Aug. 16, 1927. H. E. GANNETT 1,639,336

LAMP MOUNTING

Filed June 27. 1924

Fig. 1.

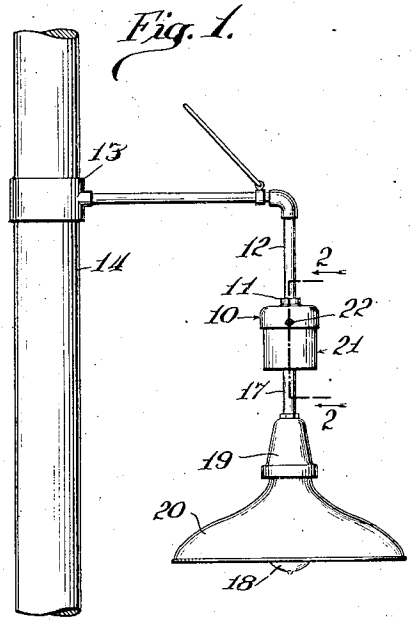


Fig. 2.

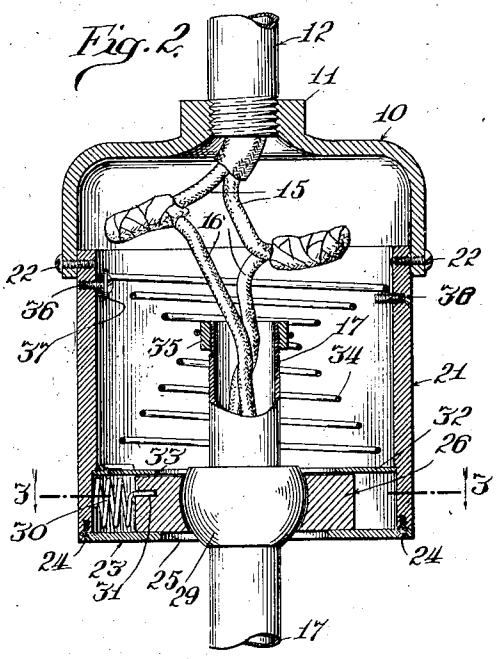


Fig. 3.

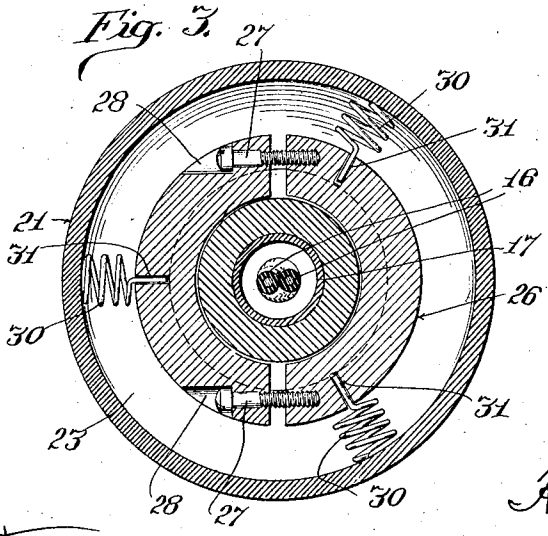


Fig. 4.



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Patented Aug. 16, 1927. 1,639,336

UNITED STATES PATENT OFFICE.

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LAMP MOUNTING.

Application filed June 27, 1924. Serial No. 722,651.

My invention relates to a mounting for lamps and more particularly to a mounting for electric lamps as employed in railroad stations and on railroad property; that is to say, more especially to the type of electric lamps which are suspended from suitable overhead fixtures or supports; the invention having for its object the provision of means for absorbing the shocks to which the lamp or the supporting fixtures are subjected.

The purpose of my invention is to provide means whereby the vibrations or shocks encountered by the supporting fixtures or brackets will be absorbed without transmitting same to the lamp proper, namely to the electric bulb or its filament; the device being adapted to eliminate breakage of the lamp proper or injury of the filament of the bulb by preventing the vibrations of the supporting fixtures or brackets being transmitted to the lamp and more particularly to the electric bulb; while at the same time providing means which will in no way interfere with or affect the lead lines or wires leading to the bulb-receiving socket member of the lamp.

The objects and advantages of my invention will be more readily comprehended from the detailed description of the accompanying drawing, wherein:

Figure 1 is a side elevation of a supporting member or bracket and an electric lamp provided with my improved device or lamp mounting.

