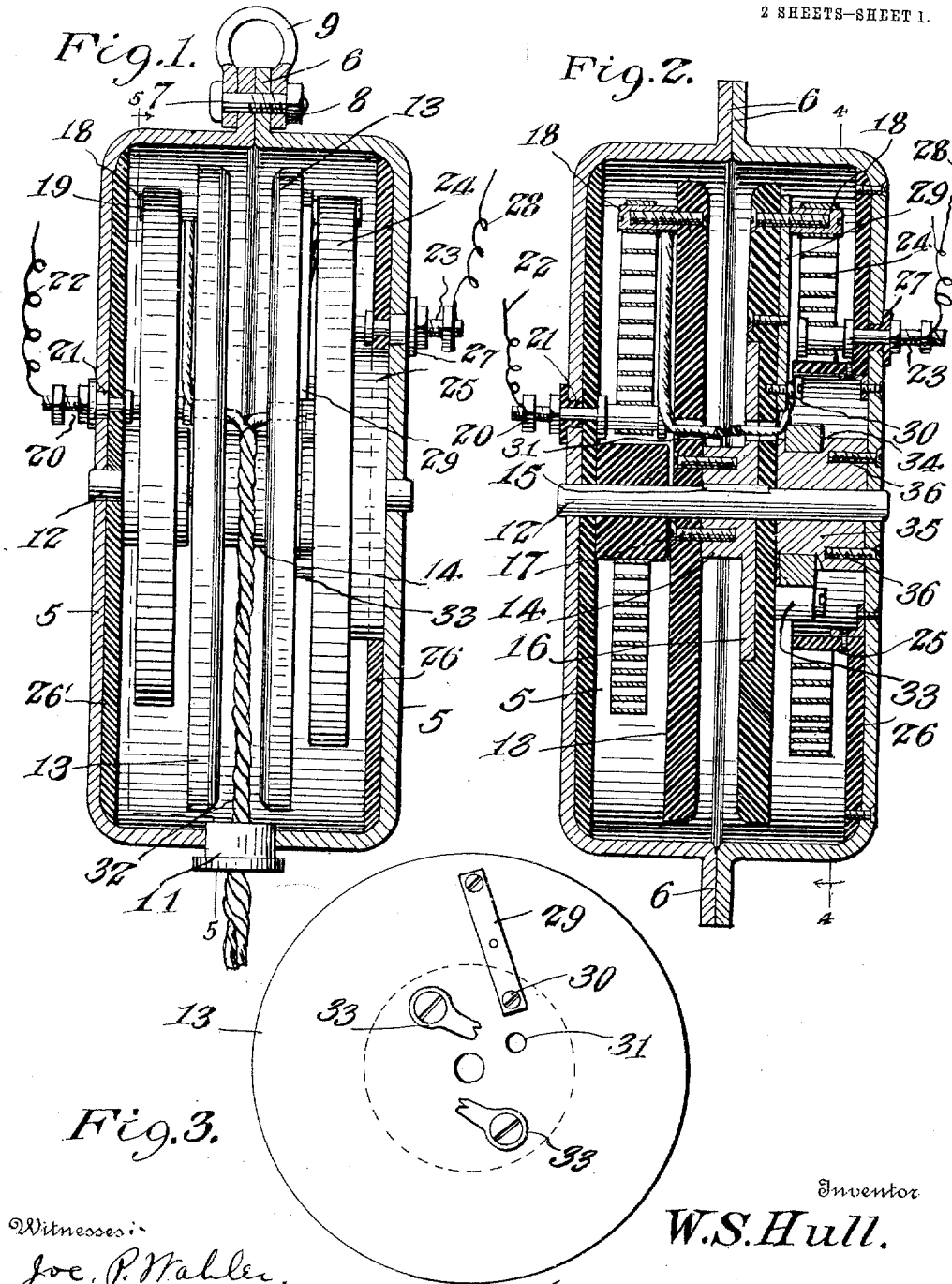


W. S. HULL.
ELECTRIC DROP CORD ADJUSTER.
APPLICATION FILED JAN. 15, 1910.

977,192.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.



Witnesses:

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Fig. 4.

