M. J. LINDAHL.

ADJUSTABLE ELECTRIC DROP LIGHT.

APPLICATION FILED APR. 2, 1914.

1,117,869.

Patented Nov. 17, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

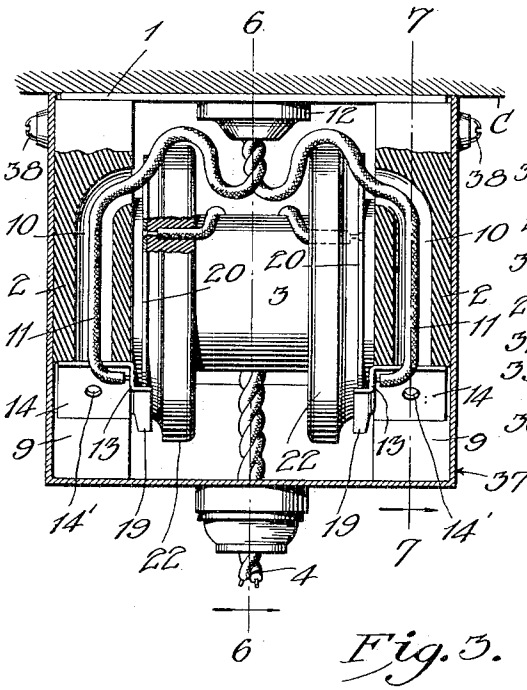



Fig. 2.

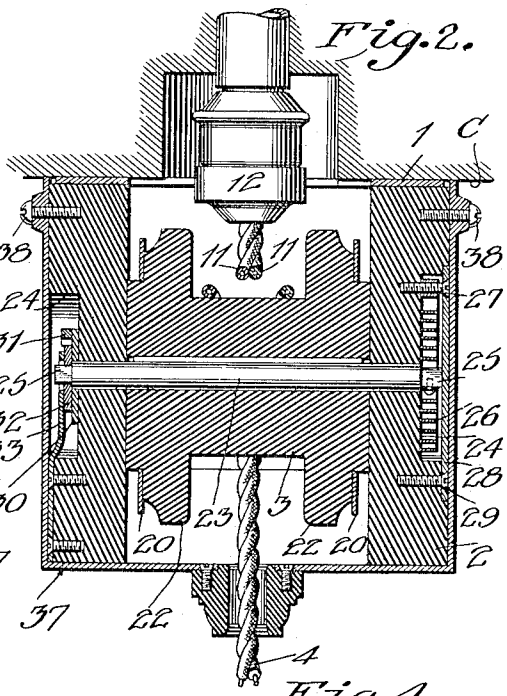



Fig. 4.

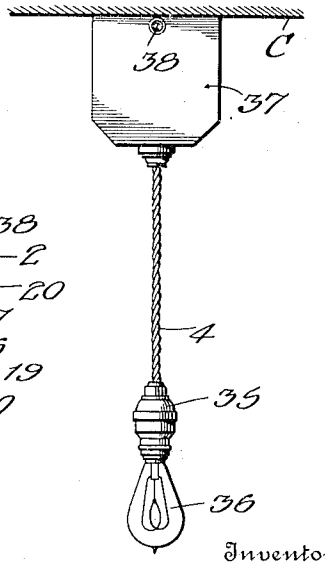



Fig. 3.

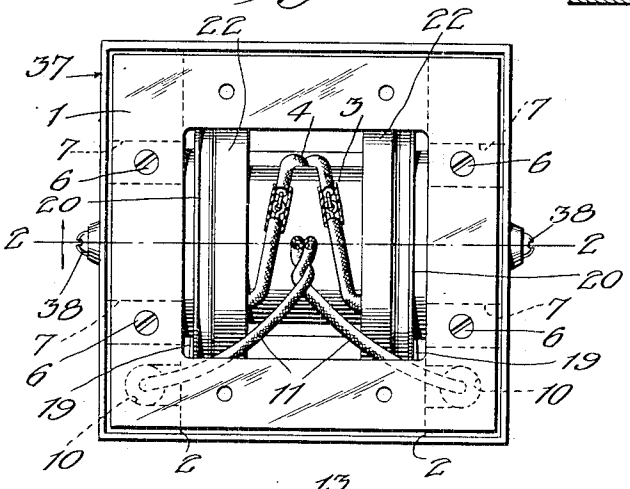
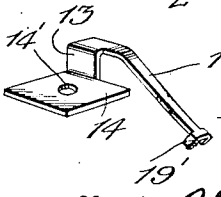



Fig. 5.




