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H. D'OLIER, Jr.

ELECTRIC LAMP ADJUSTER.

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Fig. 1

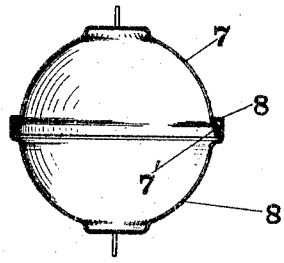
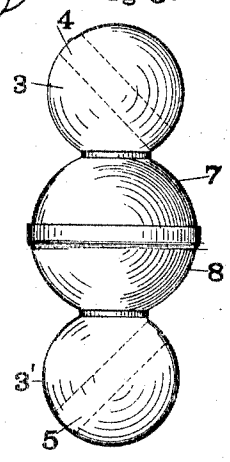


Fig. 2

Fig. 3.



Witnesses

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No. 783,743. Patented February 28, 1905.

UNITED STATES PATENT OFFICE.

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ELECTRIC-LAMP ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 783,743, dated February 28, 1905.

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To all whom it may concern:

Be it known that I, HENRY D'OLIER, Jr., residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Electric-Lamp Adjuster, of which the following is a specification.

My invention relates to means for supporting an incandescent lamp in a practically horizontal position by means of the flexible conductor-cord and to means whereby the lamp may be rotated to any position with regard to the drop-cord.

My invention consists of means whereby an incandescent lamp may be adjusted as to height when suspended by a drop-cord and of means for adjusting the lamp to any desired position about its supporting-cord, such adjustment being a rotation in a horizontal plane.

My invention consists of a cord-adjuster, from which is supported in practically horizontal position an incandescent lamp, there being provided a swiveling device applied either intermediate the parts of the adjuster or intermediate the adjuster and lamp system, the lamp system comprising the lamp proper, reflector, and socket or other accessories.

The usual mode of supporting an incandescent lamp is by a cord-drop consisting of the conductors which convey the current to and from the lamp, the lamp-axis being practically coincident with the vertically-hanging cord. It is found that an incandescent lamp so suspended and as extensively used in factories, machine-shops, and the like radiates the greater portion of the light in horizontal directions rather than vertically downward, the latter direction of radiation being most desirable where workmen require the lamp to be placed immediately over their bench or machine in order to illuminate their work in the most thorough manner. I have found by photometer tests that the vertically-hanging incandescent lamp if the illumination in horizontal directions is expressed by sixteen-candle power the illumination vertically downward, all conditions being the same, is expressed by 7.9 candle power. In other words, the ordinary incandescent lamp in order to cause the greatest illumination vertically downward must be turned through a right angle, so that its axis becomes practically horizontal. Workmen do so turn the lamp by tying it up to some fixed object and then they immediately find that due to the twisting tendencies of the drop-cord the lamp will assume undesired positions.

It is to gain the advantages of maximum downward illumination and to prevent the lamp from assuming undesired positions about the cord that my invention is adaptable.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a sectional view of the swiveling device. Fig. 2 is a general view, in side elevation, of the cord-drop, adjuster, swiveling device, and lamp system. Fig. 3 is a view in elevation of combined adjuster and swiveling device.

Referring to the drawings, 1 represents the usual cord-drop comprising the twisted or braided conductors suspended vertically from the ceiling cut-out, rosette, or other device.

2 is an adjuster of dumb-bell form having the spherically-shaped end portions 3 and 3′, through which extend the channels 4 and 5, respectively. Through these channels is strung the lamp-cord 1. By pulling either the upper or lower portion of the lamp-cord through the channels 4 or 5 to greater or less extent the height of the lamp system may be adjusted.

6 is a chain or other flexible supporting means secured at its upper end to the spherical member 3′ and at its lower end to the hemispherical shell member 7, made, preferably, of spun metal. The lower edge of the member 7 is flared outwardly, as shown at 7′ in Fig. 1. 8 is a similar hemispherical shell member having the flange 8′ spun over and embracing the flange 7′. The engagement between 7 and 8 is, however, a loose one, thereby permitting relative rotation between the members 7 and 8.

At 9 is shown a chain or other member similar to 6, secured at its upper end to the swiveling member 8 and at its lower end engaged by the hook 10, secured to the neck 11 of a shade and reflector 12. On the neck 11 are

provided resilient clasps or fingers 13, which embrace and engage the bead 14, spun in the lamp-socket 15. By this engagement the member 12 may be rotated to any position about the longitudinal axis of the lamp 16, whose filament is shown at 17 extending horizontally. The lamp 16 may have the screw-threaded Edison base or any other type of base to engage and be secured in the usual socket 15, having the usual switch-key 18. The hook 10 is applied at such point of the lamp system that such system will practically balance about the hook 10, and thus assume a practically horizontal position, as shown. If no swiveling means were provided, the lamp 16 would take up a position corresponding to the position of equilibrium of the cord-drop, which has decided twisting tendencies, as well understood in the art. Cords of structure other than that illustrated also have twisting tendencies and cause the lamp suspended by them to take up a certain definite position, and when the lamp is rotated from such position the tendency of the cord to untwist will again return the lamp to its initial position. In the ordinary lamp suspension with the lamp-axis vertical and coincident with the cord-axis such behavior is generally of no inconvenience. However, when the lamp is suspended practically horizontally for the purposes hereinbefore set forth such action is decidedly undesirable. This disadvantage is overcome, however, by the swiveling action of the member 8 with regard to the member 7. In other words, the lamp and lamp system have a swiveling action with regard to the cord or the cord-adjuster. From this it follows that the lamp may be rotated to any position and will there remain and be independent of the twisting action of its cord support.

Instead of the flexible connections 6 and 9 rigid connections, such as rods, may be employed.

In Fig. 3 is shown a modified arrangement for securing the swiveling action. In this case the spherical members 3 and 3′ are separate and distinct from each other. The hemispherical member 7 is directly connected to the spherical member 3 and the hemispherical member 8 is directly connected to the hemispherical member 3′. The channels 4 and 5 are arranged and serve as previously described. From this it is apparent that the member 3′ has a swiveling action with respect to the member 3 and with a simple chain or rod connection between the spherical member 3′ and the member 11 of the lamp system permits such lamp system to have a swiveling action with regard to the upper portion of the cord-drop.

The members 7 and 8 are secured to the members 3 and 3′, respectively, in any desired manner—as, for example, fastening the hemispherical members to the spherical members 3 and 3′ by means of ordinary screws, the screw-heads being on the inside of the hemispherical members. Furthermore, in place of the direct connection between the members 7 and 8 and the members 3 and 3′ the connection may be indirect as by means of flexible or rigid members intermediate 3 and 7 and intermediate members 8 and 3′.

What I claim is—

1. In combination, a drop-cord, an adjuster comprising a plurality of parts each engaging said drop-cord, a swivel connection between said cord-engaging parts, a lamp and its attachments, and a member depending from said adjuster and secured approximate the middle of said lamp and its attachments, whereby said lamp is supported in approximately horizontal position.

2. In combination, a drop-cord, an adjuster comprising a plurality of parts each engaging said drop-cord, a member depending from said adjuster, a lamp supported by said member, and a swivel connected between said adjuster parts, whereby said lamp is independent of the twisting tendencies of said drop-cord.

3. A cord-adjuster comprising independent parts each adapted to frictionally engage a drop-cord to secure the same, and a swivel connected between said independent parts.

4. A cord-adjuster comprising independent parts each adapted to engage a drop-cord, and a swivel connecting said parts, said swivel comprising shell members secured to each other by flange engagement, whereby said adjuster parts may rotate with respect to each other.

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Witnesses:
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