Figure 2 is a vertical sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a cross sectional view taken substantially on the line 3—3 of Figure 2.

Figure 4 is a detail view, in perspective, of one of the springs used to control a socket-forming member of the device.

In the specific exemplification of my invention as disclosed in the drawing, it comprises a cup-shaped member or cap 10 preferably provided with an internally threaded boss 11 adapted to receive a supporting tube or pipe 12 whereby the lamp is supported from a suitable bracket as at 13 secured to the upright or supporting frame 14 of the building or structure. It will be understood that any suitable means of attaching or supporting the lamp may be employed, the drawing merely showing a simple and convenient form for the purpose of illustrating the application of the invention. The conduit or pipe 12 is also intended to receive the lead lines or electric wires, indicated at 15 in Figure 2, which extend through to the interior of the member 10 where they are shown connected with the wires 16 which extend through a conduit 17 to the lower end whereof is secured the usual socket member for receiving the bulb 18; the socket member being enclosed in a suitable shell as at 19 whereby the reflector 20 is also secured in place.

My improved device is intended to be situated at any convenient point between the lamp proper and the supporting or attaching bracket in order that vibrations or jars encountered by the upright or structure to which the bracket is secured will be absorbed and not conveyed to the bulb of the lamp.

For the sake of ease in assembly and access to enclosed parts, the cup member 10 is preferably provided with a separate band or shell 21 removably secured in place by means of screws 22; with the cup member overlapping the band or shell 21 to the exterior so as to prevent the ingress of moisture. The shell 21, at its lower end, is closed, the closure being preferably effected by a disc 23 removably held in place by suitable screws 24. The closed end or disc 23 is provided with a comparatively large opening 25 for the passage of the conduit 17, to permit rotative movement between the shell 21 and the conduit 17 without contact therebetween. The disc 23 is provided with a member 26 preferably in the form of a split ring shown secured together by screws 27; with one segment of the ring being shown with cut-out portions at 28 to receive the heads of the screws and permit easy manipulation thereof.

The split ring segments at their inner perimeters are formed with a dished or concaved opening to provide a socket for the spherical or ball portion 29 formed on or secured to the conduit 17, thereby providing a ball-and-socket connection whereby conduit 17 is held in place and at the same time permitted to have oscillatory movement. The ring segments or portions are normally arranged with their ends slightly spaced apart as shown in Figure 3 so that they may be drawn together by the bolts or screws 27 to take up any wear that may take place between the ring members and the spherical portion 29 of conduit 17. The split ring

26 is preferably of a diameter materially smaller than the inner diameter of shell 21, to provide sufficient space therebetween for a suitable number of coil springs 30; one end of each spring being disposed substantially parallel with the axis of the spring and secured within the adjacent segment of the ring as shown at 31 in Figure 2; while the outer ends of the springs bear against the sides of the shell 21; the springs being preferably normally under slight compression.

With this construction it is apparent that the split ring 26 and therefore also conduit 17 are both yieldingly held in centered position; while at the same time permitting oscillatory movement between the split ring 26 and the shell 21, and also relative movement between shell 21 and ring 26 with conduit 17 in a lateral direction, in the event of any jars or vibrations being encountered either by the suspended lamp or the structure or fixture from which the lamp is supported.

The shell 21, at a point above the split ring 26, is shown provided with a diaphragm or disc 32, which may be welded or secured at its outer perimeter to the shell 21, and arranged in slight spaced relation with the split ring so as to offer no resistance to the latter. The disc 32 is provided with an enlarged opening as shown at 33 for the upper portion of the spherical enlargement 29 of conduit 17 and the passage of the upper end of said conduit; the opening 33 being of a size sufficient to permit any lateral movement of the split ring and the conduit as well as any oscillatory movement of the conduit 17. The disc 32 provides a seat or bearing for a double helical spring 34 whose apex or inner coil is in bearing relation with or secured to a collar 35 shown screwed onto the upper threaded end of conduit 17. The upper enlarged coil or end of the double helical spring 34 is secured in any suitable manner to the inner side of shell 21, as for example by having the end of the spring wound about a set screw 36 shown provided with a washer 37, thus causing the upper end of the spring to be firmly held in place. The opposite side of the upper turn or coil is also preferably supported and held in proper horizontal plane and against too far downward movement by a set-screw 38. With the means shown, the double helical spring 34 will be maintained in proper position within the shell and permit free movement of the intermediate coils or turns. It is evident, however, that instead of employing a double helical spring as shown, two helical springs may be employed with the smaller coils or turns of the springs secured about the collar 35.

