C. S. RYERSON.

LAMP MOUNTING.

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Fig. 1.

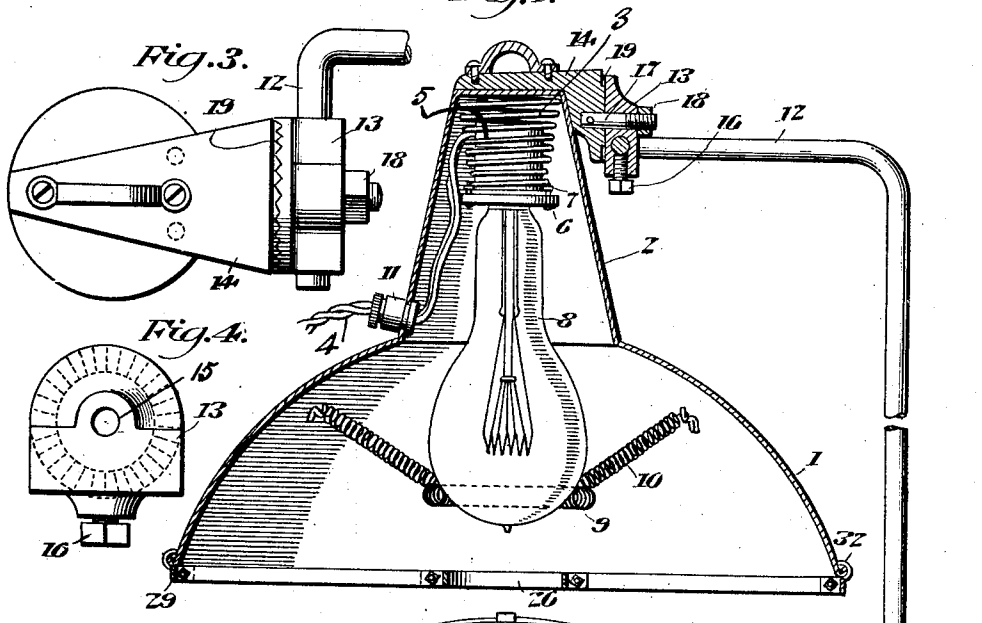
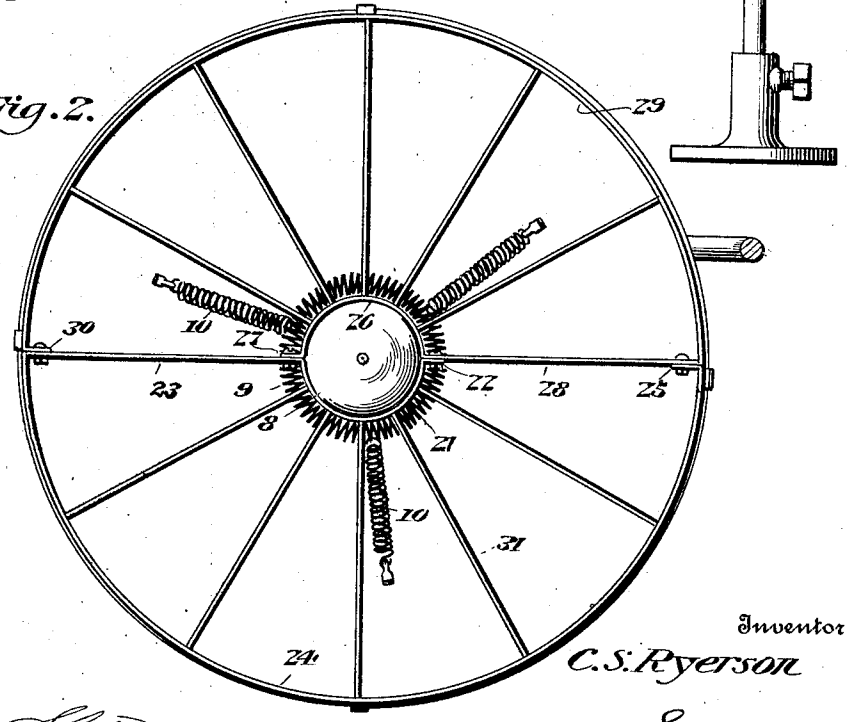


Fig. 3.

Fig. 4.

