May 7, 1963 H. A. BRISCO 3,089,025

LAMP FIXTURES

Filed Aug. 8, 1960

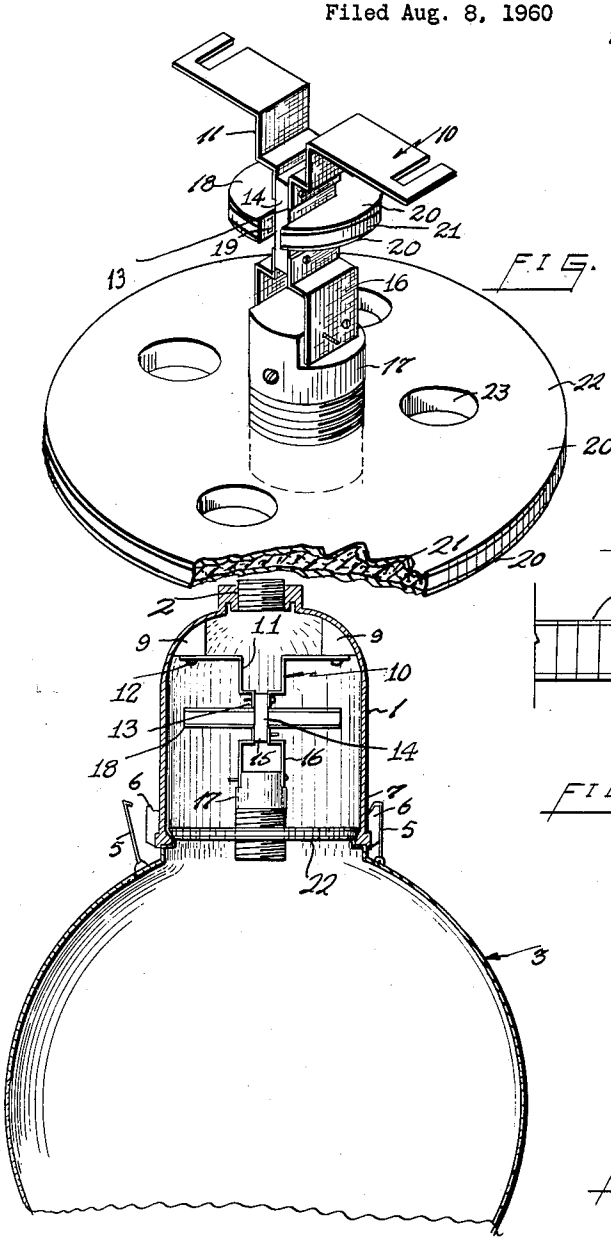

FIG. 1

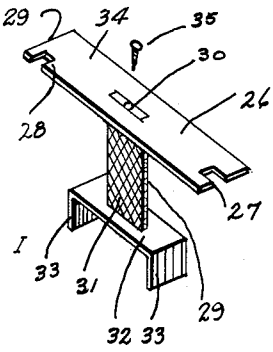

FIG. 4

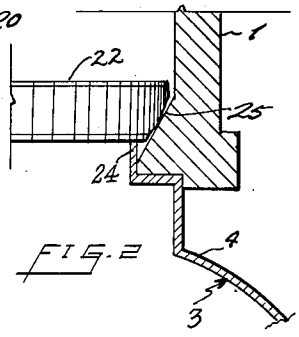

FIG. 2

FIG. 3

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LAMP FIXTURES

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My invention relates to new and useful improvements in street lighting fixtures, particularly those consisting of a metallic semi-spherical hood and a semi-spherical glass luminaire suspended from overhead poles and the like.

Conventional structures suffer from several disadvantages, the principal one of which is the collection of moisture within the bowl when the lamp is unlit, either due to condensation, hoar frost, and other water vapor, or water caused by driving rain, snow and the like which enters through cracks and crevices in the structure.

When the lamp is lit, this moisture is evaporated by the heat of the lamp, and condenses when the lamp is extinguished thus falling onto the hot lamp and cracking same. Furthermore, in cold climates, this moisture tends to form a heavy hoar frost within the interior of the hood which is melted by the heat of the lamp and falls as droplets upon the lamp once again causing fracture of the glass due to moisture hitting the hot lamp.

Another disadvantage of this conventional type of fixture is the fact that, particularly when same is mounted near heavy traffic areas or on bridge approaches and the like, severe vibration is caused by the traffic, which vibration shortens the life of the lamp considerably due to filament fracture. This is due to the conventional method of mounting in which the lamp bulb is screwed into the lamp holder which in turn is rigidly supported within the hood. The hood, in turn, is rigidly mounted to the lamp standard so that any ground vibration is transmitted directly to the lamp bulb.

I have overcome both of these disadvantages by providing a plurality of moisture absorbing pads situated above the lamp thus preventing moisture from striking the lamp directly and by mounting the lamp holder upon a link of resilient material such as reinforced rubber or the like which absorbs or dampens the majority of vibration before it reaches the lamp filament.

The principal object and essence of my invention is therefore to provide a device of the character herewithin described which includes one or more absorbent pads situated above the lamp to absorb moisture and condensation and prevents same from falling upon the lamp.

Another object of my invention is to provide a device of the character herewithin described in which the vibration normally encountered due to heavy traffic conditions is absorbed prior to it reaching the lamp filament.

A still further object of my invention is to provide a device of the character herewithin described in which these improvements can readily be attached to existing lamp structures with the minimum of alteration taking place.

The most important object flowing from the above advantages of my invention is to extend the lamp life by several hundred percent.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawing in which:

FIGURE 1 is an enlarged fragmentary isometric view of the lamp holder showing my absorbent pads in position.

FIGURE 2 is a view on reduced scale to FIGURE 1, showing a side section of a lamp fixture with my invention incorporated therein.