With the construction shown, it is apparent that the initial force or effect of any jar encountered either by the lamp support or the lamp proper will be transmitted through conduit 17 and be absorbed by the helical spring 34 at the upper end of the conduit 17; the spring, or springs as the case may be, being of a nature to permit lateral flexing or movement of the reduced end of the spring as well as any vertical or up and down movement. If the jar or vibration is heavy or excessive and in a lateral direction, then, in addition to the jar or vibration being absorbed by the helical spring 34, it will also be absorbed by the lower springs 30 induced by any lateral movement of the split ring member 26.

My invention is especially intended to overcome the material loss and expense encountered more especially by railroads at railroad stations and freight-houses, through the breakage of either the bulb or its filament or other parts of the lamp, such breakage being caused by heavy trucks, or the baggage hauling tractors colliding with the supporting girders or uprights from which the lamps are supported. With my invention, the lamps will be properly supported in place without a rigid connection between the lamp and the supporting structure or bracket; the invention providing a device or mounting which will permit vertical as well as oscillatory movement of the lamp proper and at the same time completely absorb the shocks and vibrations without transmitting them to the lamp or the bulb and therefore without causing injury to the filament of the bulb as has, however, heretofore been the case.

I have illustrated what I believe to be a simple embodiment of my invention, which may be applied to any suitable type of standard or supporting bracket; the invention having been described in terms employed merely as terms of description and not as terms of limitation, as structural modifications are possible and may be made without, however, departing from the spirit of my invention.

What I claim is:—

1. A lamp mounting of the character described, comprising a supporting shell having an apertured end wall, a contractible socket forming member slidably mounted on said end wall, a plurality of springs intermediate of the sides of the socket forming member and the shell for yieldingly maintaining the socket forming member in position, a lamp holding conduit disposed through said apertured end wall and provided with a spherical portion seatable in said socket forming member so as to permit oscillatory movement of the conduit, and a helical spring within said shell and disposed about the end of said conduit.

2. A lamp mounting of the character described, comprising a supporting shell having an apertured end wall and a diaphragm in parallel spaced relation with the end wall,

a split ring arranged between the diaphragm and the end wall and having a socket forming opening, a plurality of springs secured to said split ring and bearing against the inner sides of the shell for yieldingly maintaining the split ring in normal postion, a lamp socket carrying conduit disposed through the apertured end wall and the socket opening of the split ring and provided with a spherical enlargement seatable in said socket opening, and a helical spring within the shell about the inner end of said conduit.

3. In a lamp mounting of the character described, a main shell or housing adapted to be connected to a lamp bracket or supporting frame, a lamp socket carrying conduit, a ball-and-socket connection between the conduit and the main shell whereby oscillatory movement of the conduit relative to the shell may be permitted, said connection having lateral sliding relation with the shell, resilient means having bearing relation at the ends with the shell while an intermediate portion of said means is operatively connected with said conduit above said ball-and-socket connection, and means intermediate of the sides of the main shell and the ball-and-socket connection whereby the latter with the conduit is yieldingly held relative to the sides of the shell.

4. A lamp mounting of the character described, comprising a shell adapted to be secured to a bracket or stem for supporting the lamp in place, a socket-forming member mounted in the shell, said member having transverse sliding relation with said shell, a conduit provided with a spherical portion seatable in the socket forming member to permit oscillatory movement of the conduit, resilient means disposed about the conduit above said spherical portion in bearing relation with the conduit and secured at the end to the shell, and resilient means intermediate of the socket forming member and the sides of the shell for yieldingly holding the socket forming member in normal position relative to the sides of the shell.

5. A lamp mounting of the character described, comprising a supporting shell having a lower apertured end wall, an apertured partition within the shell in spaced parallel relation with the lower end wall, a socket forming member slidable intermediate of said end wall and the partition and held against vertical movement by the partition, a lamp holding conduit disposed through the apertures in the end wall and partition and provided with a spherical portion seatable in said socket-forming member, a double helical spring about the upper end of the conduit with its intermediate portion operatively secured to the upper end of the conduit while one end thereof is secured to the shell and the other end in bearing relation with said partition, and a plurality of springs disposed in circumferential spaced relation intermediate of the sides of the shell and socket forming member to yieldingly hold the latter in place.

HOMER E. GANNETT.