F. BUCHANAN.

SUPPORT FOR INCANDESCENT ELECTRIC LAMP SOCKETS.

APPLICATION FILED AUG. 2, 1915.

1,220,395.

Patented Mar. 27, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

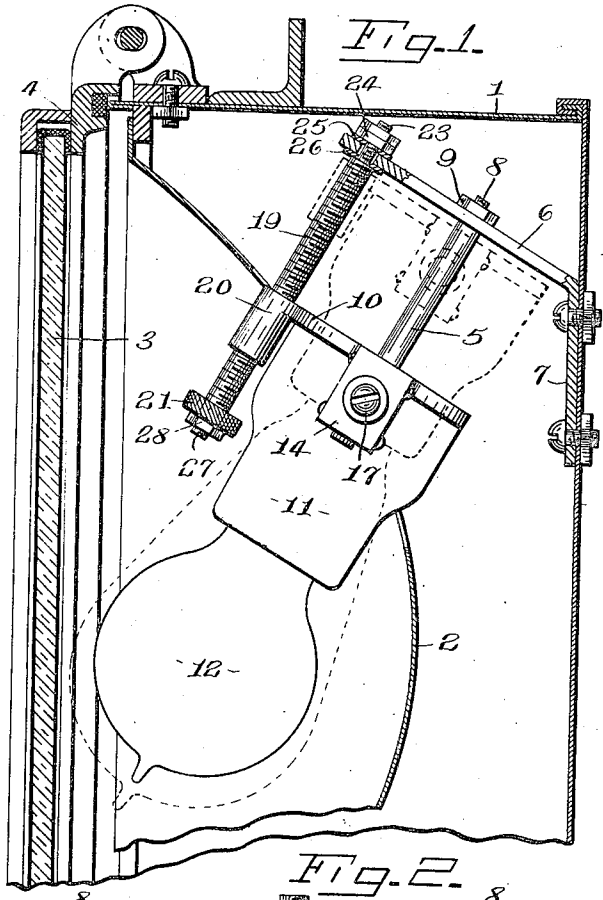


Fig. 3.

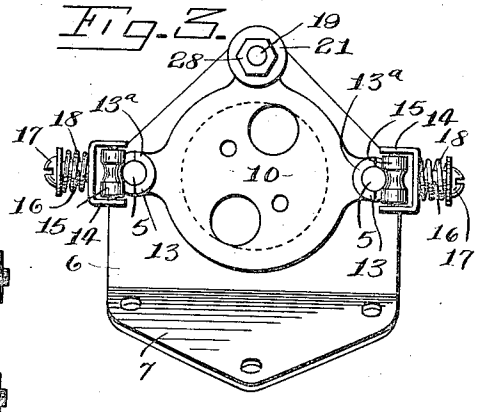


Fig. 4.

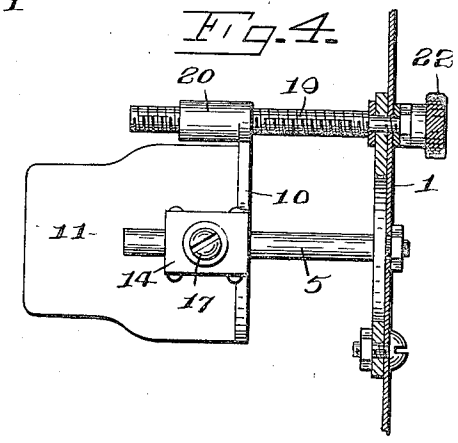


Fig. 2.

