Jan. 6, 1925.

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J. R. MOLE ET AL.

ELECTRIC LAMP SHOCK ABSORBER

Filed June 4, 1923

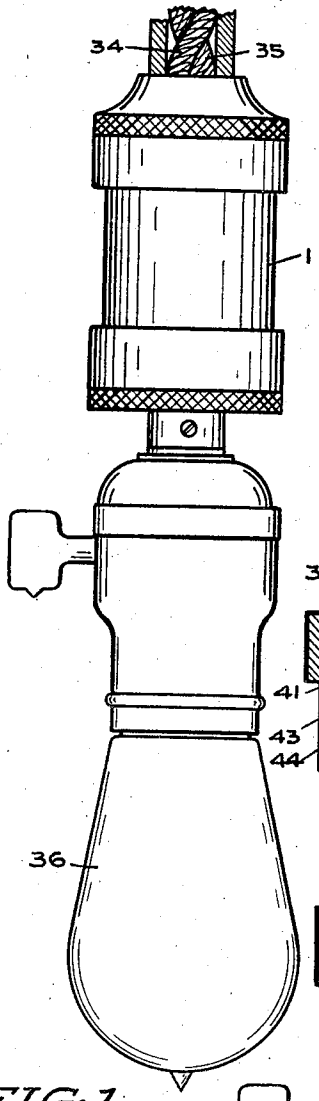


FIG. 1.

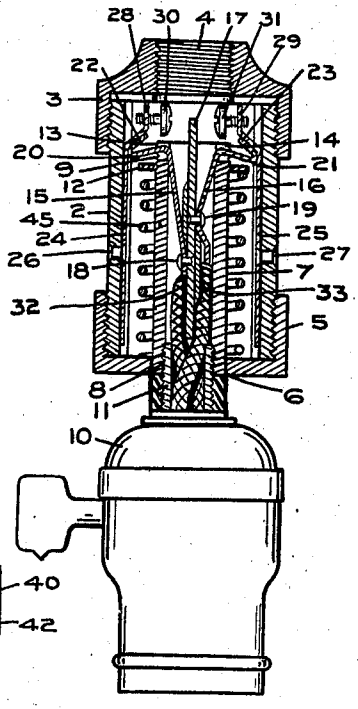


FIG. 2.

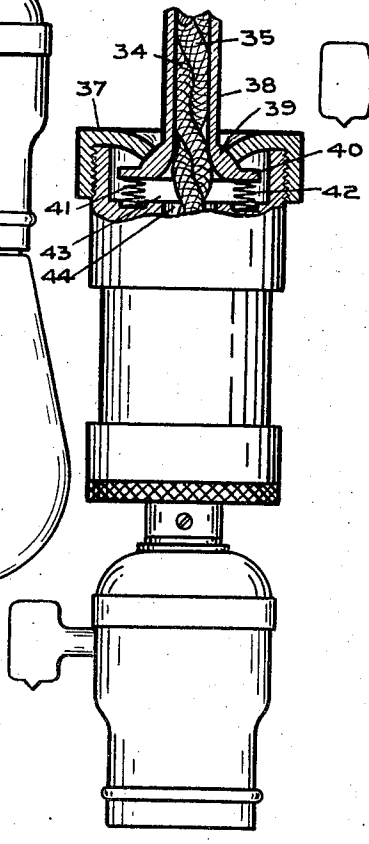


FIG. 3.

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UNITED STATES PATENT OFFICE.

JAMES REGINALD MOLE AND WILLIAM ALLAN COUGHLAN, OF THETFORD MINES, QUEBEC, CANADA.

ELECTRIC-LAMP SHOCK ABSORBER.

Application filed June 4, 1923. Serial No. 643,193.

To all whom it may concern:

Be it known that we, JAMES REGINALD MOLE and WILLIAM ALLAN COUGHLAN, both subjects of the King of Great Britain, and residents of the town of Thetford Mines, in the Province of Quebec, in the Dominion of Canada, have invented a new and useful Improvement in an Electric-Lamp Shock Absorber, of which the following is the specification.

The invention relates to an electric lamp shock absorber, as described in the present specification and shown in the accompanying drawings that form part of the same.

The invention consists essentially of the novel features pointed out broadly and specifically in the claims for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to reduce the expense of lamp renewals in factories and other places, to furnish a simple mechanical device that will not materially add to the costs of an electric light installation; to insure good and steady light and thereby avoid accidents liable to cause damage to property and persons; to facilitate the adaptation of the lamps in every lighting system; and generally to provide a reliable and efficient support for an electric lamp and socket subject to vibratory movements.

In the drawings, Figure 1 is an elevation showing the resilient supporting member, the socket and lamp.

Figure 2 is a vertical sectional view of the resilient support showing the socket therebelow.

Figure 3 is a sectional view of a universal connection to the resilient support, showing the latter and the socket therebelow.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings, the casing 1 is formed of the barrel portion 2 preferably made of fibre or other insulating material, the cap 3 of brass screwed on to the fibre at one end and having the threaded orifice 4, and the base 5 of brass screwed on to the fibre at the other end and having the central orifice 6.

