Dec. 30, 1930. C. H. LARSON 1,786,758

SIGNAL LAMP

Filed Oct. 11, 1928

Fig. 1

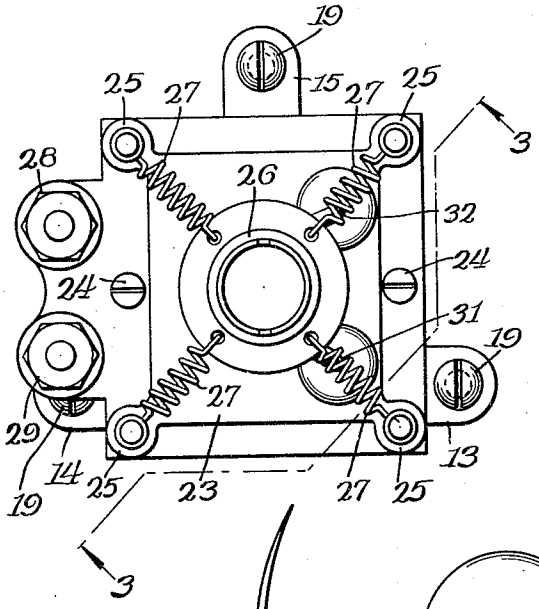
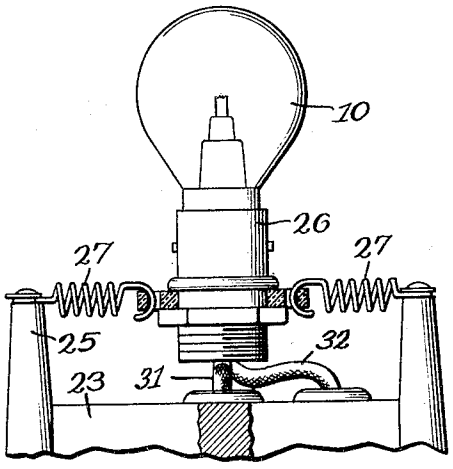


Fig. 3



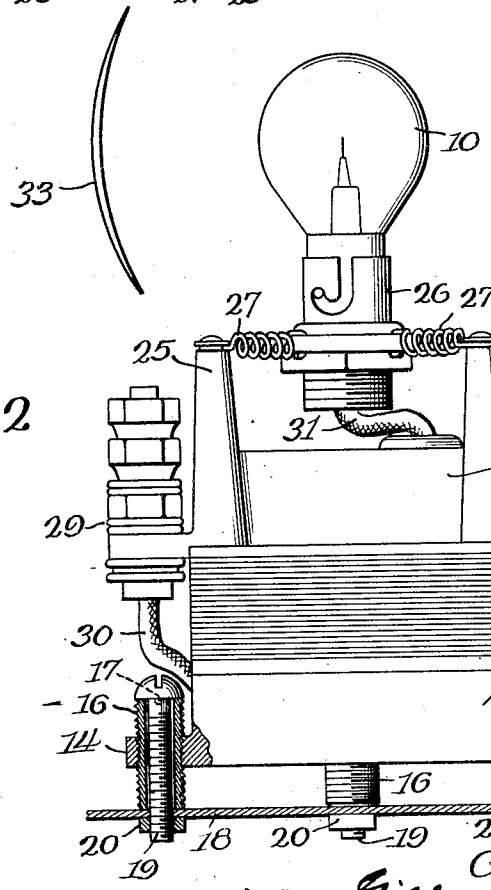


Fig. 2

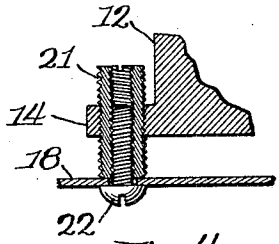


Fig. 4

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UNITED STATES PATENT OFFICE

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SIGNAL LAMP

Application filed October 11, 1928. Serial No. 311,722.

The invention relates to lamps for use as railway signals, such as switch and semaphore lamps.

The objects of the invention are to provide improved means for focusing the lamp and for protecting it against injury due to vibration.

A preferred embodiment of the invention is hereinafter described and is illustrated in the accompanying drawings, in which

Fig. 1 is a plan view of the lamp;

Fig. 2 is a side elevation thereof;

Fig. 3 is a detail section on the line 3—3 of Fig. 1; and

Fig. 4 is a detail section showing a modified form of the focusing and attaching means.