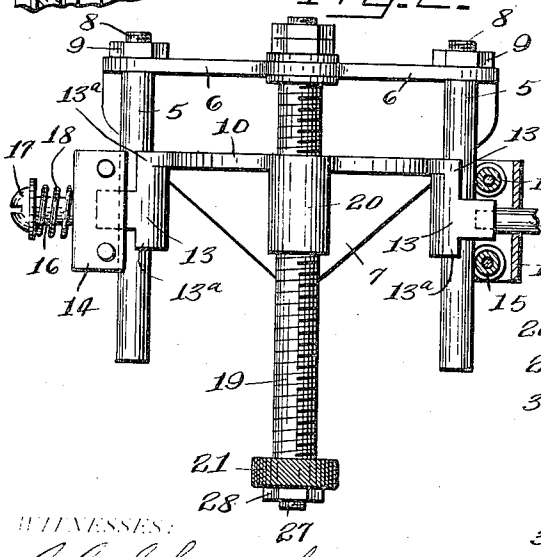
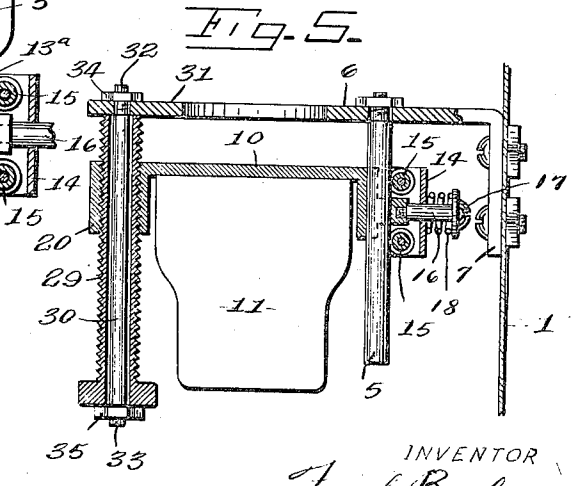


Fig. 5.



WITNESSES:

C. C. Schroeck

Chas. H. Young.

INVENTOR

Frank Buchanan

By Parsons & Bodell

ATTORNEYS.

F. BUCHANAN.

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Fig. 6.

