

L. ERIKSON.
ADJUSTABLE SUPPORT FOR ELECTRIC LAMPS.
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941,863.

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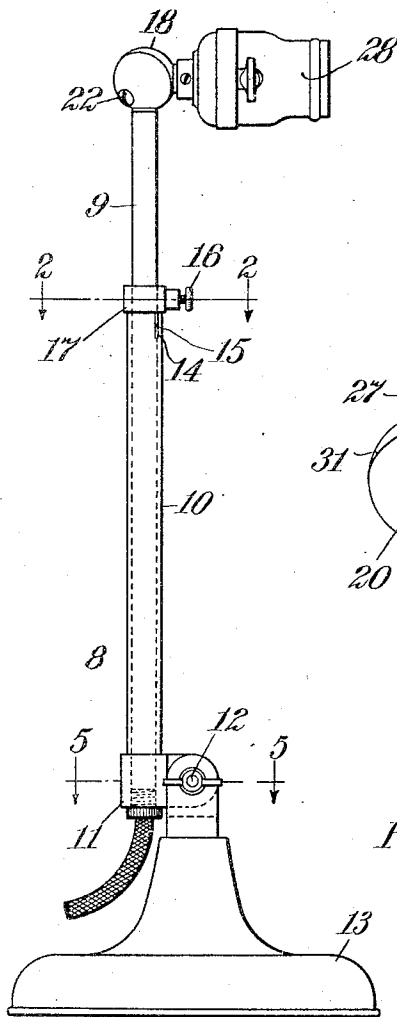


Fig. 1.

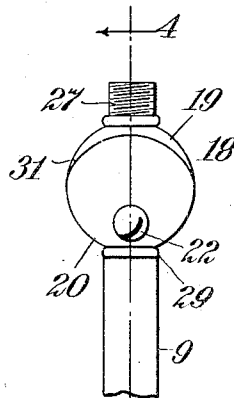


Fig. 3.

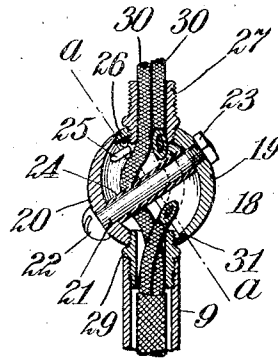


Fig. 4.

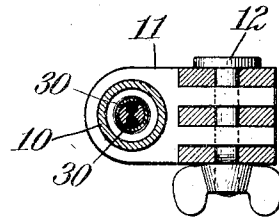


Fig. 5.

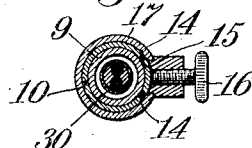


Fig. 6.

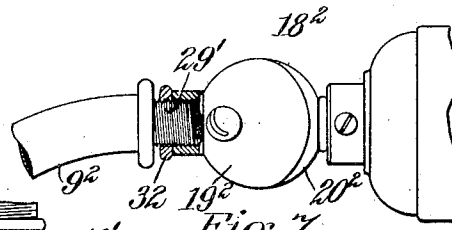


Fig. 7.

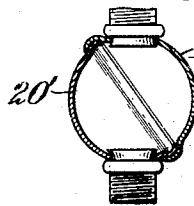


Fig. 8.

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE SUPPORT FOR ELECTRIC LAMPS.

941,863.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEONARD ERIKSON, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Adjustable Supports for Electric Lamps, of which the following is a specification.

This invention relates to an adjustable support for electric lamps, the object of the invention being to provide a support which can be adjusted to set the electric lamp at any desired angle, a certain portion of said support consisting of a hollow cylindrical joint divided into two hemispheres, one of said hemispheres being adapted to be attached to a standard or to a bracket, the other of said hemispheres being adapted to have an electric lamp secured or otherwise attached thereto.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a side elevation of my adjustable support and an electric lamp socket supported thereon. Fig. 2 is a sectional plan taken on line 2—2 of Fig. 1. Fig. 3 is a detail elevation of the spherical joint and a portion of the standard to which it is attached. Fig. 4 is a sectional elevation taken on line 4—4 of Fig. 3, illustrating the manner in which the wires are carried through the joint from the standard to the lamp. Fig. 5 is a sectional plan taken on line 5—5 of Fig. 1. Fig. 6 is a sectional elevation similar to Fig. 4 illustrating a modified form of my spherical joint. Fig. 7 is a side elevation, partly in section, illustrating my improved adjustable joint with a socket attached thereto and a portion of a bracket or support upon which said spherical joint is mounted, said socket and bracket being broken away to save space.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, Figs. 1 to 4, inclusive, 8 is a standard in two parts, 9 and 10, both of said parts being hollow or tubular. The part 10 is fast to an arm 11 which is pivoted upon a clamp-bolt 12 on the base 13. The upper part of the tube 10 is slitted at 14, 14, thus forming a tongue 15, and this tongue 15 is forced against the tube 9, so as to clamp the tubes 9 and 10 together by a set-