Witnesses

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2 SHEETS—SHEET 2.

Fig. 6.

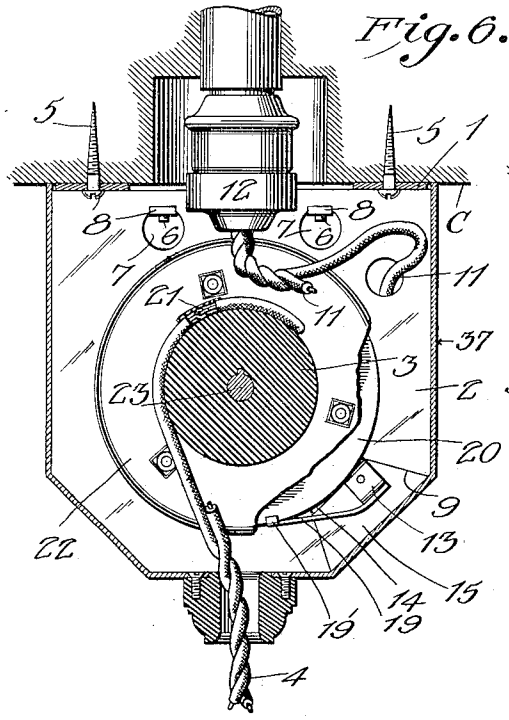



Fig. 7.

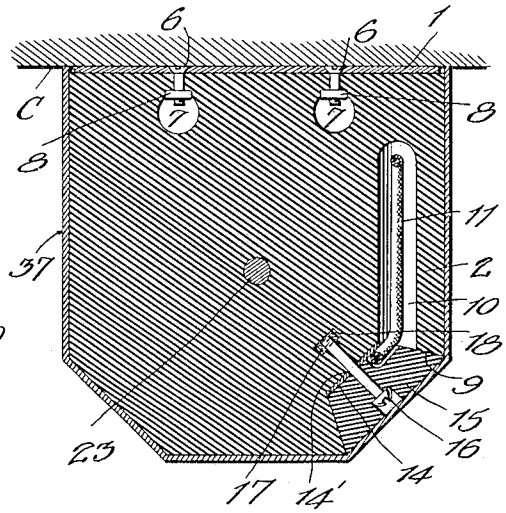



Fig. 8.

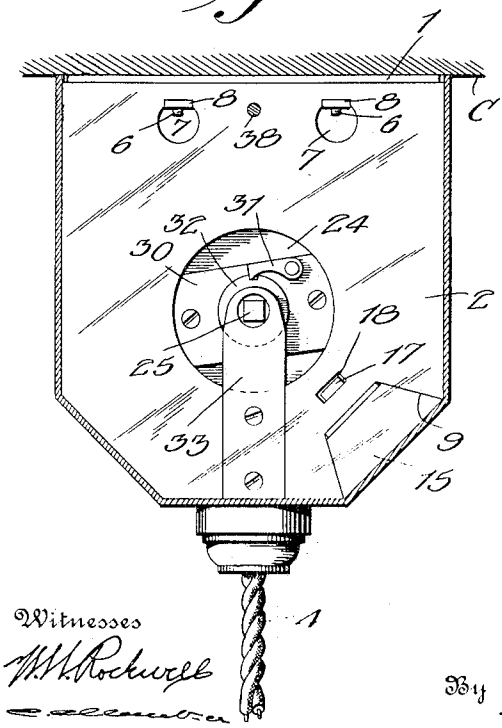
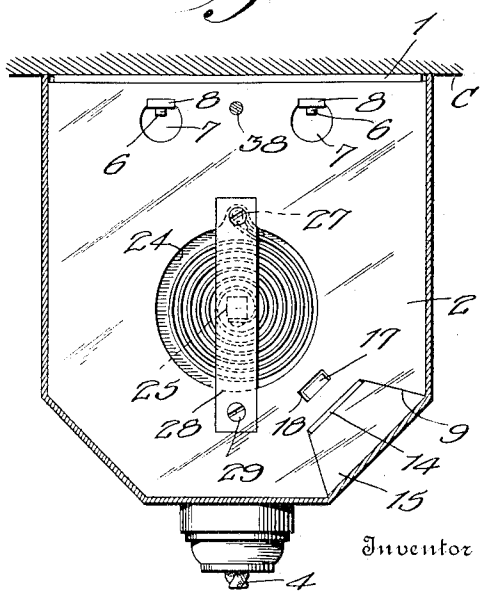



Fig. 9.




