

Oct. 13, 1942.

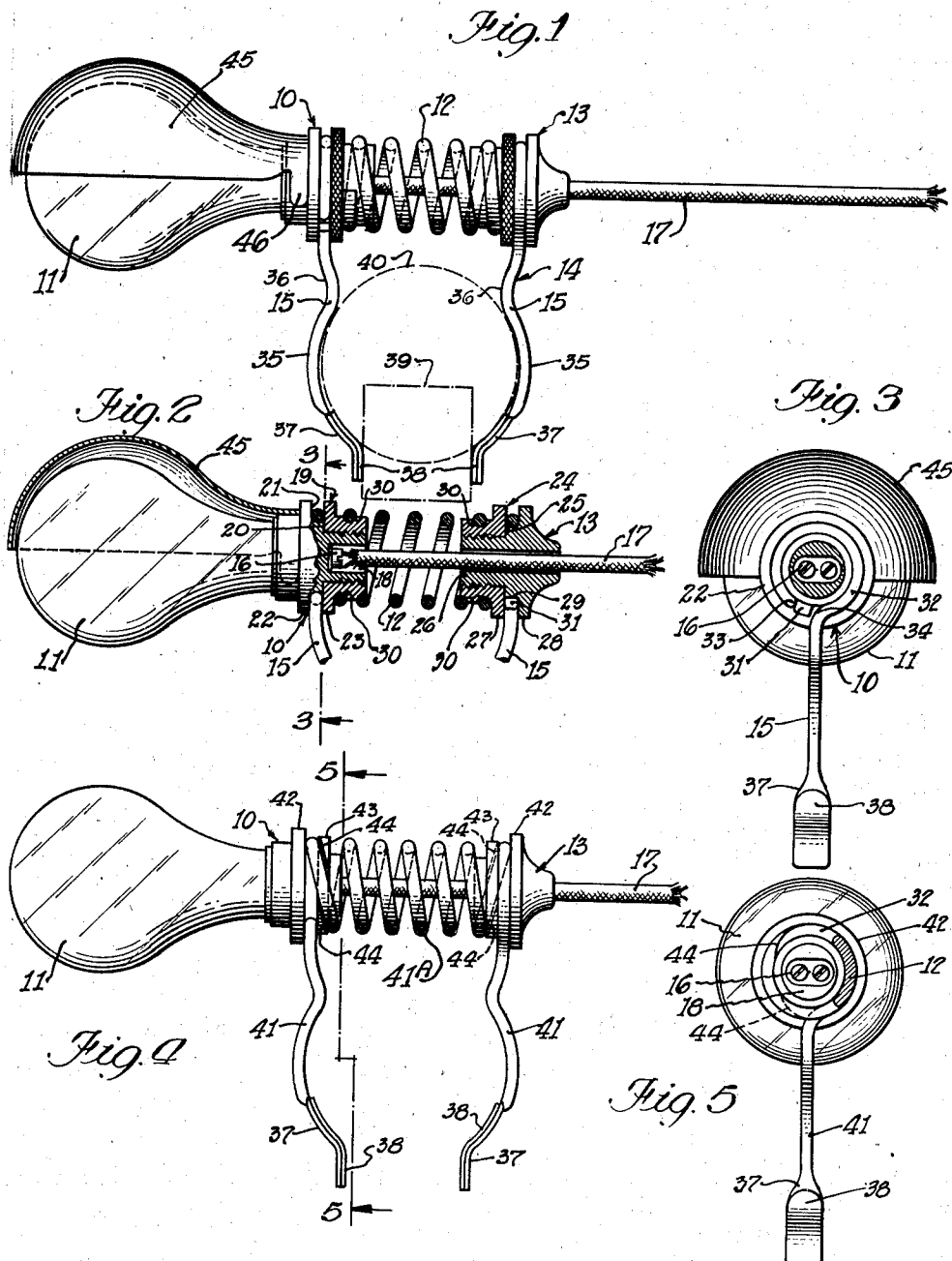
F. V. FISCHER

2,298,758

PORTABLE ELECTRIC LAMP

Filed April 16, 1941

2 Sheets-Sheet 1



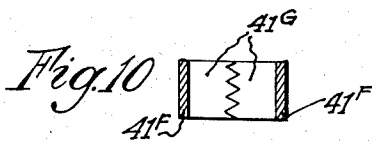
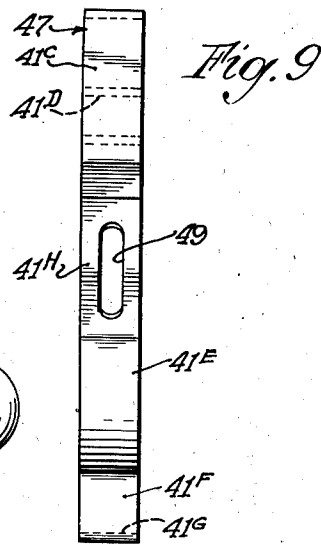
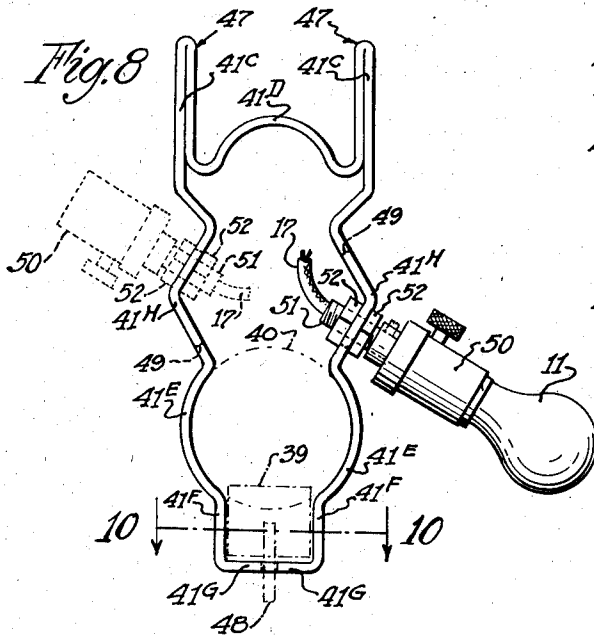
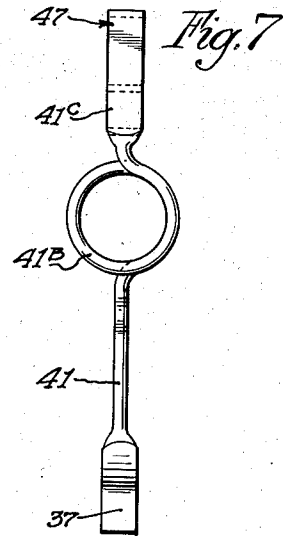
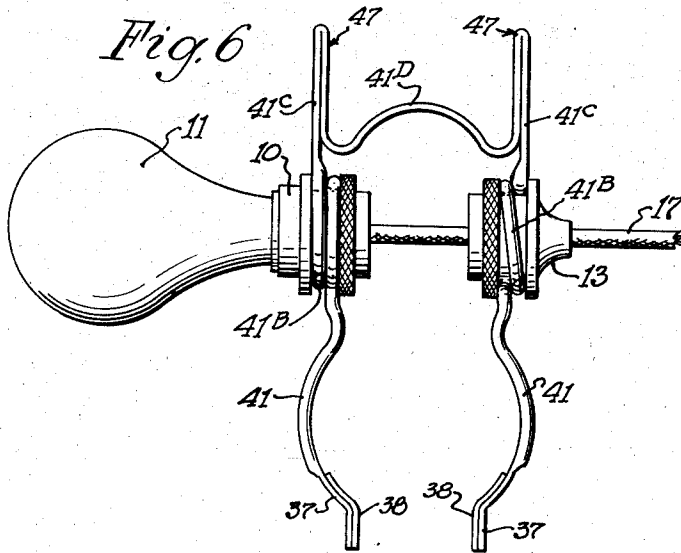
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,298,758

PORTABLE ELECTRIC LAMP

Fred V. Fischer, Omaha, Nebr.

Application April 16, 1941, Serial No. 388,726

7 Claims. (Cl. 240—52.1)

This invention relates generally to new and useful improvements in portable electric lamps and has particular reference to electric lamp supports.

It is an object of my invention to provide a simple and durable portable electric lamp which may be quickly assembled and conveniently removably clampingly attached to various objects, posts, or fixed supports to provide a conveniently supported light for workers in various arts, or for use by invalids confined to beds, since my improved clamp may be attached to objects, posts or members of round or rectangular shape.

Another object of my invention resides in the novel and inexpensive clamp which may be formed of suitable flat metal or wire and preferably of a single piece of flat spring steel to which an electric lamp socket may be conveniently and adjustably attached or to which clamp may be attached an electric light fixture composed of two spaced parts having an interconnecting coil spring between such parts adapted to exert pressure upon the clamp to afford its detachable securement to curved or flat surfaces of objects or posts or various fixed members for convenient support thereon.

The invention also has for its object to provide an adjustable clamp for an electric light fixture wherein such clamp is composed of two separate comparatively stiff metallic wire members which are supported on relatively spaced resiliently supported parts or members of the electric light fixture.

A further object of my invention finds embodiment in the construction and formation of a unitary clamp wherein the clamp members are an integral part of the ends of a resilient member or portion supported on relatively spaced parts of the electric light fixture.

With the above and other objects in view, my invention consists in the novel combination, construction and arrangement of the parts and members shown in preferred embodiment in the attached drawings, described in the following specification and particularly pointed out in the appended claims.