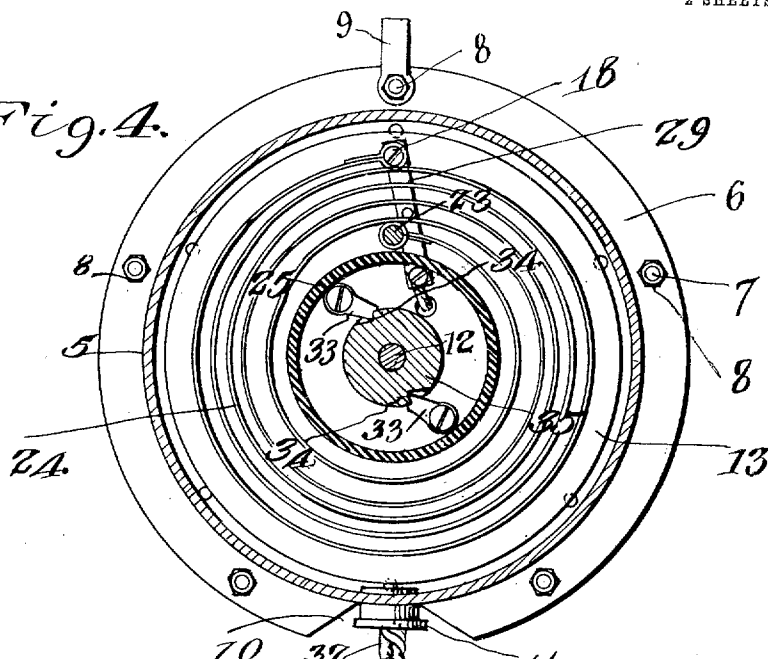
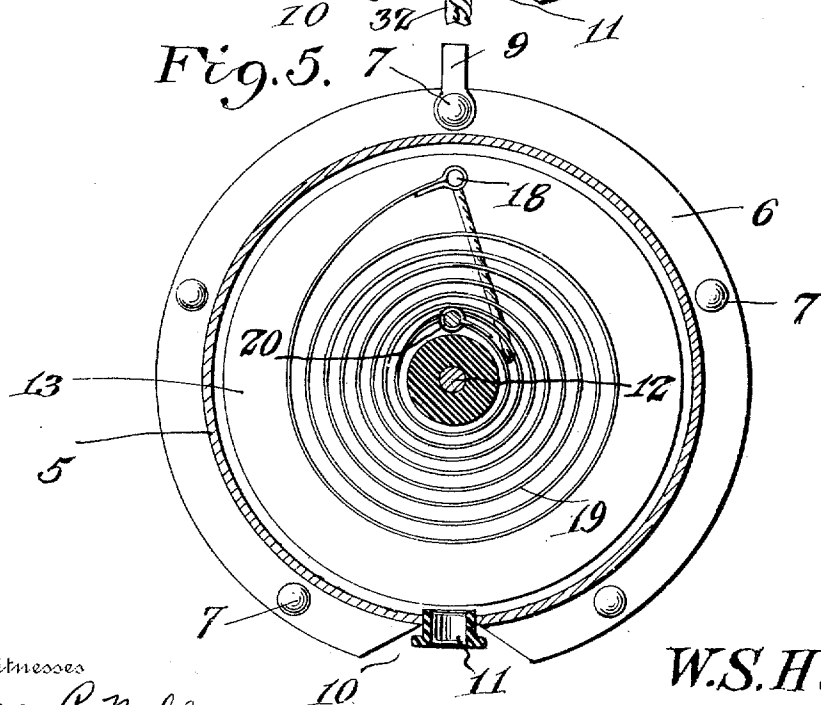


Fig. 5.



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UNITED STATES PATENT OFFICE.

WARREN S. HULL, OF SHELDON, ILLINOIS.

ELECTRIC-DROP-CORD ADJUSTER.

977,192.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed January 15, 1910. Serial No. 533,247.

To all whom it may concern:

Be it known that I, WARREN S. HULL, a citizen of the United States, residing at Sheldon, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Electric-Drop-Cord Adjusters, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain new and useful improvements in electric light drop cord adjusters and has for its object to provide a device of this character which is automatic in operation whereby the length of the electric light cord may be adjusted as desired, the slack of said cord being automatically taken up.

Another object is to provide means for winding the drop cord whereby the same may be adjusted, without breaking the electric circuit or using sliding contacts.

A further object is to provide new and novel means of a very simple construction whereby the continuity of the electric current may remain unbroken in the operation of the device, the conducting wires carried by the coil being connected to suitable terminals carried by the rotatable winding element.

With these and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section through a drop cord adjuster embodying my improvements; Fig. 2 is a vertical section through the spool and casing; Fig. 3 is a side elevation of the winding spool; Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 2; and Fig. 5 is a section taken on the line 5—5 of Fig. 1.

Referring more particularly to the drawings 5, 5 indicate the two sections of a circular casing, each of said sections being formed with an annular flange 6. These flanges are adapted to be disposed upon each other and the casing sections secured together by means of the bolts 7 disposed through said flanges upon the ends of which the nuts 8 are threaded. One of these fastening bolts also secures a hanger yoke or clip 9 to the flanges of the sections by means of which the device may be suspended in any convenient position. At the bottom of the

casing, the annular flanges 6 are cut away, as shown at 10, and a tubular plug 11 is disposed through an opening in the bottom of the sections and may be secured therein in any desired manner.

