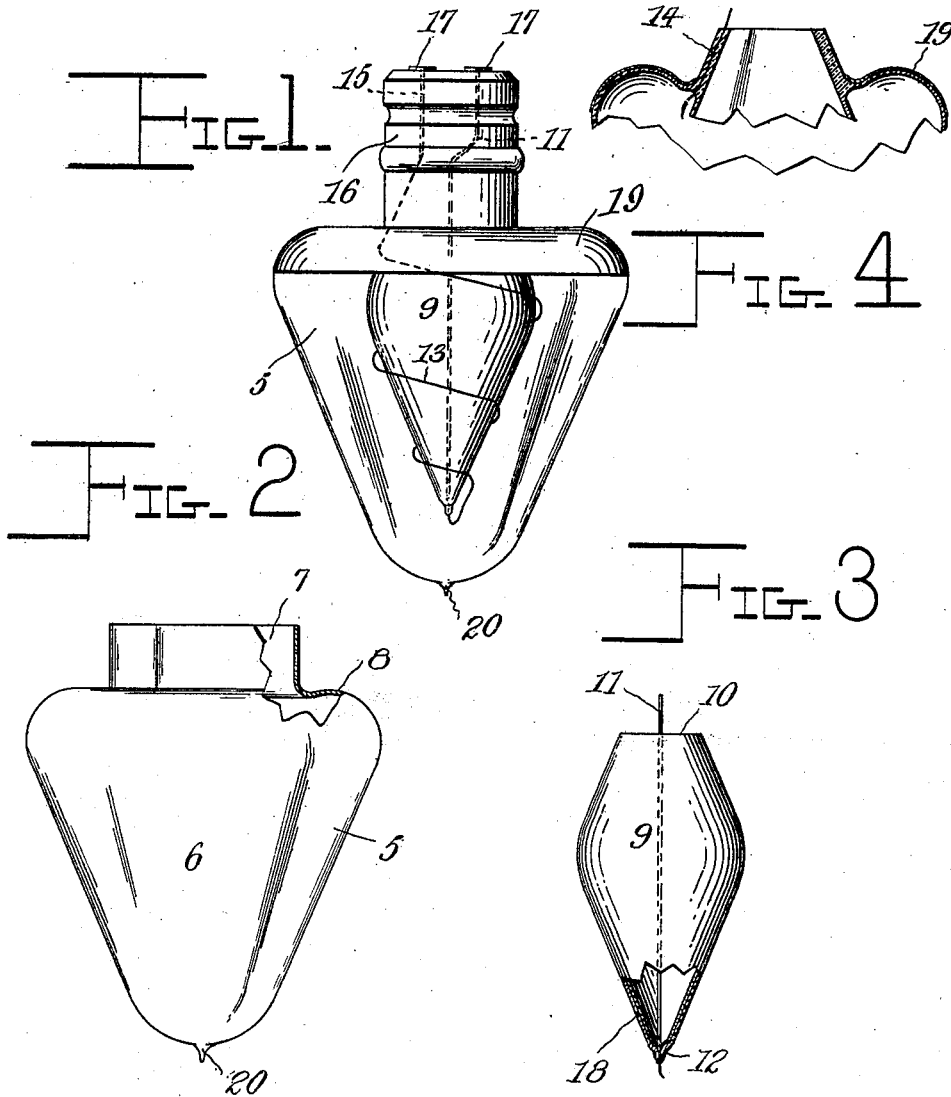


H. M. TAYLOR.  
INCANDESCENT ELECTRIC LAMP.  
APPLICATION FILED SEPT. 2, 1902.

NO MODEL.



Witnesses:

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# UNITED STATES PATENT OFFICE.

HERBERT MUNRO TAYLOR, OF HAMILTON, CANADA.

## INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 753,935, dated March 8, 1904.

Application filed September 2, 1902. Serial No. 121,785. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT MUNRO TAYLOR, manufacturer, a citizen of the Dominion of Canada, residing at No. 60 King street, west, in the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Canada, have invented certain new and useful improvements in Incandescent Electric Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

My invention relates to lamps, and is especially applicable to incandescent electric lamps.

The object of the invention is to provide such a construction of the lamp and globe as will enable substantially all the light generated to be reflected advantageously. The invention includes such a construction of the globe with a view to accomplishing the objects intended and also contemplates an improved disposition of the reflecting-surfaces.