In the drawings:

Fig. 1 is a side elevation of an electric lamp support embodying my invention;

Fig. 2 is a longitudinal section through the electric lamp support shown in Fig. 1;

Fig. 3 is a cross-section taken on line 3—3 of Fig. 2; Fig. 4 is a side elevation of an electric lamp support showing a modification of the clamp therefor;

Fig. 5 is a cross-section taken on line 5—5 of Fig. 4;

Fig. 6 is a side elevation of a modified electric lamp support including a unitary clamp embodying my invention;

Fig. 7 is an end view of the clamp shown in Fig. 6;

Fig. 8 is a side view of another modified electric lamp support embodying my invention;

Fig. 9 is an end view of the clamp shown in Fig. 8; and

Fig. 10 is a cross-section taken on line 10—10 of Fig. 8.

As shown in Figs. 1, 2 and 3, the electric lamp support consists of an electric lamp socket 10 for the electric light bulb 11, a coil spring 12 having one end supported on said light bulb socket 10, a tubular support 13 for the other end of the coil spring 12, and a clamp 14 composed of spaced identical clamp members 15, one supported on the electric light bulb socket 10 and the other supported on the tubular support 13.

As shown in Figs. 1, 2 and 3, the electric light bulb socket 10 is provided with the usual screw connections 16 for the two leads of the electric current conductor 17 which extends into the open end 18 of the socket 10 and which open end is of decreased diameter and exteriorly threaded to receive the interiorly threaded tubular cap 19 for screw-connection thereon.

The socket 10 is formed with a shoulder 20 against which the cap 19 is screw-mounted to provide an annular groove 21 between the circular flange 22 of the socket 10 and the flange 23 of the cap 19.

The tubular coil-spring-support 13 is also, like the socket 10, provided with a cap 24 which is screw-mounted on an exteriorly threaded portion 26 of decreased diameter. The spring support 13 is provided with a shoulder 25 which provides an abutment for the cap 24 whereby the circular flange 27 of the cap 24 and the circular flange 28 of the support 13 are maintained in relatively spaced position to provide an annular groove 29 therebetween.

The electric current conductor 17, which conducts an electric current from any source of electric power such as a power line or battery, extends through aligned centrally disposed passages extending through the support 13 and cap 24.

The exterior faces of the caps 19 and 24 are each formed with a spiral groove 30 to receive therein the end portions of the coil spring 12.

The socket 10 and the support 13 are both formed with an integral lug 31 disposed within

respectively the grooves 21 and 29 which lugs function to prevent rotation of the clamps 15 relatively to the socket 10 and support 13.

As shown in Figs. 1 and 3, the clamp 14 consists of two like clamping members 15, one mounted on the socket 10 and the other mounted on the spring support 13.

Each clamp member 15 is fabricated from a comparatively stiff piece of elongated metal preferably of round cross-section, and each clamp 15 is formed with a circular portion 32 at one end thereof which is adapted to be positioned in one of the grooves 21 or 29 for support therein.

It will be noted that the opening in the circular looped end 32 is not completely closed, that is, the terminal 33 is spaced from the curved portion 34 a distance to clear the lug 31 so that the lug 31 interfits between the terminal 33 and the curved portion 34 to thereby prevent rotation of the clamps 15 relatively to the socket 10 and spring-support member 13.

The medial portion of each of the clamps 15 is provided with a curved or arcuate portion 35 which adapts the clamps 15 to engagement with and about objects having a curved surface, as for example, a round post 40 indicated by the broken lines in Fig. 1. The clamps may be somewhat strengthened by interposing a slight curve 36 in a reverse direction to the curve of the portion 35.

The free ends of the clamps 15 are flattened, as at 37, and straightened out to form opposed flat gripping faces, and such faces are preferably covered with felt or cork pads 38 to increase their frictional gripping or holding action when the lamp is clamped to a pair of opposed flat faces of an object 39 indicated by the dot and dash lines in Fig. 1.

In the modification shown in Figs. 4 and 5, the coil spring 12 and the clamps 15 are combined in one unit, that is, the clamps 15 are formed from or in extended end portions of spring 12 and are therefore integral therewith.

The formation or structure of the spring end clamp portions, generally indicated by 41, is the same as those above-described.

In the modification shown in Figs. 4 and 5, there is no necessity for providing the socket 10 and spring-supporting members 13 with separate caps 19 and 24 and therefore, the socket 10 and the support 13 may each be formed or cast or molded in one piece but each provided with a pair of spaced circular flanges 42 and 43 for retaining therebetween the clamp portions 41 of the spring.

Since the clamps and spring are formed integral with each other, the flanges 43 are each provided with a diagonal groove 44 to receive the end convolutions of the spring portion 41^A.

The lugs 31 are also dispensed with in the socket 10 and support 13 of the modification in Figs. 4 and 5.

