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A. B. WASS & W. WHITAKER, Jr.

ADJUSTABLE SUSPENDING DEVICE FOR ELECTRIC LIGHTS.

APPLICATION FILED JULY 14, 1904.

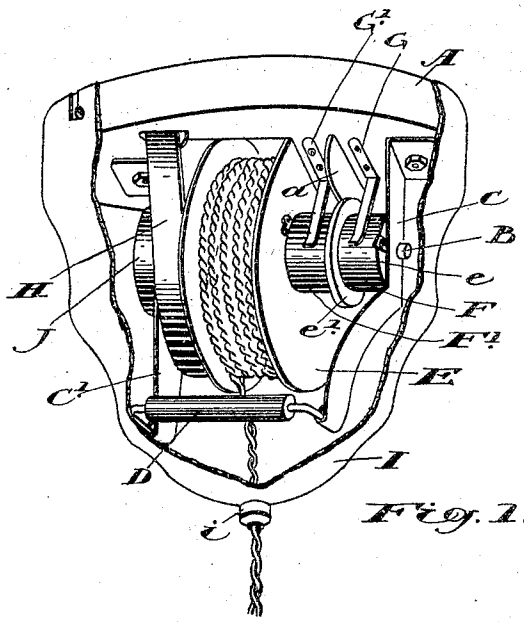



Fig. 1.

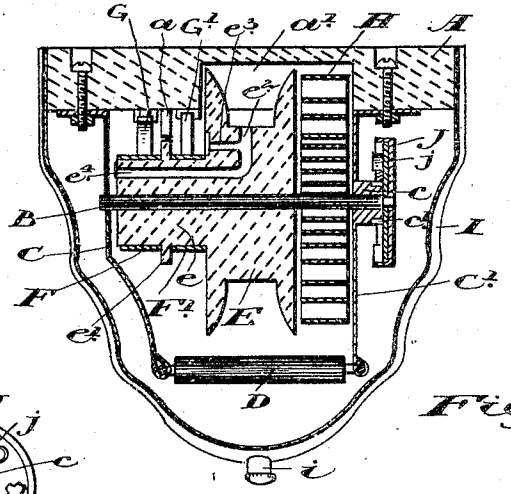



Fig. 2.

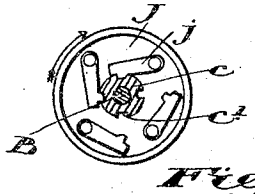



Fig. 3.

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# UNITED STATES PATENT OFFICE.

ARTHUR BRIGHT WASS AND WILLIAM WHITAKER, JR., OF OAKVILLE, CANADA.

## ADJUSTABLE SUSPENDING DEVICE FOR ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 790,940, dated May 30, 1905.

Application filed July 14, 1904. Serial No. 216,607.

*To all whom it may concern:*

Be it known that we, ARTHUR BRIGHT WASS and WILLIAM WHITAKER, Jr., of the town of Oakville, in the county of Halton, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Adjustable Suspending Devices for Electric Lights, of which the following is the specification.

Our invention relates to improvements in adjustable suspending devices for electric lights, &c.; and the objects of our invention are to devise a suspending device of cheap and simple construction from which an electric light or other electrically-operated device may be suspended by the electric cable or wires and by means of which the amount of such cable or wires suspending the light may be lengthened or shortened in a simple manner, further objects being to make the device fireproof and ornamental in appearance; and it consists, essentially, of a suitable base adapted to be secured to the ceiling, wall, or any other suitable place, brackets secured to said brace, a shaft journaled in such brackets, a sheave or pulley of insulating material mounted on such shaft, a spring secured to said pulley and adapted to rotate it in one direction after it has been rotated in the opposite direction by an outside force, suitable commutator-rings and brushes secured so as to form a connection between the cable or wires wound on the pulley and the outside source of the electric power, a further device being also provided which operates to stop the spring from rotating the sheave or pulley except at a high rate of speed and the various parts being constructed and arranged in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of the device, showing the covering partly broken away to reveal the interior parts. Fig. 2 is a sectional view through the center of the device. Fig. 3 is a view of the controlling attachment.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the base. This base may be constructed of any suitable material—such as porcelain, wood, or the like—though for practical purposes porcelain will be found preferable.

