[Second Edition.]

AMENDED SPECIFICATION.

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PATENT SPECIFICATION

Application Date : Jan. 13, 1930. No. 1213/30. **341,265**

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One Complete Left : Oct. 13, 1930.

Complete Accepted : Jan. 15, 1931.

PROVISIONAL SPECIFICATION.

No. 1213, A.D. 1930.

Improvements in or relating to Electric Lamp Holders.

We, HERBERT ALFRED TURNER, of 10, Hampton Road, Leytonstone, London, E.11, a British Subject, and HENRY BLOOM, of 15, Highbury Quadrant, London, N.5, a British Subject, do hereby declare the nature of this invention to be as follows:—

For the purpose of fete or gala illumination and like electric lighting purposes lamp holders have been made with pointed, rearwardly directed, projections from spring contact plungers extending from a fitting and adapted to project into a groove formed in a removable base in such a manner that when the lampholder and the base are clamped together over an insulated twin cable disposed within said groove, the two pointed projections are caused to pierce the insulation and make electrical contact with the two conductors respectively. In such lampholders the base has been secured to the holder proper by means of two screws which served not only to clamp the parts together but also to position the groove relatively to the pointed projections and such a construction renders it difficult, if not impossible to make the parts watertight and free from risk of short circuits.

Furthermore the employment of separate fixing screws multiplies the number of parts required and renders necessary the use of a screw driver or other tool.

With a view of providing an improved construction whereby the above mentioned disadvantages may be avoided, and in accordance with the present invention, the rear end of a lamp holder extends beyond the level of the pointed ends of the spring contacts and is formed with a diametrically extending groove the centre line of which makes a small angle with the line joining said pointed ends, whilst said rear end is screw threaded to engage with the screw threaded end of a base or cap having a central inwardly directed projection.

In one form of the invention the rear end of a lamp holder moulded from insulating material is formed with a skirt screw threaded externally and extending beyond the level of the pointed rear ends of the two spring contacts. On two diametrically opposite sides the skirt is formed with slots which together with the space within the skirt constitute a diametrically extending groove adapted to receive a length of rubber or like insulated cable in which the conductors are laid up side by side. The centre line of the groove is disposed at a small angle to the line joining the pointed ends of the spring contacts so that said ends are adapted to intersect the two conductors respectively.

An internally threaded, cap-like base having a central inwardly directed projection, is adapted to engage with the rear end of the lamp holder so that when it is screwed thereon with a length of insulated twin cable extending along the groove, the central projection will force the insulated cable against the pointed ends of the contacts which ends will be caused thereby to penetrate the insulation and effect contact with the conductors respectively.

The screwing on of the cap also causes

the rim of the latter to engage with the insulation of the cable and squeeze it into the ends of the groove thus effecting a water tight joint.

Preferably the plunger contacts themselves are of the known type in which the end of an outer sleeve member is spun or otherwise forced inwards and adapted to be engaged by a shoulder on the inner telescopic member to prevent disengagement of said members. It is desirable that the lamp holder should be of insulating material but obviously it can be made of metal with suitable insulated internal fittings.

Dated the 13th day of January, 1930.

A. M. & WM. CLARK,
Chartered Patent Agents,
53 & 54, Chancery Lane, London, W.C.2.

PROVISIONAL SPECIFICATION.

No. 15,105, A.D. 1930.

Improvements in or relating to Electric Lamp Holders.

We, HERBERT ALFRED TURNER, of 10, Hampton Road, Leytonstone, London, E.11, and HENRY BLOOM, of 15, Highbury Quadrant, London, N.5, both British Subjects, do hereby declare the nature of this invention to be as follows:—

In the Provisional Specification accompanying our co-pending Application for Letters Patent No. 1213/30 are described means for connecting with an insulated twin cable electric lamp holders of the well known bayonet-socket type having two spring-plunger contacts and it is the object of the present invention to provide with such means electric lamp holders of the screw-cap type.

According to the present invention two similar pointed projections connected respectively with the centre contact and the outer contact of screw-cap type lamp holder, extend rearwardly with their axes in a diametrical plane of the lamp holder of which the rear end extends beyond the level of the pointed ends of said projections and is formed with a diametrically extending groove the centre line of which makes a small angle with the line joining said pointed ends, whilst said rear end is screw threaded to engage with the screw threaded end of a base or cap having a central inwardly directed projection.

In one form of the invention the outer or screw contact of the lamp holder is in the form of a metal lining for the insulated body of the lamp holder, said lining having an inturned margin at its base and being adapted to be retained in position by means of a clamping plate through which passes a screw the rear end of which engages with or itself constitutes a rearwardly directed pointed projection. The centre contact of the lamp holder is constituted by a springy strip of metal bent into L-shape and held in position, preferably in an insulated recess, by means of a screw passing through one end of the strip the rear end of said screw being arranged similarly to that of the screw which retains the screw contact in position, whilst the free limb of the strip is afterwards bent over to present a flat surface to the centre contact of the lamp.