The non-conductor tube 7 is internally threaded at its lower end 8 and externally threaded at its upper end 9 and joined to the socket 10 by the threaded coupling 11 screwed into the internal thread 8 and into the socket 10. The fibre disc 12 is screwed on the upper thread 9 and the tube 7 is slotted at each side at 13 and 14 through said threads 9 for the sliding contacts 15 and 16.

The contacts 15 and 16 are separated by the fibre division strip 17 to which they are held by the rivets 18 and 19 and from the latter they extend outwardly up to and through said slots 13 and 14 in the offsets 20 and 21, which are inwardly turned at the ends 22 and 23. The contacts 15 and 16 thus form springs from the rivets 18 and 19 which hold them firmly though resiliently to the vertical contacts 24 and 25 secured by the rivets 26 and 27 to the barrel.

The contacts 24 and 25 are strips of conducting metal extending for the greater portion of the length of the barrel 2 on the inner wall surface and at their outer ends 28 and 29 to receive the binding screws 30 and 31.

The contacts 15 and 16 are offset outwardly at their inner ends and soldered to the insulated wires 32 and 33 which are connected to the posts in the socket 10.

The lead wires from the source of electric current here indicated by the numerals 34 and 35 are connected to the offsets 28 and 29 of the contacts 24 and 25 respectively and held by the binding screws 30 and 31 and this insures a continuous connection from the lead wires to the lamp 36, which is connected through the socket 10 as usual in lamp and socket construction.

In Figure 3 the cap 37 is made somewhat differently in order to include a universal connection for the lead wires 34 and 35, which extend through a tubular member 38 terminating in a semi-globe joint member 39 flanged outwardly at 40 and held by the springs 41 and 42 to the globe socket 43 formed on the inner surface of the cap 37 surrounding the central tube or orifice 44 therethrough.

In both forms of the invention the spring 45 is situated within the barrel 2 and encircles the central non-conducting tube between the washer at the upper end and the base.

The attachment of this device is so dependent on the electric wiring of the building that it is hardly possible to show a universal adapter but where the cap or tubular

joint member cannot be directly secured to the conduits then any suitable form of adapter is used.

The shock absorber hangs from the rigidly secured cap or joint member and when vibratory movements occur in the building, vehicle or other place the inner non-conductor tube draws out against the strength of the spring 45, which is compressed at each outward movement, thereby drawing the socket and lamp back to their normal hanging position, that is to say the lamp is cushioned against all movements and in Figure 3 the universal joint allows side play also.

What we claim is:—

1. In a shock absorber for electric devices, a casing adapted to be secured to electric connections, a tubular member reciprocally arranged in said casing, a socket supported by said tubular member, fixed contacts in said casing, spring contacts in said tubular member and projecting therefrom into engagement with said fixed contacts, a spring stop on said tubular member and a spring encircling said tubular member between the spring stop and the base of the casing and resiliently supporting said socket from said casing.

2. In a shock absorber for electric devices, a casing formed of a fibre barrel portion having metal cap and base, a tubular member reciprocally arranged in said casing, a socket supported by said tubular member, fixed contacts in said casing, spring contacts in said tubular member and projecting therefrom into engagement with said fixed contacts, a spring stop on said tubular member and a spring encircling said tubular member between the spring stop and the base of the casing and resiliently supporting said socket from said casing.

3. In a shock absorber for electric devices, a casing adapted to be secured to electric connections, a tubular member threaded at the ends and formed of non-conducting material, a socket supported by said tubular member, fixed contacts in said casing, spring contacts in said tubular member and projecting therefrom into engagement with said fixed contacts, a spring stop on said tubular member and a spring encircling said tubular member between the spring stop and the base of the casing and resiliently supporting said socket from said casing.

4. In a shock absorber for electric devices, a casing adapted to be secured to electric connections, a tubular member reciprocally arranged in said casing, a socket supported by said tubular member, metal strips of conducting material forming fixed contacts and offset at the upper ends and carrying binding screws, spring contacts in said tubular member and projecting therefrom into engagement with said fixed contacts, a spring stop on said tubular member between the spring stop and the base of the casing and resiliently supporting said socket from said casing.

5. In a shock absorber for electric devices, a casing adapted to be secured to electric connections, a tubular member reciprocally arranged in said casing, a socket supported by said tubular member, fixed contacts in said casing, a non-conducting divisional strip vertically separating the interior of said tubular member, a spring contact secured to said strip and projecting upwardly and outwardly therefrom to one fixed contact and at the inner end soldered to an electric connection, a spring contact secured to the other side of said strip and projecting upwardly and outwardly therefrom to the other fixed contact and at the inner end soldered to an electric connection, a spring stop on said tubular member and a spring encircling said tubular member between the spring stop and the base of the casing and resiliently supporting said socket from said casing.

Signed at Sherbrooke, Quebec, Canada, this tenth day of May, 1923.

JAMES REGINALD MOLE.
WILLIAM ALLAN COUGHLAN.