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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE ELECTRIC DROP-LIGHT.

1,117,869. Specification of Letters Patent. Patented Nov. 17, 1914.

Application filed April 2, 1914. Serial No. 829,084.

*To all whom it may concern:*

Be it known that I, MARTINUS J. LINDAHL, a citizen of the United States, residing at Woodburn, in the county of Marion and State of Oregon, have invented certain new and useful Improvements in Adjustable Electric Drop-Lights; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in electric light fixtures and more particularly to those which are vertically adjustable.

The primary object of the invention is to provide a device of the character described whereby a light suspended from the usual drop wire or cable, may readily be raised and lowered and be retained in any of its adjusted positions.

A secondary object of the invention is to provide simple and efficient means for conducting the current from the overhead conduit to the drop wires.

With the above objects in view, the invention resides in certain novel features of construction and combination herein described and claimed and shown in the drawings, wherein:

Figure 1 is a side elevation of the invention with parts broken away and in section; Fig. 2 is a vertical longitudinal section thereof; Fig. 3 is a top plan view; Fig. 4 is a side elevation on a reduced scale, showing the electric bulb in lowered position; Fig. 5 is a perspective view showing one of the contact members and its attaching plate; Figs. 6 and 7 are vertical sections on the lines 6—6 and 7—7 of Fig. 1, respectively; and Figs. 8 and 9 are end elevations with the casing in section.

In the accompanying drawings, I have shown my invention as comprising an attaching plate 1, bearing blocks 2 depending therefrom, a spool or drum 3, a cable 4 wound upon the latter and connections between said cable and the overhead conduit within the ceiling C. The attaching plate 1 is here shown in the form of a rectangular frame having a plurality of openings through which screws 5 are adapted to be passed and threaded into the ceiling and with other openings through which screws 6 pass for the purpose of supporting the bearing blocks 2. The blocks 2 are substantially rectangular but have their lowermost corners beveled off at angles of 45° as shown, the upper ends of said blocks being provided with transverse openings 7 in which nuts 8 are non-rotatably held for engagement by the screws 6, whereby said bearing blocks are rigidly suspended from the attaching plate 1. One lower corner of each of the bearing blocks 3 is provided with a transverse notch 9 with which communicates an upright opening 10. The openings 10 are provided for the reception of current conducting wires 11 which are electrically connected with the wires in the overhead conduit in any suitable manner, as by the usual plug 12, said wires being electrically connected in any suitable manner at their free ends to upright flanges 13 formed on attaching plates 14 which are held rigidly within the notches 9 by means of clamping blocks 15 and screws 16, the latter passing through openings 14′ in said plates and being threaded into nuts 17 which are non-rotatably mounted in suitable openings 18 extending laterally through said bearing blocks.

Each flange 13 is provided with a resilient arm or brush 19, said brushes having U-shaped contact shoes 19′ which straddle and frictionally contact with the edges of current conducting rings 20, one of which is carried rigidly by each end of the spool or drum 3, the inner ends of the strands of wire forming the cable 4 being electrically connected as at 21 to said rings, said ends passing through the annular flanges 22 of said drum for this purpose. It may be well to here state that the bearing blocks 2, the spool or drum 3 and the clamping blocks 15 are all of insulating material such as porcelain.

Coming now more particularly to the mounting of the spool or drum 3, said drum is provided with a bearing shaft 23, which is revolubly mounted in bearing openings formed through the central portions of the blocks 2, said openings communicating at their outer ends with circular recesses 24 formed in the outer sides of said blocks 2. Extending longitudinally from each end of the shaft 23, is a squared stud 25, said stud on the one side being rigidly secured to the inner end of a spring 26 which is coiled within one of the recesses 24 and has its outer end rigidly secured by means of a screw 27 which passes through one end of a spring retaining plate 28, overlies said recess and said spring, and is secured at its opposite end as at 29. Extending diamet-

rically across the recess 24 in the other bearing block is a metal plate 30 which is centrally perforated to allow the other stud 25 to pass therethrough, said plate carrying a dog 31 which is adapted to engage a notch in the edge of a disk 32 which is non-rotatably carried upon said stud 25 and is held in place by means of a resilient arm 33 which is secured at its lower end to the outer side of the bearing block 2. By this mounting of the drum 3, when the cable 4 is unwound therefrom, tension will be exerted upon the spring 26 and the dog 31 will prevent said spring from rewinding said drum until said cable is given a sharp downward pull whereupon said dog will be forced out of the notch with which it has engaged, and will allow the tension of the spring to rotate the drum and rewind the cable 4 thereon. During any rotation on the part of the drum 2 current will be conducted through the wires 11 to the flanges 13 from which it will pass through the brushes 19 to the annular contact rings 20. From the rings 20 it will be conducted through the two strands of the cable 4 to the lamp socket 35 and thence to the usual electric bulb 36.