In an alternative construction the rearwardly directed pointed projections are in the form of spikes projecting laterally from two strips of springy metal, the holder proper being constructed wholly of insulating material. One of said strips is passed from the rear through a slot in the base of the holder proper and is bent in to substantially U-shape so that whilst its spike projects rearwardly of the holder, the other end of the strip extends across the axis of the holder on the inside. The other strip extends through a similar slot in the holder proper so as to lie in a groove formed transversely of the screw-threads inside the holder whilst the rear end is bent at right angles so that the spike projects rearwardly. Although the threads of the holder which are adapted to receive the screw cap of the lamp are themselves of insulating material, the metal strip which lies in the groove is capable of contacting with the projecting threads of the cap.

By means of this invention, as in the case of that set forth in the Provisional Specification accompanying our co-pending Application for Letters Patent No. 1213/30, a simple and readily assembled lamp holder may be provided whereby gala and like illuminations may readily and inexpensively be arranged.

Dated the 16th day of May, 1930.

A. M. & WM. CLARK,
Chartered Patent Agents,
53 & 54, Chancery Lane, London, W.C.2.

COMPLETE SPECIFICATION (AMENDED).

Improvements in or relating to Electric Lamp Holders.

We, HERBERT ALFRED TURNER, of 10, Hampton Road, Leytonstone, London, E.11, England, and HENRY BLOOM, of 15, Highbury Quadrant, London, N.5, England, both British Subjects, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

For the purpose of fete or gala illumination and like electric lighting purposes lamp holders have been made with pointed, rearwardly directed, projections from spring contact plungers extending from a fitting and adapted to project into a groove in such a manner that when the lampholder and a base are clamped together over an insulated twin cable disposed within said groove, the two pointed projections are caused to pierce the insulation and make electrical contact with the two conductors respectively.

In such a lampholder the rear end of which extends beyond the level of pointed projections connected with the contacts and is formed with a diametrically extending groove the centre line of which makes a small angle with the line joining said pointed projections, whilst said rear end is screw threaded to engage with the screw threaded end of a base or cap the base or cap in accordance with this invention is provided with a central inwardly directed projection.

The invention will be described with reference to the accompanying drawings of which Figure 1 is an elevation of one form of lamp holder, Figure 2 is a plan thereof, Figure 3 is an inverted plan of a lamp holder proper, Figure 4 is a sectional elevation taken on the line 4—4 of Figure 3, Figure 5 is an inverted plan of the holder proper in an alternative form of lamp holder and Figure 6 is a sectional elevation of a complete holder taken on the line 6—6 of Figure 5.

As shown in Figures 1 to 4 of the drawings, the rear end of a lamp holder *a*, moulded from insulating material, is formed with an externally screw threaded skirt *b* formed on two diametrically opposite sides with slots *cc* which, together with the space within the skirt, constitute a diametrically extending groove adapted to receive a length of rubber or like insulated twin cable such as *d* in which the two conductors *ee* are laid up side by side. In a diametral plane of the holder *a* which makes a small angle with the centre line of the slots *cc*, two spring contacts *ff*, the axes of which are adapted to intersect the conductors *ee* respectively, are inserted into corresponding holes in the holder *a* and positioned therein by means of external shoulders on the contacts *ff* and corresponding internal shoulders in the holes. The spring contacts *ff* are of the general type employed in bayonet cap lamp holders, but are formed at their rear ends each with a spike *g* adapted, when the cable *d* is pressed into the slots *cc*, to pierce the insulation thereof and make electrical contact with the appropriate conductor *e*.

A cap-like base *h* of material similar to that employed for the holder *a* is screw-threaded internally as at *i* so as to be adapted to engage with the screw-threaded skirt *b* and is formed with a central projection *j* adapted, after the cable *d* has been placed in position in the slots *cc*, and the base *h* is being screwed onto the skirt *b*, to press the cable *d* into engagement with the spikes *gg* as above set forth. The central projection *j* is formed with a central recess j^1 so that the pressure of said projection upon the cable *d* may be concentrated in the vicinity of the spikes *gg*. As the base *h* is being screwed onto the skirt *b*, its upper edge engages with the underside of the cable *d* and compresses the insulation into the space between said upper edge and the bottoms of the slots *cc*, whereby a watertight joint is effected between the base *h* and the holder *a*. The base *h* may be formed with lugs *kk* having screw-holes *mm* so as to enable the assembly to be fixed in position upon a support.