The improved lamp comprises an incandescent electric bulb 10 and a transformer 11 for adapting the current to the requirements of the bulb, both being carried by a base 12 adapted to be secured within a conventional casing (not fully shown).

The base 12 may be of any desired form and is shown as square and as being provided with three outstanding lugs 13, 14 and 15, two of which are located near adjacent corners of the base and one midway of the more remote side thereof. These lugs are vertically apertured to receive threaded tubular feet as 16, the upper ends of which are slotted as shown at 17 for engagement by a screw driver. These feet are adapted to rest upon a plate 18 which may constitute the bottom of the lamp casing and, by reason of their threaded engagement with the base lugs, serve as convenient means for properly positioning the bulb 10 with reference to the lens of the casing, determining not only its altitude within the casing, but its lateral adjustment to bring it to the exact focal point of the lens, conventionally indicated at 33. The latter adjustment is accomplished by varying the length of the feet. The base 12 is secured to the plate 18 as shown in Fig. 2 by means of screw bolts 19 setting through the feet as 16, which may be regarded as bushings for the apertures in the lugs as 13, a nut 20 being applied to the lower end of each bolt. In fitting the lamp to a casing, it is first positioned with reference to the focal point by proper manipulation of these bushings resting loosely upon the plate 18. The screw bolts 19 are then inserted and the nuts applied to their lower ends.

As the heads of the bolts, which are preferably slotted, as shown, for engagement by a screw driver, cover the slotted ends of the bushings, the adjustment of the lamp is not easily disturbed by unskilled attendants.

In the modification of Fig. 4, the bushing 21 is shown as internally threaded and the securing screw 22 is inserted from below and is in threaded engagement with the interior of the bushing. When this construction is followed, the adjustment of the lamp is accomplished by the adjustment of the bushing within the base lug before the screw 22 is set up tightly.

The transformer 11 is of conventional form. A chambered cap 23 is seated upon the body of the transformer and houses the coils thereof, the base 12 being suitably chambered to receive the lower portions of the coils. The cap 23 is secured to the base by means of screws as 24. Posts, 25, preferably 4 in number, rise from the corners of the cap 23. The socket 26 for the bulb 10 is centrally disposed above the casing 23 and is carried by posts 25 by means of springs 27, preferably helical in form, whereby the lamp is delicately, but securely and resiliently held in position. Binding posts 28, 29 shown as mounted upon the cap 23 provide for the attachment of the leading feed wires and for connection therewith of one of the windings 30 of the transformer.

The secondary circuit, the terminals of which are shown at 31, 32 are led through the cap 23 to the lamp socket.

The invention provides not only for the accurate and permanent focusing of the lamp, but guards the delicate filament of the bulb from injury due to the jarring to which signal lamps are subjected by passing trains. The lamp being spring supported, independently of the comparatively heavy transformer, is but slightly affected by the jarring action, is

not shifted from the exact focal point, except momentarily and quickly comes to rest.

The details of construction are not of the essence of the invention in its broader aspects and may be varied within the scope thereof.

I claim as my invention:

1. A lamp comprising a base having a plurality of apertured lugs, vertically adjustable tubular feet setting through the lugs, and in threaded engagement therewith, and securing screws setting through the feet and being in threaded engagement therewith for locking said tubular feet in adjustment.

2. In a lamp in combination a base, a plurality of posts rising from the base, a lamp socket positioned between the posts, springs extending between the posts and lamp socket for supporting the latter, and means for universally adjusting the lamp socket.

3. In a lamp support, the combination of a base, a plurality of adjustable feet for the base, upstanding posts rising from the base, a lamp socket positioned between the posts, and resilient means connecting the socket to the posts.

4. A lamp comprising a base having a plurality of apertured lugs, vertically adjustable tubular feet setting through the lugs, and in threaded engagement therewith, securing screws setting through the feet and in threaded engagement therewith, a plurality of posts rising from the base, a lamp socket positioned between the posts, and springs extending between the posts and the lamp socket for supporting the latter and protecting it from injury.

5. In a device of the class described, a base having a plurality of apertured lugs, tubular feet for the base in threaded engagement with the lugs and equipped with a screw driver kerf, and securing screws setting through the tubular feet and in threaded engagement therewith for locking the latter in adjustment, the heads of the securing screws being sufficiently large to cover the screw driver kerf on the feet.

In testimony whereof I affix my signature.

CARL H. LARSON.