screw 16, the inner end of which bears against the tongue 15. Said set-screw has screw-threaded engagement with a collar 17 which is fast to the tube 10 and extends around the upper end thereof, outside the tongue 15.

The spherical joint 18 is bisected by a plane *a—*a** indicated by broken and dotted lines, Fig. 4, thus dividing the sphere 18 into two hemispheres 19 and 20. At the meeting joint of the two hemispheres 19 and 20, the same are rabbeted, as shown in Fig. 4, and said hemispheres are joined together by a bolt 21 which has a head 22 at one end thereof bearing against the hemisphere 20, the other end of said bolt being screw-threaded to engage the shell of the hemisphere 19 and locked to said shell by a set-nut 23, so that by loosening the set-nut 23 and screwing up on the bolt 21, the two hemispheres may be drawn more or less tightly toward each other, and after they have been tightened to the desired extent, the set-nut 23 is tightened, thus holding the hemispheres in the desired relation to each other and so that, when rotated one upon the other, there will be sufficient friction to hold the parts against accidental displacement relatively to each other. The bolt 21 is preferably surrounded by a rubber or insulating sleeve 24.

In order to limit the angle through which the hemispheres 19 and 20 can be rotated one upon the other, a pin 25 is fastened to the hemisphere 20 and another pin 26 is fastened to the hemisphere 19, these two pins being so arranged relatively to each other that when the hemispheres 19 and 20 are rotated one upon the other, they will cross each other's paths and lock the hemispheres against further rotation, so that said hemispheres can be rotated one upon the other slightly less than 360°.

A screw-threaded nipple 27 is preferably screwed into the hemisphere 19 and to this screw-threaded nipple the lamp socket 28 may be attached. Another screw-threaded nipple 29 is preferably screwed into the hemisphere 20 and to this nipple is attached the tube 9, preferably by screw-threaded engagement therewith.

The electric wires 30, 30 are passed through the spherical joint 18, preferably as illustrated in Fig. 4. It will be seen that the median axial line of the bolt 21 intersects the bisecting plane *a—*a** in the center of the sphere 18 and that the median axial

lines of the nipples 27 and 29 or of the lamp socket 28 and the tube 9 intersect said bisecting plane at an angle. The nipples 27 and 29 are thus both attached to their respective hemispheres in positions eccentric to the median axial line of the bolt 21, so that the entire diameter of the nipple is outside of the bisecting plane, and thus there is no danger of the meeting joint 31 of the two hemispheres or parts of the sphere 18 chafing the electric wires or their covering.

While I prefer to use a nipple, such as 29, it is evident that without departing from the spirit of my invention, the tube 9 might be screw-threaded upon the outside to screw directly into the hemisphere 20, or said tube might be joined to said hemisphere in any desirable or workmanlike manner, and the same is true in relation to the particular manner in which the lamp socket is attached to the hemisphere 19.

It will be seen that by rotating the hemispheres 19 and 20 upon each other and combining said rotation with the rotation of the tube 9 within the tube 10, the lamp socket can be set in any desired position or at any desired angle, and also that in thus rotating the parts the wires are not in any way twisted or chafed.

In Fig. 6 I have illustrated a modified form of the spherical joint 18' consisting of two hemispheres 19' and 20' which are joined together by spinning adjacent edges of said hemispheres, as shown in said Fig. 6, whereby said adjacent edges interlock one with the other and prevent the hemispheres from becoming detached from each other. In this form of my improved joint the bolt is omitted.

