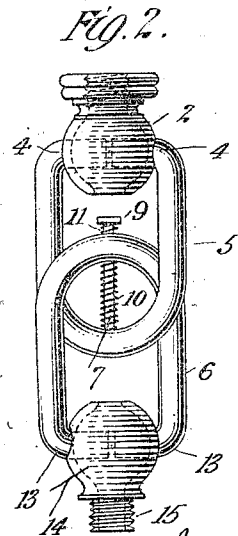
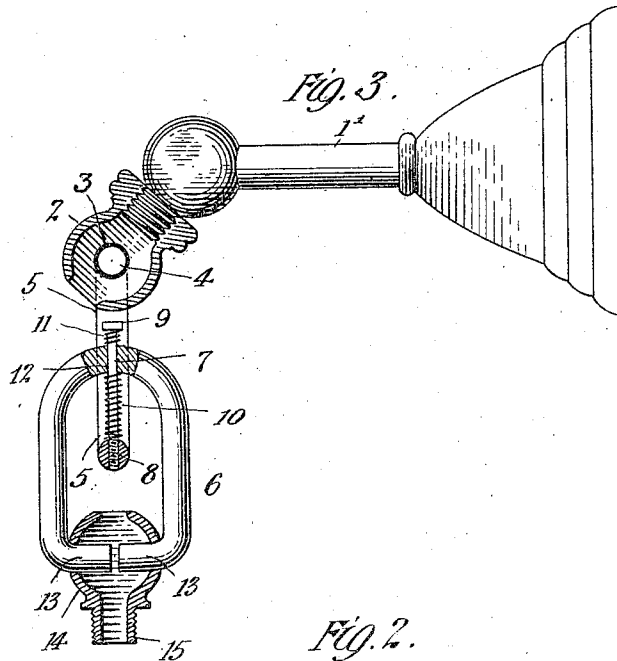
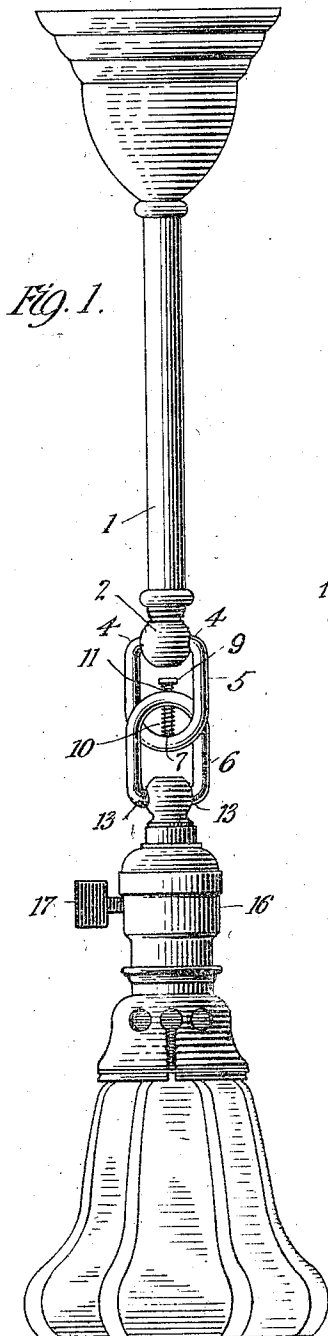


J. H. DALE.
TUNGSTEN LAMP SHOCK ABSORBER AND ADAPTER.
APPLICATION FILED MAR. 29, 1910.

979,933.

Patented Dec. 27, 1910.



Witnesses:
J. H. Dale
Chas. F. H. H.

Inventor
John H. Dale
By his Attorneys
Rosenbaum & Seckmidge

UNITED STATES PATENT OFFICE.

JOHN H. DALE, OF NEW YORK, N. Y.

TUNGSTEN-LAMP SHOCK-ABSORBER AND ADAPTER.

979,933.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed March 29, 1910. Serial No. 552,233.

To all whom it may concern:

Be it known that I, JOHN H. DALE, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Tungsten-Lamp Shock-Absorbers and Adapters, of which the following is a full, clear, and exact description.

10 This invention relates to lamp shock-absorbers and adapters, particularly for incandescent lamps wherein a tungsten filament is employed. As is well known, these filaments are extremely fragile; and are so
15 delicate, in fact, that after a tungsten lamp has been used for a short while, the same can be removed from its socket only by the exercise of great care without rupturing the filament thereof. I have provided a novel
20 means for obviating almost entirely the danger of breaking the filament in a tungsten lamp by reason of shocks to which such a lamp is usually subjected in ordinary use.

My invention comprises two features
25 which I regard as of particular importance: One, the provision of a resilient cushion between the elements of a universal joint; and the other,—means of suspending such elements from a bracket which may be dis-
30 posed at any angle; this last feature permitting a lamp supported by my device to be carried from a supporting surface which may be horizontal, vertical or at an angle.

Other features of my invention will be
35 hereinafter set forth and more particularly pointed out in the appended claims.