B is the main shaft of the device. This shaft or spindle is journaled in bearings formed in the brackets C C′, these brackets being securely fastened to the base by means of suitable screws and nuts or any other equivalent device. At the lower extremities of the brackets C C′ a roller D is rotatably held in the horizontal position, the object of this roller being hereinafter described.

E is a pulley or sheave, which is mounted on and secured to the shaft B and is provided with a groove to receive the coils or cable or electric-light wire, which are wound thereon, as hereinafter described. A cylindrical projection $e$ is formed on one side of the pulley, and commutator-rings F F′ are secured thereon, such rings being separated by an annular flange $e'$, formed integral with the projection.

$e^2$ is a passage-way leading from the groove in the pulley E by way of two branches $e^3$ and $e^4$ to the two commutator-rings F and F′, and the two wires of the cable are adapted to be carried through these passages and secured to the commutator-rings by suitable means.

G G′ are two spring-brushes, which are in contact with the commutator-rings and are secured each to one of the wires leading from the source of power. These brushes are insulated from one another by an insulating projection $a$, formed integral with or secured to the base A.

H is a spring of the ordinary spiral form, which is secured at one end to the shaft B and at its other end to the base A.

I is the casing or covering for the device, which may be of any ornamental form and is provided with an opening $i$, through which the cable or wires are intended to pass.

It will now be seen that a light or other device may be suspended from a cable connected to the commutator-rings F F′ and wound on the pulley E, the current passing through the brushes G G′, commutator-rings F F′, and the wires of the cable to the light. It will thus be seen that the light may be moved in any desirable direction by simply pulling out the cable, thereby unwinding it off the pulley E, and at the same time the spring H will be wound up so as to cause the pulley to rewind the cable when the light is brought back.

As it may frequently be desirable to lay the

light down where it cannot be held securely, it will be seen that some device will be necessary to prevent the spring from rewinding the cable and drawing the light back into position, and this is particularly necessary when the light hangs directly down from the suspending device and requires to be adjusted to various positions vertically. The device which we have provided for this purpose is that shown most clearly in Fig. 3 and is also shown in the sectional view, Fig. 2, and it consists of a disk J, secured to the shaft B, the said disk having a plurality of pivoted pawls *j* secured to its inner face. A projection *c* is formed on or secured to the bracket C', and this projection has recesses *c'*, adapted to be engaged by the pivoted pawls or dogs *j*. The engaging teeth of the pawls are beveled on one side, so that the disk may always be turned in the direction indicated by arrow in Fig. 3; but the other sides of the teeth are made abrupt, so that when they have once engaged the notches *c'* the disk will be held from rotating in the opposite direction to the arrow.

It may be here mentioned that owing to centrifugal force when the disk is rotating at a considerable speed the pawl or dogs *j* will tend to fly out; and consequently will not be engaged by the notches *c'*; but if the disk be very slowly rotated there will be practically no centrifugal force, and the notches will consequently be engaged by the pawls, thus preventing the spring H from winding up the cable any further. It will thus be seen that a light suspended from the ceiling of a room may be pulled down to any desired position, and by letting it up slowly until one of the pawls engages with a notch it may be held in such position securely.

It may here be mentioned that for the sake of compactness the pulley is preferably sunk in the recess *a'*, formed in the base A, and this recess is located considerably to one side of the center of the base, so that the cord or cable will run almost directly from the pulley into the hole *i*. The roller D above referred to prevents the wear of the cord from friction.

It will be understood that in constructing our device for practical use we do not wish to be limited to the exact details of construction illustrated in the accompanying drawings, but we wish to be able to make variations in the form of the device which will come within the scope of mechanical skill.

What we claim as our invention is—

In an adjustable suspending device for electric lights, the combination with the base, depending hangers and canopy having a central opening at the bottom provided with an insulating-bushing and a roller journaled in the lower ends of the depending hangers, of the main arbor journaled in the hangers, the gravity-ratchet secured at one end thereof outside of the hanger, the spring secured at one end to the arbor within the hanger and at the other end to the base, the pulley made of insulating material and provided with a laterally-extending portion or hub having passage-ways made therein, the contact-rings located on the hub, the insulated wire extending around the pulley and having the ends thereof passing through the passage-ways in the hub to their respective contact-rings and the contact-brushes secured to the base and forming thereon the terminals for the main wires and contacting with the rings at the opposite end as and for the purposes specified.

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