A shaft 12 is centrally journaled in the sides of the casing sections and has keyed thereon a winding spool 13. This spool comprises the two parallel sides constructed of fiber, rubber, or other suitable insulating material and are spaced apart by means of the connecting hub or body 14. This hub 14 is secured to the shaft by means of the feather key 15 and is formed with an annular flange 16 seated in the inner face of one of the spool sections. The parallel side plates of the spool may be secured to the connecting hub 14 by means of suitable fastening screws 17. Each of the parallel members of the spool 13 carries a binding post or terminal 18, and one of said terminals is electrically connected by means of a resilient sheet metal coil spring 19 to a similar terminal 20 fixed in one of the casing sections 5 and extending exteriorly thereof. This terminal 20 is insulated from the casing by means of a suitable insulating sleeve or collar 21 and the primary wire 22 of the electric circuit is connected to said binding post. A terminal or binding post 23 is also disposed through the other casing section and has secured thereto one end of a resilient metallic band 24. This band is coiled about an inwardly extending collar 25 of insulating material which is integrally formed with the insulating lining 26 disposed upon the inner surface of the side of the casing, and has its other end secured to the binding post 18 carried by the winding spool 13. A similar insulating lining is also provided for the other casing section and has a central inwardly extending portion 26' disposed about the shaft 12, thereby thoroughly insulating the same. The binding post 23 is further insulated from the casing by means of the sleeve 27 extending there-through. The secondary wire 28 is connected to the binding post 23 whereby the electric current may be conducted through the metallic band 24 and to the binding post 18. The binding post 18 secures one end of a metal bar 29 to the side of the winding spool, the other end of which is secured thereto by means of a screw 30. The conducting wires are attached to the primary terminal 18 and the secondary terminal 30

and disposed through the opposed openings 31 in the opposite side plates of the winding spool. The wires are then joined and wrapped with suitable insulating material to provide the drop cord 32 which extends from the connecting hub 14 through the sleeve 11 in the bottom of the sectional casing. Thus it will be obvious that as the cord is drawn from the casing, the spool will be rotated upon the shaft 12 and the spiral spring 19 wound to place the same under tension, while at the same time the flow of the electric current will not be interrupted.

In order to hold the spool against reverse rotative movement, I provide the gravity pawls 33 pivotally secured to one side of the winding spool and adapted to be engaged in the oppositely disposed notches 34 provided in the periphery of a cylindrical head or block 35. This ratchet block is secured to the side of the casing section by means of the screws 35, and when the end of the pawls 33 are engaged in the notches therein, it will be obvious that the spool will be securely held against rotation due to the tendency of the spring 19 to uncoil.

In the operation of the device, when it is desired to remove the lamp to another position, the cord 32 may be pulled from the casing and the spool 13 rotated as above described which will coil the spring 19 and the band 24 without interrupting the flow of the electric current, the electric bulb or lamp remaining lighted unless the current is turned off at the socket or head. When it is desired to shorten the cord, a sharp pull upon the cord will rotate the spool sufficiently to release the gravity pawls 33 from engagement in the notches of the ratchet head 34. The tension of the spring 19 is sufficient to rotate the spool at a high speed, and the pawls 33 will be thrown outwardly by centrifugal force and away from the ratchet head. When the proper amount of cord has thus been wound upon the spool, the operator checks the same by grasping the cord, thereby stopping the rotation of the spool and allowing the pawls to reseat themselves in the notches in the ratchet head when the cord may be released.

From the foregoing it is believed that the operation and many advantages of my invention will be readily apparent without requiring a more extended description. The device is of simple construction, is very positive in its operation and may be produced at a minimum expense.

While I have shown and described the spool as being formed of two parallel plates connected by a metallic member, it will be understood that this spool can be entirely formed of the insulating material if desired, but in order to cheapen the construction of

the device it would preferably be constructed in the manner above set forth.

It will further be obvious that the device is susceptible of a great many minor modifications without departing from the essential features or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:

1. A device of the character described comprising a casing formed in two sections, each of said sections having an insulated lining, a shaft centrally journaled in the casing sections, a spool keyed on said shaft, said spool comprising two plates of insulating material, a metallic hub rigidly secured to and connecting the spool sections, a cord adapted to be wound on said spool extending through the casing, a binding post secured to each of the casing sections, a binding post secured to each of the spool sections, flexible electrical conductors secured to said binding posts, one of said conductors comprising a coil spring adapted to rotate the spool, electrical connections between said cord and the binding posts on said spool, an annular flange formed on the insulating lining of one of the casing sections, a ratchet head rigidly secured to said casing section and gravity pawls mounted on the side of one of the spool sections engaging with said ratchet head to normally hold the spool against rotation.

2. A device of the character described comprising a sectional casing, a sleeve secured in the bottom of said casing between the sections, a shaft centrally journaled in the casing sections, a spool keyed on said shaft, a cord adapted to be wound on said spool extending through the sleeve, binding posts secured to the opposite sides of said spools and to the casing, electrical conductors between said binding posts for the primary and secondary electrical circuits, one of said conductors comprising a coil spring adapted to rotate the spool, a plate secured to said spool by one of the binding posts and adapted to convey the electric current from the other of said conductors, a screw securing the other end of said plate to the spool, and constituting the terminal of the secondary circuit, said spool having opposed openings therein, and electrical connections between the drop cord, said screw and the binding post upon the opposite side of the spool.

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

WARREN S. HULL.

Witnesses:

J. F. SWITZER,
A. A. BISHOPP.