The invention consists in the construction and combination of parts to be more fully described hereinafter and definitely set forth in the claim.

In the drawings, which fully illustrate my invention, Figure 1, represents my lamp in side elevation. Fig. 2 represents the outer globe of this lamp, substantially in side elevation, a portion being broken away, as indicated. Fig. 3 represents a reflector comprised in my invention, a portion of which is broken away, as indicated. Fig. 4 represents in section the upper portion of the finished globe.

Throughout the drawings and specification the same numerals of reference indicate like parts.

Referring more particularly to the parts, 5 represents the globe or bulb of the lamp. This globe is most clearly shown in Fig. 2, this view showing it, however, before it has been incorporated into the lamp. It should appear that it consists substantially of a conical body 6, of glass, provided with a wide open mouth or neck 7, and it should be observed that the body near the lower portion of the neck is formed into a curved shoulder 8, extending continuously around the globe.

Centrally disposed within the globe 5 there

is a reflecting-cone 9, also of glass, which is shown clearly in Fig. 3. As will appear from an inspection of that figure, this reflector is of substantially the form of two cones placed with their bases together, one of the cones being truncated. In this manner a double cone, as it were, is formed, the upper extremity whereof is cut off, so that it constitutes a mouth 10. A leading-in wire 11 passes axially downwardly through the cone 9, and at its tip 12 it unites with the lower end of the filament 13, which filament is disposed in a spiral around the outside of the said reflecting-cone, in the manner indicated in Fig. 1. In forming the complete globe, as shown in Fig. 2, the cone 9 is inserted within the same with its mouth 10 in substantial alinement with the edge of the mouth 7 of the globe, whereupon the parts are raised to a high temperature, and the neck or mouth 7 when in a plastic condition is pressed inwardly against the outer surface of the cone 9 at this point in such a manner as to effect the complete fusion or union between the cone and the globe, as will be readily understood. In doing this the lower portion of the lead 15 is held between the uniting surfaces, so that after the operation is completed it lies embedded in the glass at this point. Its lower extremity connects with the filament 13. As indicated, these leading-in wires 11 and 15 pass upwardly through the head 16 of the lamp and terminate at the contacts 17, which are adapted to complete the circuit connections when the lamp-head is inserted in a suitable socket. Fig. 4 represents substantially the appearance of the finished globe at its upper portion.

It should be stated that before the cone 9 is incorporated with the globe 5 the said cone is silvered or provided with a coat 18 upon its inner surface in any well-known manner, so that the cone constitutes an efficient reflector behind the filament. After the parts of the lamp have been completely assembled and the head 16 securely attached by means of cement or similar means the aforesaid shoulder 8 is silvered or covered with a coat 19 upon its outer side, as indicated in Fig. 4. From this arrangement it should appear that a large proportion of the light from the filament will be

reflected downwardly directly by the lower portion of the reflecting-cone 9, and light which passes upwardly toward the reflector 19 is of course returned downwardly toward the reflector at this point. It should appear that substantially all the light is thrown into the space below and around the lamp.

I prefer to have the angle of the cone 9 substantially the same as the angle of the inclosing globe 5, whereby their surfaces are substantially an equal distance apart at all points.

It should be understood that a vacuum is formed within the outer globe after the lamp is substantially complete. The vacuum may be produced in the manner in vogue in making ordinary incandescent-lamp globes, the globe being sealed at the tip 20 in the usual manner.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without effecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifica-

tions as are included within the scope of the following claims or of mechanical equivalents to the structures set forth. 30

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

In an incandescent electric lamp, a globe having a neck and a curved shoulder, the latter being provided with a reflecting material upon its outer surface and curved to conform thereto, a glass cone disposed centrally within the globe and provided with an interior coating of reflecting material, the cone and globe being fused together, a leading-in wire passed axially downward through the cone, a filament disposed spirally outside the cone within the globe and connected with the tip of said wire, and a wire connected with said filament and held between the fused uniting surfaces of the cone and globe. 35 40 45

Dated at Hamilton, Ontario, this 18th day of August, 1902.

HERBERT MUNRO TAYLOR.

In presence of—  
E. G. McCox,  
Wm. Bruce.