In Fig. 7 I have illustrated a modified form of my invention in which the spherical joint 18² is attached to a fixed bracket 9², said bracket terminating in a nipple 29' which has screw-threaded engagement with the hemisphere 19². A set-nut 32 has screw-threaded engagement with the nipple 29', so that when the parts 19² and 20² are rotated one upon the other to set the lamp at different angles, and it is desired to still further vary the position of the lamp, after these parts have been rotated one upon the other, to bring the same say into a horizontal or a vertical position, it may be accomplished by rotating the hemisphere 19² upon the nipple 29' and then setting it in position by means of the lock-nut 32, this lock-nut taking the place and performing the function of the tube 9 in the form of my invention illustrated in Fig. 1, so far as variation in adjustment of the lamp is concerned.

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

1. In an adjustable support for electric lamps, a joint consisting of a hollow sphere

formed of two hemispheres rotatably mounted on each other, each of said hemispheres provided with means whereby they may be attached, respectively, to a suitable support and a lamp, and means located inside said sphere to limit the angle through which said hemispheres may be rotated relatively to each other.

2. In an adjustable support for electric lamps, a joint consisting of a hollow sphere formed of two hemispheres rotatably mounted on each other, a pin connecting said hemispheres together, the median axial line of said pin intersecting the plane which bisects said sphere, at right angles thereto and in the center of said sphere, a hollow screw-threaded projection on each of said hemispheres located eccentrically with relation to said median axial line, and a projection inside one of said hemispheres adapted to engage another projection inside the other of said hemispheres, whereby the angle through which said hemispheres may be rotated relatively to each other is determined.

3. An adjustable support for electric lamps having, in combination, a joint consisting of a hollow sphere formed of two hemispheres rotatably mounted on each other, a lamp socket having screw-threaded engagement with one of said hemispheres, a hollow standard having screw-threaded engagement with the other of said hemispheres, the bisecting plane of said sphere being at an angle to the median axial lines of said socket and of said standard, and a check-nut interposed between said standard and sphere, whereby said sphere may be locked in different positions relatively to said standard.

4. An adjustable support for electric lamps having, in combination, a joint consisting of a hollow sphere formed of two hemispheres rotatably mounted on each other, a lamp socket having screw-threaded engagement with one of said hemispheres, a hollow standard in two parts, one of said parts having screw-threaded engagement with the other of said hemispheres, the bisecting plane of said sphere being at an angle to the median axial lines of said socket and of said standard, one of said standard parts rotatable on the other, and means to lock said standard parts together.

5. An adjustable support for electric lamps having, in combination, a joint consisting of a hollow sphere formed of two hemispheres rotatably mounted on each other, a lamp socket having screw-threaded engagement with one of said hemispheres, a hollow standard in two parts, one of said parts having screw-threaded engagement with the other of said hemispheres, the bisecting plane of said sphere being at an angle to the median axial lines of said socket and of said standard, one of said standard

parts split to form a tongue therein, a collar surrounding said split portion, and a screw in said collar, the end of which is adapted to bear against said tongue and force the same against the other part of said standard, whereby the said standard parts may be clamped together.

6. An adjustable support for electric lamps having, in combination, a joint consisting of a hollow sphere formed of two hemispheres rotatably mounted on each other, a lamp socket having screw-threaded engagement with one of said hemispheres, a hollow standard in two parts, one of said parts having screw-threaded engagement with the other of said hemispheres, the bisecting plane of said sphere being at an angle to the median axial lines of said sockets and of said standard, one of said standard parts rotatable on the other, means to lock said standard parts together, and a base upon which said standard is pivotally mounted.

7. In an adjustable support for electric lamps, a joint consisting of two hollow members rotatably mounted on each other, a pin connecting said members together, the

median axial line of said pin being oblique to the longitudinal median line of one of said members, and an insulating sleeve surrounding said pin.

8. In an adjustable support for electric lamps, a joint consisting of two hollow members rotatably mounted on each other, a screw passing through and connecting said members together, the median axial line of said screw being oblique to the longitudinal median line of one of said members, said screw having screw-threaded engagement with one of said members, and a check nut having screw-threaded engagement with said screw and adapted to lock said screw against rotation relatively to said member with which it has screw-threaded engagement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEONARD ERIKSON.

Witnesses:

CHARLES S. GOODING,
LOUIS A. JONES.