Although the parts so far described would operate without a housing or casing, it is in most cases desirable to provide the same with an ornamental cover of any suitable formation. Said cover is here shown in the form of a hood 37 having a suitable rosette on its under side through which the cable 4 is adapted to pass. The sides of the hood 37 are provided with threaded bosses through which fastening screws 38 are threaded, said screws passing into suitable openings within the bearing blocks 2. By this fastening means for the hood 37, but two small screws are visible. The provision of the contact shoes 19′ insures the proper positioning of the brushes 19, in respect to the rings 20, at all times, numerous shiftings of the drum being allowed without causing the brushes to disengage said rings.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the device will be readily understood without requiring a more extended explanation.

Various changes in form, proportion, and minor details may be resorted to without departing from the spirit of the invention as claimed.

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

1. A device of the character described comprising a supporting plate, a pair of bearing blocks depending therefrom in spaced relation, each of said blocks having a notch in one edge, a drum revolubly mounted between said bearing blocks and having contact rings on its opposite ends, a pair of wires wound upon said drum and electrically connected with said contact rings, brush attaching plates within the notches in said bearing blocks, clamping blocks within said notches and retaining said brush attaching plates in position, brushes carried by said brush attaching plates and contacting with the contact rings, and wires electrically connected with said brushes.

2. A device of the character described comprising a supporting plate, a pair of substantially rectangular bearing blocks depending therefrom in spaced relation, said blocks being formed of insulating material and each having one of its lower corners provided with a notch and with an upright passage rising therefrom, brush attaching plates contacting with the inner walls of said notches, current conducting wires depending through said passages and electrically connected to said plates, clamping blocks in said notches and in contact with said plates, a drum revolubly mounted between said blocks, contact rings on the ends of said drum, insulated current conducting wires wound upon said drum and electrically connected to said rings, and contact brushes carried by said attaching plates and in contact with said rings, the wires on said drum being designed to be electrically connected to, and to support an electric bulb.

3. A device of the character described comprising a supporting plate, a pair of substantially rectangular bearing blocks depending therefrom in spaced relation, said blocks being formed of insulating material and each having one of its lower corners provided with a notch and with an upright passage rising therefrom, apertured brush attaching plates in contact with the inner walls of said notches, flanges projecting from the inner edges of said plates, current conducting wires depending through said passages and electrically connected to said flanges, clamping blocks in said notches, screws passing through said clamping blocks and the apertures in said attaching plates and entering said bearing blocks, a drum revolubly mounted between said bearing blocks, contact rings on the ends of said drum and resilient brushes carried by said flanges and in contact with said rings.

4. A device of the character described comprising a supporting plate, a pair of substantially rectangular bearing blocks depending therefrom in spaced relation, said blocks being formed of insulating material and each having one of its lower corners provided with a notch and with an upright passage rising therefrom, apertured brush attaching plates in contact with the inner walls of said notches, flanges projecting from the inner edges of said plates, current conducting wires depending through said

passage and electrically connected to said flanges, clamping blocks in said notches, screws passing through said clamping blocks and the apertures in said attaching plates and entering said bearing blocks, a drum revolubly mounted between said bearing blocks, contact rings on the ends of said drum and resilient brushes carried by said flanges and having U-shaped contact shoes on their free ends, said shoes straddling the edges of said rings, whereby said brushes are retained in proper position relative to said rings.

5. In a device of the character described, a block of insulating material, an attaching plate connected thereto, a flange formed integrally with and projecting laterally from said plate, a resilient brush arm formed integrally with said flange and a U-shaped contact shoe formed integrally with the free end of said arm, for the purpose set forth.

6. In a device of the character described, a block of insulating material, an attaching plate connected thereto, a flange formed integrally with and projecting laterally from said plate, and a resilient brush arm formed integrally with said flange, for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MARTINUS J. LINDAHL.

Witnesses:
C. Z. RANDALL,
B. T. RANDALL.