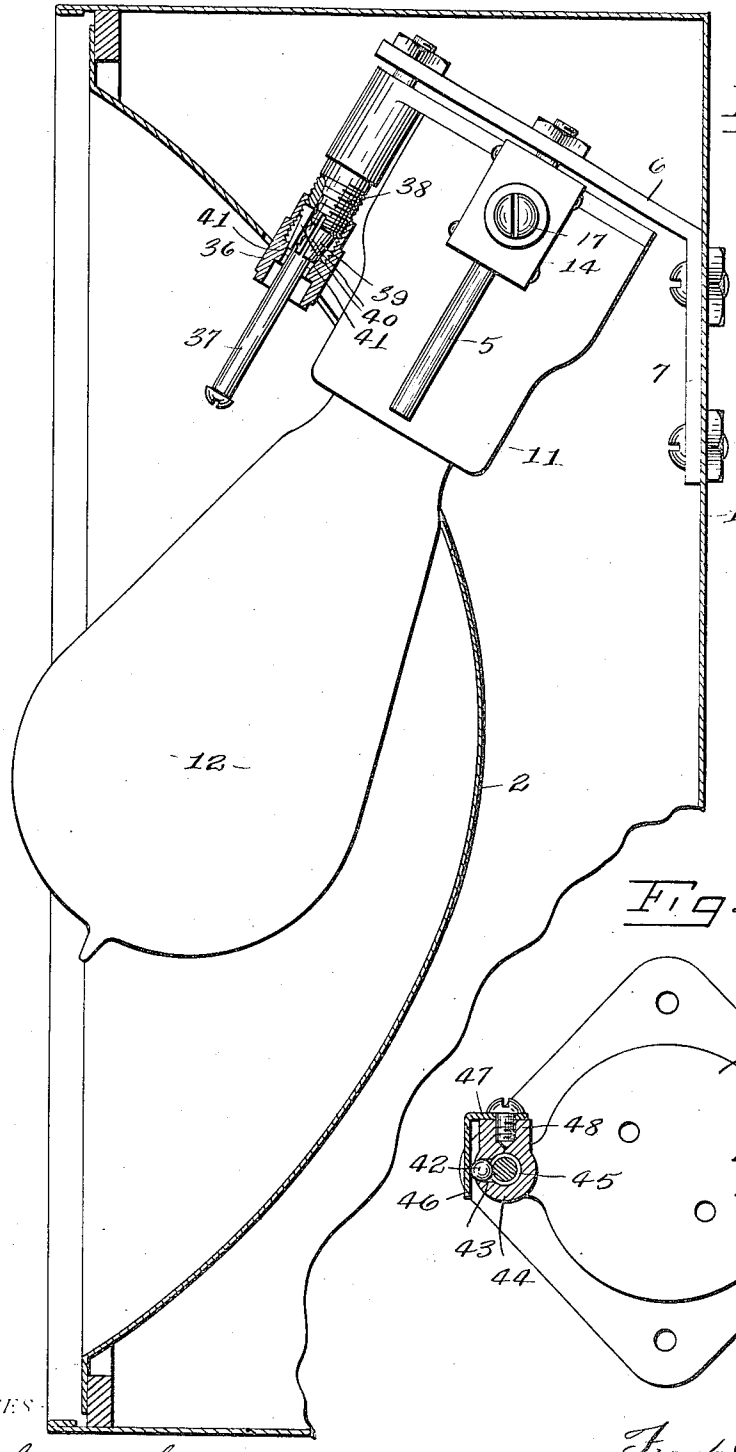


Fig. 7.

WITNESSES:

C. C. Schoeneck

Chas. A. Young.

INVENTOR.

Frank Buchanan

BY Parmenter & Bodell

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK BUCHANAN, OF SYRACUSE, NEW YORK.

SUPPORT FOR INCANDESCENT-ELECTRIC-LAMP SOCKETS.

1,220,395. Specification of Letters Patent. Patented Mar. 27, 1917.

Application filed August 2, 1915. Serial No. 43,247.

To all whom it may concern:

Be it known that I, FRANK BUCHANAN, a citizen of the United States, and a resident of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Support for Incandescent-Electric-Lamp Sockets, of which the following is a specification.

This invention relates to headlights, and has for its object a particularly simple and efficient means for supporting an incandescent electric lamp within the casing of the headlight, and for adjusting the lamp relatively to the axis of the light focusing means of the headlight; and the invention consists of the combinations and the constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a vertical sectional view, partly broken away, through a headlight embodying my invention, showing, in side elevation and partly in section, a preferable form of this lamp supporting means.

Fig. 2 is an elevation of the lamp supporting means looking rearwardly and downwardly in Fig. 1.

Fig. 3 is an elevation looking upwardly in Fig. 2.

Figs. 4 and 5 are elevations, partly in section, of modified forms of the lamp supporting means, the contiguous part of the casing being also shown.

Fig. 6 is a sectional view similar to Fig. 1, showing a third modified form of my invention; and Fig. 7 is a view similar to Fig. 3, but partly in section, of a fourth modified form of my invention.

This headlight comprises generally, a casing, light focusing means within the casing, a lamp support in the casing including a guide and a carriage having bearing means movable along the guide, the bearing means being located at one side of, that is, eccentric to, the axis of the lamp and the lamp socket carriage, and means located eccentric to the axis of the carriage and remote from said guide for moving the carriage along the guide or for holding the carriage in its adjusted position against displacement by excessive vibration and like causes.

The bearing means preferably includes a spring-pressed member or members which coact with the guide to steady the lamp.

1 designates the casing which may be of any suitable form, size and construction. The light focusing means may be a reflector, as 2, or a lens 3 carried by the door 4 of the casing 1, or both.

As here shown the guide includes a plurality of rods 5 projecting from a bracket 6, having a base plate 7 lying against, and secured to, the rear wall of the casing 1. The bracket, as shown in Figs. 1, 2 and 3, inclines upwardly and forwardly from the base plate, and the rods are arranged at a right angle to the bracket and have reduced ends 8 which extend through the bracket 6, and which receive nuts 9 turning against the rear face of the bracket. Usually there are two rods 5 located on diametrically opposite sides of the lamp socket and its carriage. 10 is the lamp socket carriage having bearing means on the rods 5, this carriage being in the form of a circular plate having bearings engaging the rods on diametrically opposite sides of the plate. 11 is the lamp socket projecting forwardly from the carriage and 12 is the lamp carried by the socket.

The bearing means, with which the carriage is provided, as here shown, includes parts slidable on the rods as sleeves 13 carried on diametrically opposite edges of the carriage 10 and slidable on the rods 5 and spring-pressed means arranged on the outer sides of the rods 5 and pressing on the rods. The sleeves 13 terminate at their ends in segmental or semi-cylindrical portions 13^a which embrace opposing sides of the rods, that is the sides toward the carriage 10.