Fig. 2.



Witness

M. A. Shipe

T. E. Tarbin

Inventor

C. S. Ryerson

By Victor J. Evans

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES S. RYERSON, OF NORFOLK, VIRGINIA.

LAMP-MOUNTING.

1,313,739. Specification of Letters Patent. Patented Aug. 19, 1919.

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To all whom it may concern:

Be it known that I, CHARLES S. RYERSON, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Lamp-Mountings, of which the following is a specification.

My present invention pertains to means for supporting incandescent electric lamps for portable and flood lighting, and is designed more especially to render practical the use of nitrogen filled lamps of large watt capacity which lamps when rigidly disposed in reflectors are frequently broken by shocks and jars.

One object of the invention is the provision of a spring suspension for the lamp unit, calculated to cushion the unit and permit limited movement thereof in all directions while effectually absorbing the shocks and jars to which portable lamps are ordinarily subjected. The spring suspension is also valuable where lamps are installed on traveling machinery and in other places where they are subjected to excessive vibration.

Another object of the invention is the provision of a universal adjustment whereby the lamp may be disposed in any desired direction and expeditiously and easily fixed adjustably in position.

Another object is to so dispose the lamp wires that the lamp receptacle may be withdrawn from the reduced portion of the reflector without interrupting the connection of the wires, and so that the lamp receptacle may be held by the hand during the removal and replacement of lamps.

Another object is to provide a peculiar and advantageous guard, designed to occupy the mouth of the reflector with a view to preventing objects reaching and injuring the lamp bulb.

Other objects and advantages of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a vertical diametrical section of the construction constituting the best practical embodiment of my invention that I have as yet devised.

Fig. 2 is an inverted plan view of the same,

Figs. 3 and 4 are views of the peculiar and advantageous universal adjustment.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The reflector 1 of my improvement is provided with a reduced upper portion or neck 2, and disposed at one end against the end wall of the reflector portion 2 is the cushioning spring 3 which merely bears at its end against said wall.

The said spring 3 is preferably in the form of an inverted truncated cone as illustrated so as to afford free clearance between the spring and the wall of the reflector portion 2 for the electric wires 4.

Extending upwardly within the spring 3 is the lamp receptacle 5 which is flanged at its lower end, as indicated by 6 to enable it to bear against the lower whirl of the spring and is connected to the spring, preferably through the medium of bolts 6 and nuts 7, as illustrated.

The lamp 8 is removably secured in the receptacle 5 in the ordinary well-known manner.

For the suspension of the lamp 8 the spring means such as shown is provided; the said means in the present and preferred embodiment of my invention comprising an annular spring 9 which receives the lower portion of the lamp bulb, and three (more or less) radial spring members 10 interposed between and connected to the annular member 9 and the major portion of the reflector.

It will be noted here that the spring members 9 and 10 constitute the sole support of the lamp, and that, therefore, the lamp is maintained in position in such manner that it is free to move in any direction, and at the same time the transmission of shocks and jars as well as excessive vibration to the lamp is effectually precluded. At the opposite point, with reference to the spring members 9 and 10, the lamp is adequately cushioned for all purposes by the interposed spring 3 which may be depended upon to yieldingly hold the lamp against the spring member 9, and to allow free upward movement of the lamp while preventing any injury that might result from a sudden upward movement of the lamp were the spring 3 not employed. The wires 4 are carried between intermediate whirls of the spring 3, and downwardly between the spring and the

reflector portion 2 and through the outlet 11, secured in the wall of the portion 2 and consequently it will be observed that the said wires 4 will not interfere with the seating of the spring 3 against the end of the reflector portion 2, nor will they interfere in any degree with the downward movement of the spring 3 and the receptacle 5 when it is desired to remove a lamp and replace the same with a new lamp. On the other hand the disposition of the springs 3 renders it perfectly feasible for an operator to hold the receptacle 5 in one hand while turning a lamp into or out of position with his other hand, and when it is desired for any reason to detach the receptacle 5 from the spring 3 the disconnection may be expeditiously and easily accomplished.