FIGURE 3 is an enlarged fragmentary side sectional view showing the fitting of the lower pad within the hood of the lamp.

FIGURE 4 is an isometric view of an alternative embodiment of the suspension means, reduced in scale from FIGURE 1.

In the drawings like characters of reference indicate corresponding parts in the different figures.

Proceeding therefore to describe my invention in detail, reference should first be made to FIGURE 3 in which I have shown the conventional spun metal hood **1**, fitted with a pipe nipple **2** at the upper end thereof by which the device is attached to the conventional overhead arm (not illustrated).

A globe collectively designated 3 is attached by means of clips **5** to an annular projection **6** around the base **7** of the hood **1**.

Suspended from blocks **9** secured internally to the upper portion of the hood **1**, is a lamp holder component collectively designated **10**. This consists of angulated brackets **11** secured to the blocks **9** by means of screws **12**, said angulated brackets terminating in downwardly depending legs **13** to which is attached a block or link of reinforced rubber or similar resilient material **14** depending downwardly therefrom.

Also attached to the block **14** but at the lower end **15** thereof is a further pair of legs **16**, said legs carrying the lamp holder **17** within which the conventional incandescent lamp (not illustrated) is screwed.

From the foregoing, it will be appreciated that the lamp holder **17** is insulated from the legs **11** and hence the hood **1**, against untoward vibration.

A circular pad **18** is provided and adapted to fit around the block **14** by the provision of a slot **19** formed within the pad. This pad is formed of a lamination of two sheets of asbestos fiber material **20** with a layer of fiber glass **21** secured between the sheets of asbestos, either by adhesive or similar means and this prevents moisture, condensing from the top of the hood, flowing down the legs **11** to the lamp.

A further, centrally apertured, pad **22** also formed of a lamination of sheets of asbestos **20** and fiber glass **21** is adapted to encircle the lamp holder **17** and the diameter of this pad **22** is similar to the internal diameter of the base of the hood **7**. Apertures **23** are provided through the pad **22** to permit moisture from the globe **3** to be evaporated and to pass upwardly into the hood **1** and to be absorbed by the two pads therein.

The pad **22** is adapted to encircle the lamp holder **17** as hereinbefore described and when the globe **3** is pushed upwardly to engage within the base of the hood, the shoulder **24** of the globe engages the underside of the pad and seats same within the tapered portion **25**.

It will therefore be seen that the provision of these two pads **18** and **22** prevents moisture from dripping onto the incandescent lamp as the pads absorb this moisture and permit same to evaporate after the lamp has been burning for some time. The heated moisture vapor passes out of the hood around the pipe nipple **2**, thus maintaining the globe in a relatively dry condition at all times.

The pads also prevent dirt and dust which might enter through the pipe fitting **2**, and other leakage areas, from being deposited within the glass **8** of the globe thus maintaining the glass in a cleaner condition for a longer period.

FIGURE 4 shows a preferred embodiment of the method of suspending the lamp holder from the hood.

In this instance, I have provided a transverse strap **26** having a slot **27** in one end thereof and a further slot **28** in one side thereof but adjacent the opposite end **29**

thereof. This facilitates attachment of this strap to the blocks **9** by means of the screws **12**.

I have provided a length of flexible resilient material **29** manufactured preferably from braided metallic strand. The type of material is normally used for ground straps in electrical work and has the advantage of having considerable tensile strength together with flexibility and a certain amount of resiliency. I have found that this material is particularly suitable for use in this connection and is to be preferred over the reinforced rubber block or link **14** as hereinbefore described.

This length of material **29** is secured by one end thereof by forming a slot **30** centrally within the strap **26**, passing the upper end of the material just through this slot and then soldering same firmly to the strap **26**.

At the lower end **31** of the length of material **29** I provide a further transverse strap **32** and the lower end **31** is secured to this strap in a manner similar to the attachment of the upper end of the length of material to the strap **26**.

The aforementioned strap **32** is provided with downwardly depending legs **33** by which the strap can be secured to the lamp holder **17** in a manner similar to that illustrated in FIGURE 1 of the drawings.

In this particular embodiment, I find it advantageous to support the upper pad **18** by placing the same upon the upper surface **34** of the strap **26** and securing it in position by means of a sharp pointed pin **35** passing through the pad and into the soldered upper end of the length of material **29**.

This particular embodiment not only simplifies construction and insulation but supplies the necessary resiliency and flexibility essential for the elimination of vibration.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely different embodiments of same made within the spirit and scope of the claims without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

What I claim as my invention is:

1. In a street lighting fixture, the combination of a dome-shaped hood having an open bottom and adapted at the top thereof for attachment to an overhead support, a depending globe removably attached to the bottom portion of said hood, a moisture absorbing pad mounted in the open bottom of the hood, said pad being provided with a central socket receiving opening and with at least one vapor passage spaced laterally from said opening and communicating the interior of said globe with the interior of the hood, lamp socket suspension means provided in said hood above said pad, a lamp socket suspended by said suspension means and projecting through said central opening in said pad to support a lamp in said globe, said suspension means including an intermediate portion spaced upwardly from said socket, and a second moisture absorbing pad provided in said hood, said second pad fitting around and being supported by said intermediate portion of said suspension means in upwardly spaced relation from said socket, whereby to prevent gravitation of moisture along said suspension means to said socket.

2. The device as defined in claim 1 wherein said suspension means also include a transversely extending support bracket secured in the top portion of said hood, and a yoke secured to said socket, said intermediate portion of the suspension means comprising a vertical shock absorbing strap connected at its upper end to the center portion of said support bracket, the lower end of said strap being connected to said yoke, and said second pad fitting around and being supported by said strap.

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