Each spring-pressed member or part coacting with the rod 5 includes a body 14 and rotating parts as grooved rollers 15 carried by the body and fitting on the periphery of the rod. Each body 14 is connected to its companion sleeve 13 by means located between the rollers and consisting of a stem 16 threading into said sleeve 13 and having a head 17 at its outer end and a spring 18 interposed between said head 17 and the body 14. The body 14 is in the form of a channel, and the rollers are supported between the opposing side flanges of the channel, and the stem 16 extends through a hole in the intermediate part or web of the channel. The rollers 15 are arranged in the front of, and in the rear of, the complete portion of the sleeve and are opposed to the segmental end portions 13^a thereof. The means located eccentric to the axis of the lamp socket and remote from the

rod 5, for moving the carriage 10 along the rods comprises a screw 19 supported by the bracket 6 equidistant from or midway between the rods 5 and at one side of the carriage 10, said screw 19 being held from endwise movement relatively to the bracket and turning in a threaded sleeve 20 provided on the carriage 10, the screw having a suitable knurled head 21 at one end. In Fig. 1, the bracket and parts carried thereby are shown as arranged in the rear of, and extending forwardly through, a reflector 2 with the knurled head 21 at the front side of the reflector, so that the screw 19 can be operated from the front side of the reflector, but as seen in Fig. 4 the knurled head, designated 22, may be located on the rear side of the rear wall of the casing.

The screw 19 is shown as having a reduced end 23 which extends through the bracket 6, on which end turns lock nuts 24. Washers 25 and 26 are interposed between the lock nuts 24 and the rear side of the bracket, and between the front side of the bracket and the shoulder at the base of the reduced end 23. The screw 19 is also formed at its front end with a reduced end portion 27 on which the knurled head 21 threads, the head 21 being locked in position by a nut 28.

In Fig. 5 the operating screw, which is designated 29, is shown as hollow and as rotatable on a rod 30 carried by the bracket 31 and having reduced ends 32, 33 on which turn nuts 34, 35 against the rear face of the bracket 31 and the front or head of the screw 29. Instead of moving the carriage forwardly and rearwardly by means of a screw, it may be pulled and pushed forwardly and rearwardly, and held in its adjusted position by a nut 36, Fig. 6, movable along a rod 37 and threading on an expansible and contractile sleeve 38 which also moves along the rod 39 and which is carried by the lamp carriage. The sleeve 38 is formed with a conical portion 39 which is slotted at 40 longitudinally, in order that it may be expansible and contractile, and the nut 36 is formed with a complemental internal conical surface 41, which when it rides onto the conical surface 40, contracts the sleeve 38 so that it grips on the rod 37. The rod 37 is located midway between the guide rods 5, that is, in the same relative position that the operating screw 19 is located in the Figs. 1, 2 and 3.

In Fig. 7, is shown a modified form of the spring-pressed members which coact with the guide rods, the spring-pressed members in this figure being shown as balls 42 loosely connected to the sleeves and here shown as movable in suitable radial passages 43 in the sleeves 44 on the guide rods 45, the springs which act on these balls 42 being shown as leaves 46 each of which has an angular end 47 secured to a boss 48 rising from the contiguous sleeve 44, the spring holding the ball and the sleeve from separation.

This lamp supporting means is particularly advantageous in that the lamp can be readily adjusted without liability of binding on its guide.

What I claim is:—

1. A support for incandescent electric lamp sockets, including a guide rod, a lamp socket, a carriage having a bearing on the rod, the rod extending at one side of the axis of the carriage, and means located at one side of the axis of the carriage and remote from the rod for moving the carriage along the guide rod, substantially as and for the purpose described.

2. A support for incandescent electric lamp sockets, including a guide rod, a lamp socket, a carriage having a bearing on the rod, the rod extending at one side of the axis of the carriage, and means for moving the carriage along the rod, said means comprising a screw held from endwise movement and coacting with the carriage at a point spaced apart from the bearing, substantially as and for the purpose specified.

3. A support for incandescent electric lamp sockets, including a pair of parallel guide rods, a carriage located between the rods and having bearings thereon, and a screw held from endwise movement and connected to the carriage at one side of the carriage and midway between said bearings, substantially as and for the purpose set forth.