At 12 is a bracket which is of circular form in cross section, but otherwise may be of any approved description, and mounted upon the said bracket 12 is one member 13 of my novel universal adjustment, the other member 14 of which is superimposed upon the end of the reflector portion 2 and fixed thereto in any manner compatible with the purpose of my invention. The member 13 receives the bracket 12 in a bore 15, and, is designed to be adjustably fixed on the bracket through the medium of a set screw 16. Carried by the member 14 is a threaded bolt 17 which extends loosely through the member 13 and is equipped with a nut 18. The opposed faces of the members 13 and 14 are toothed or serrated as indicated by 19, and consequently it will be manifest that when the member 14 is positioned as desired relative to the member 13, and the nut 18 is tightened, the member 14 and the lamp carried thereby will be positively though adjustably fixed in position. It will also be noticed that the capacity of the universal adjustment is such that the lamp may be disposed in any direction according to the point to be illuminated.

For the sake of protecting the lamp bulb against injury and thereby prolonging the usefulness of the device as a whole I prefer to employ guard 20 in the mouth of the reflector 1. The said guard 20 is of open-work character, and is preferably constructed in the economical manner illustrated—*i. e.*, is made up of an inner semi-circular portion 21 having a terminal flange 22, an arm 23 extending radially from the opposite end of the portion 21, an outer semi-circular portion 24 into which the arm 23 merges, a terminal flange 25 at the opposite end of portion 24, with reference to the arm 23, a second inner semi-circular portion 26 having a terminal flange 27 bolted to the arm 23 and also having an arm 28 bolted to the terminal flange 22, an outer semi-circular portion 29 into which the arm 28 merges, a terminal flange 30 on said semi-circular portion 29 bolted to the arm 23, and radial arms 31 interposed between and joined to the inner semi-circular portions and the outer semi-circular portions. It will be noticed that all of the elements of the guard are disposed with their greatest widths vertical so that they will not interfere in any appreciable degree with the dissemination of light from the lamps. The said guard may be connected with the reflector 1 in any approved manner though I prefer to effect the connection through the medium of clips 32 on the guard and which engage the bead on the reflector 1 in the manner best shown in Fig. 1.

It will be appreciated from the foregoing that notwithstanding the capacity of function of my improvement and the practical advantages peculiar to the same, the improvement is simple and inexpensive in construction and is economical as regards both production and maintenance.

The construction herein specifically disclosed is the best reduction to practice of my invention of which I am cognizant, but it is to be understood that in the future practice of the invention, various changes may be made in the form and various arrangements of the parts may be resorted to without departing from the scope of my invention as defined in my appended claims.

Having described my invention what I claim and desire to secure by Letters Patent is:

1. The combination of a reflector having a reduced upper portion, closed at its upper end, a coiled spring, of inverted truncated cone shape, bearing loosely at its outer end against the said closed end of the reflector portion, a lamp receptacle disposed in said spring and having a flange bearing against and connected with the lower end thereof, wires leading through the wall of the reflector portion and between intermediate whirls of the spring to the lamp receptacle, an annular spring member adapted to seat the base of the lamp bulb held in the receptacle, and radial spring members interposed between and connected with the annular spring member and the comparatively large portion of the reflector.

2. The combination of a reflector, a coiled spring bearing at one end against the same, a lamp receptacle disposed in the coiled spring and bearing against and connected with the opposite end of the same, wires carried through a wall of the reflector and between intermediate whirls of the spring and connected with the lamp receptacle, and a spring suspension connected with the reflector and constructed and arranged to receive and maintain the bulb of the lamp carried by the receptacle.

3. The combination of a housing, a coiled spring disposed in and bearing at one end

against the housing, a lamp receptacle arranged in the spring and bearing against and connected with the same, wires carried through the wall of the housing and between intermediate whirls of the spring and connected to the lamp receptacle; said receptacle and spring being removable as a unit from the housing without disconnection from the wires, a lamp in said receptacle, and a spring suspension for said lamp; said spring suspension being connected with and carried by the housing.

4. The combination of a housing, a coiled spring disposed in and bearing at one end against the housing, a lamp receptacle surrounded by the spring and having a flange bearing against and connected with the same, a lamp in the receptacle, wires carried through the wall of the housing and connected to the lamp receptacle, said receptacle and spring being removable as a unit from the housing without disconnection from the wires, and a spring suspension for the lamp.

In testimony whereof I affix my signature.

CHARLES S. RYERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."