Referring now to the drawings, which form a part hereof, and in which like characters designate like parts throughout the
40 several views: Figure 1 is a side elevation of my shock-absorber and adapter with lamp fittings secured thereto, the whole depending from a vertically disposed bracket. Fig. 2 is an enlarged detail of the shock-
45 absorber and adapter proper. Fig. 3 is a longitudinal section through the same, showing the application of the adapter to a wall bracket, the stud of which extends downwardly substantially at 45°.

50 Referring to Fig. 1, the stem of the bracket has therein been designated 1, the adapter element 2 being secured to the end thereof in any proper manner, as by a threaded engagement. The element is trans-
55 versely apertured at 3 for the reception of

the inwardly bent ends 4 of a link 5; which link is preferably attached to the adapter by snapping the said ends in from opposite sides of the aperture 3. Link 5 is in linked engagement with a corresponding lower link 60 6, the provision of such links in connection with devices for supporting incandescent lamps being of course common. It will be observed, however, that I have secured a stud or pin 7, preferably by screwing the
65 same into a threaded recess 8, in the lowermost portion of the link 5; this pin extending thence upwardly in alinement with the vertically disposed sides of said link; the pin being provided with a head 9 at the up-
70 per end thereof. A spring 10 is disposed around the lower portion of said pin, and one end of said spring bears against the link 5 while the upper end correspondingly engages link 6, thus resiliently spacing
75 said links apart. I also prefer to provide a corresponding spring 11, of preferably but few turns, which is disposed between the head 9 and the upper surface of link 6. This construction floats link 6, so to speak,
80 so that the same is resiliently cushioned against shock, while being at the same time properly supported from link 5. The pin 7 is adapted to move freely through the
85 aperture 12 provided in the upper portion of link 6. Links 5 and 6 are preferably substantially identical in general contour, and the bent ends 13 at the bottom of link 6 are correspondingly engaged with a pivotally
90 mounted element 14 which is provided with a threaded stud 15. This stud is adapted to be screwed in the usual manner into a threaded recess in the upper portion of a lamp socket 16. As viewed in Fig. 1, the
95 lamp may be freely oscillated in a plane normal to that of the sheet of drawing, such plane passing through the axis of bracket stem 1. It is evident also that by reason of the pivotal connection between the links, the lamp may be axially rotated for some dis-
100 tance in either direction. The members 2 and 14, links 5 and 6, pin 7, and cushioning members 10 and 11, hence provide a universal joint, which while permitting movement in any direction desired, nevertheless
105 provides efficient means for cushioning the supported devices against shock. The thumb piece 17 of the lamp socket may hence be quite roughly engaged by the fingers with impunity, and the said piece rotated to effect
110

engagement and disengagement of the switch parts in the socket without running the liability of rupturing the tungsten filament. It is evident also that by reason of the pivotal connection of member 2 with link 5, said member may be swung around to adapt the same for engagement with a supporting stud which may be disposed at substantially any angle in a vertical plane; that in Fig. 2 being at substantially 45° with the horizontal. The bracket stem in Fig. 2 has been designated 1'.

Having described my invention, what I claim, is:

1. A tungsten lamp shock-absorber and adapter, comprising elements pivotally connected to each other to provide a universal joint, one of said elements affording support for the remaining parts of the device, and such element being pivotally connected to the adjacent member and being further provided with means for securing said element in place upon a bracket, the universal joint aforesaid comprising elements cushioned from each other.

2. A tungsten lamp shock-absorber and adapter comprising a pair of bent members, one of which is linked through the other, a pivotal pin secured to one of said elements, the other of said elements slidably engaging said pin, and a resilient device disposed between the opposing surfaces of said linked elements.

3. A tungsten lamp shock-absorber and adapter comprising a link-shaped member carrying a pin in substantial alinement with the sides thereof, a second link-shaped member apertured for the reception of said pin, and a plurality of resilient devices disposed adjacent the said pin, one of said devices being interposed between the normally contacting surfaces of said link members, and the other of said devices being disposed be-

tween the upper surface of one of said members, and an abutment carried by said pin.

4. A tungsten lamp shock-absorber and adapter comprising a link-shaped member carrying a pin in substantial alinement with the sides thereof, a second link-shaped member apertured for the reception of said pin, and a plurality of resilient devices disposed adjacent the said pin, one of said devices being interposed between the normally contacting surfaces of said link members, and the other of said devices being disposed between the upper surface of one of said members, an abutment carried by said pin, and a pair of members, one of which is recessed and threaded for the reception of a threaded stud, and the other of which is provided with a threaded stud respectively pivoted to the link members aforesaid.

5. A device of the class described comprising a pivot and a plurality of elements pivotally connected thereby, a shock-absorbing, spacing device cooperating with said elements, and a plurality of members pivotally connected to said elements, to permit of oscillation of each of said members in a plane passing through the axis of the pivot aforesaid.

6. A device of the class described comprising linked members, a pivot connecting said members, springs disposed upon said pivot upon the respective sides of one of said linked members, and an element pivotally connected to one of said members and cooperating with said linked members to form a universal joint.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

JOHN H. DALE.

Witnesses:

WALTER I. HESS,
C. P. ROEN.