4. A headlight comprising a casing, light focusing means in the casing, a lamp support within the casing, a movable carriage carried by the support, a lamp socket supported by the carriage, and means for moving the carriage to carry the lamp in a direction at an inclined angle to the axis of the light focusing means, substantially as and for the purpose described.

5. A headlight comprising a casing, light focusing means in the casing, a lamp support within the casing including a guide rod arranged at an inclined angle to the axis of the light focusing means, a carriage having a bearing on the rod, a lamp socket supported by the carriage, and a screw carried by the support and arranged parallel to the rod and coacting with the carriage to shift the same to carry the lamp socket relatively to the axis of the light focusing means, substantially as and for the purpose specified.

6. A headlight, comprising a casing, a reflector in the casing, a lamp support within the casing in the rear of the reflector and including a guide rod arranged at an inclined angle to the axis of the reflector, a carriage having a bearing on the rod at one side of the axis of the lamp, a lamp socket sup-

ported by the carriage, and a screw carried by the support and arranged parallel to the rod and coacting with the carriage at one side of the axis of the lamp and at a point remote from the rod to shift the carriage relatively to the axis of the reflector, the screw having a hand piece located in front of the reflector, substantially as and for the purpose set forth.

7. A support for an incandescent electric lamp socket, including a pair of rods, a screw, a carriage having bearings on the rods and a threaded passage for receiving the screw, the rods extending on opposite sides of the carriage, and the screw being located at one side of the carriage midway between the rods, and a lamp socket supported by the carriage, substantially as and for the purpose described.

8. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, and a spring-pressed member coacting with the guide rod and being connected to said part, substantially as and for the purpose described.

9. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, a stem projecting from said part and having a head at its outer end, a member mounted on the stem and having means engaging the guide rod, and a spring between said head and said member, substantially as and for the purpose set forth.

10. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, a stem projecting from said part and having a head at its outer end, a member mounted on the stem and having means engaging the guide rod on opposite sides of the stem, and a spring between the head and said member, substantially as and for the purpose described.

11. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, a stem projecting from the bearing part and having a head at its outer end, a member mounted on the stem, rollers mounted in said member on opposite sides of the stem, and a spring between the head and said member, substantially as and for the purpose specified.

12. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, a stem projecting from the bearing part and having a head at its outer end, a member mounted on the stem, rollers carried by said member on opposite sides of the stem, the rollers having grooves receiving the rod, and a spring between the head and said member, substantially as and for the purpose set forth.

13. A support for incandescent electric lamp sockets, comprising a guide rod, a lamp socket carriage having a bearing part movable along the guide rod, said bearing part being in the form of a sleeve on the rod and having segmental portions at its ends partly inclosing the rod, a stem projecting from the intermediate or complete part of the sleeve, a body on the stem and having a pair of rollers coacting with the rod and pressing toward the segmental portions of the sleeves, and a spring encircling the stem and pressing against said body, substantially as and for the purpose set forth.

14. A support for incandescent electric lamp sockets, comprising a guide, a lamp socket carriage having bearing means movable along the guide, including a spring-pressed member coacting with the guide, and means for moving the carriage along the guide, substantially as and for the purpose described.

15. A support for incandescent electric lamp sockets, comprising a guide, a lamp socket carriage having bearing means movable along the guide, including a spring-pressed member coacting with the guide, and means including a non-endwisely movable screw spaced from the guide and coacting with the carriage, substantially as and for the purpose specified.

16. A support for incandescent electric lamp sockets, comprising a pair of guide rods, a carriage having bearing means on the guide rods, said means including a spring-pressed member, the rods being located on opposite sides of the carriage, and a screw for moving the carriage along the rods, the screw being located at one side of the carriage and midway between the rods, substantially as and for the purpose set forth.

17. A support for incandescent electric lamp sockets, comprising a pair of guide rods, a carriage having a bearing part on each of the rods and spring-pressed members coacting with the bearing parts to grip the rods, the rods being located on opposite sides of the carriage and a screw for moving the carriage along the rods, the screw being located at one side of the carriage and midway between the rods, substantially as and for the purpose described.

In testimony whereof, I have hereunto signed my name at Syracuse, in the county of Onondaga, and State of New York, this this 26th day of July, 1915.

FRANK BUCHANAN.