The electric lamp or bulb 11 may be provided with any suitable type of reflector. The reflector 45 shown in Fig. 1 is provided with resilient prongs 46 adapted to embrace the socket 10 for support of the reflector 45.

The modification of my clamp shown in Figs. 6 and 7 is somewhat similar to that shown in Figs. 4 and 5 except that the medial coiled spring portion 41^A is dispensed with by providing the looped portions 41^B with upwardly extended integral portions 41^C. The extensions 41^C are bent back upon themselves or extended in reverse direction to provide double thickness in the form

of spaced clamp handles 47 and the doubled portions are preferably flattened as clearly shown in Fig. 7.

The medial portion 41^D, which is also preferably flattened, is formed as an integral part with the clamp portions 41^C and is curved to provide spring action between the clamp portions 41 when the handles 47 are pressed toward one another to spread the clamping ends 41.

The modification shown in Figs. 6 and 7 substitutes a flat arcuate spring portion 41^D for the coil spring portion 41^A shown in Figs. 4 and 5 and incorporate integral portions of the clamp into the handle formations 47.

The modification of my invention shown in Figs. 8, 9 and 10, embodies features of the two clamps shown in Figs. 4, 5, 6 and 7 in a unitary clamp constructed preferably of bent flat spring steel.

In the clamp shown in Figs. 8, 9 and 10, the overlapped portions 41^C, which constitute the clamp handles 47, are connected by the curved or arcuate spring portion 41^D formed integrally therewith.

The clamping parts of the clamp include the oppositely curved portions 41^E which are adapted to clampingly engage a circular member 40 as indicated by broken lines. The outer parallel extensions 41^F are adapted to clampingly engage flattened sides of an object 39 as indicated by broken lines, and the end portions 41^G are bent right-angularly toward one another and preferably formed with toothed edges whereby same may frictionally engage opposed faces of a flat member such as 48 indicated by broken lines.

The opposed clamp portions 41^H formed integrally with and intermediately the handle portions 41^C and the circular clamping portions 41^E are bent into angular formations and each provided with an elongated slot 49 for support therein of the electric light fixture which includes the socket 50, the nipple 51, through which the electric current conductor 17 extends, and a pair of securing nuts 52.

The electric light fixture may, as shown by dot and dash lines, be mounted on the clamp in relatively different angular positions because the nipple 51, upon loosening of the nuts 52, may be positioned in either ends of the slots 49 which extend through the angularly bent portions 41^H.

I claim as my invention:

1. A portable electric light lamp including an electric lamp socket, a tubular member spaced from said socket, a coil spring interposed between and connecting said socket and said tubular member, clamping means including a pair of clamping members extending one from said socket and the other from said tubular member, and an electric current conductor extending through said tubular member and through the longitudinal axis of the convolutions of said coil spring into connections with said socket.

2. A portable electric light lamp as embodied in claim 1 and including said clamping members formed integrally with said coil spring, one of said clamping members being formed with one end of said coil spring and the other of said clamping members with the other end of said coil spring.

3. A portable electric light lamp including an electric light socket having an annular groove thereon, a tubular member spaced from said socket and having an annular groove thereon, a coil spring extending between and connecting said

socket and said tubular member, said coil spring including a pair of clamping members, one of said clamping members being formed integrally with one end of said spring and the other of said clamping members being formed integrally with the other end of said spring, and an electric current conductor extending through said tubular member into connection with said socket.

4. A portable electric light lamp including an electric lamp socket having an annular groove, a tubular member disposed in spaced relation to said socket and having an annular groove, a clamp comprising a pair of spaced clamping members, a portion of one of said clamping members being secured in said groove on said socket and a portion of the other of said clamping members being secured in said groove on said tubular member, a resilient clamp portion formed integrally with said clamping members, and an electric current conductor extending through said tubular member into connection with said socket.

5. A portable electric light lamp as embodied in claim 4 and including each of said clamping members having an extended overlapped integral portion, said extended overlapped portions constituting spaced handles and being formed integrally with said resilient clamp portion.

6. A portable electric light lamp as embodied in claim 4 and including each of said clamping members having an extended portion, said extended portions constituting spaced handles, and including said resilient clamp portion comprising an arcuate bent portion formed integrally with said extended handle portions.

7. A portable electric light lamp including a pair of spaced elongated clamping members, each of said clamping members having an arcuate object-engaging medial portion and a straight object-engaging terminal portion, both of said clamping members having a looped integral portion and an overlapped extension, resilient means comprising an arcuate resilient portion formed integrally with said looped portions and interposed between said clamp members resisting spreading apart of said clamping members, and an electric lamp socket supported in the looped portion of one of said clamping members, said overlapped extensions constituting handles whereby said clamping members may be spaced apart under resistance of said arcuate resilient portion.

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