In the alternative form of the invention as shown in Figures 5 and 6 and which is adapted for use with screw-cap electric lamps, the holder proper, *a*, is formed with an externally screw threaded skirt *b* having slots *c*,*c* as and for the purpose described with reference to Figures 1 to 4. The interior of the holder *a* is screw threaded as at *n* for the reception of the screw-cap of an electric lamp, the threaded portion being formed at one side with longitudinal groove *o* which is substantially a continuation of a slot *p* in the bottom of the holder. Diametrically opposite to the slot *p* is a second and similar slot *q* through which passes a springy strip of

metal *r* which is bent over on each side of the bottom of the holder so as to constitute on the one hand a central spring contact for the lamp and on the other hand, a connection for a spike *s* which is mounted on said holder. A second strip of springy metal *t* extends along the groove *o* and through the slot *p* where it is bent under the bottom of the holder *a* to connect with a second spike *s* mounted on the holder. The two spikes *ss* are disposed similarly to and serve the same purpose as the spikes *g,g* previously referred to, and may be either soldered or rivetted to the strips *r* and *t* or may be merely pressed thereagainst, projections from said spikes extending through the strips and engaging with the body of the holder *a*. A cap-like base *h* exactly similar in every respect to that described with reference to Figures 1—4 is adapted to engage with the skirt *b* for clamping the holder to the cable (not shown).

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. An electric lamp-holder of the kind set forth in which the rear end of the holder extends beyond the level of pointed projections connected with the contacts and is formed with a diametrically extending groove the centre line of which makes a small angle with the line joining said pointed projections whilst said rear end is screw threaded to engage with the screw threaded end of a base or cap wherein the base or cap has a central inwardly directed projection.

2. An electric lamp-holder as claimed in Claim 1, wherein the central inwardly directed projection in the base has a central recess.

3. An electric lamp holder as claimed in Claim 1 or in Claim 2 for screw cap lamps, wherein the pointed projections are connected with strips of springy metal extending through slots in the body of the holder, one of said strips being bent over to constitute a central contact whilst the other is disposed in a longitudinal groove in the screw-threaded interior of the holder.

4. An electric lamp holder constructed and arranged substantially as hereinbefore set forth with reference to Figures 1 to 4 or to Figures 5 and 6 of the accompanying drawings.

Dated the 13th day of October, 1930.

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[Wt. 8002A.—125/10/1934.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

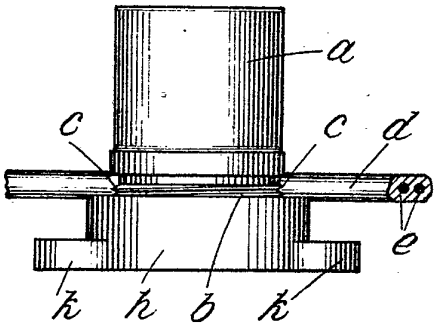


Fig. 4.

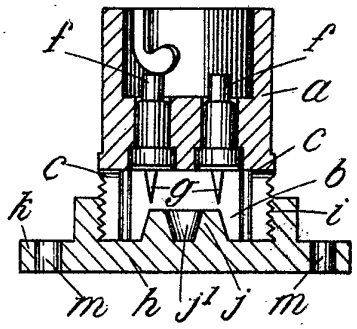


Fig. 2.

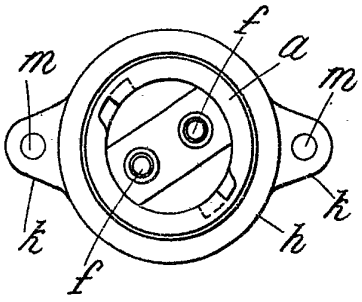


Fig. 5.

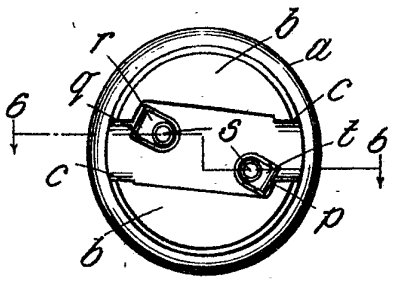


Fig. 3.

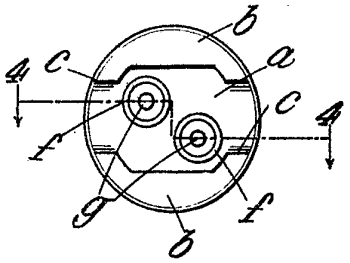
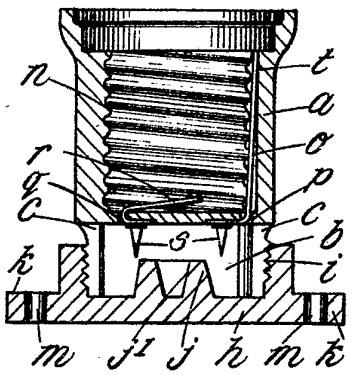


Fig. 6.



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