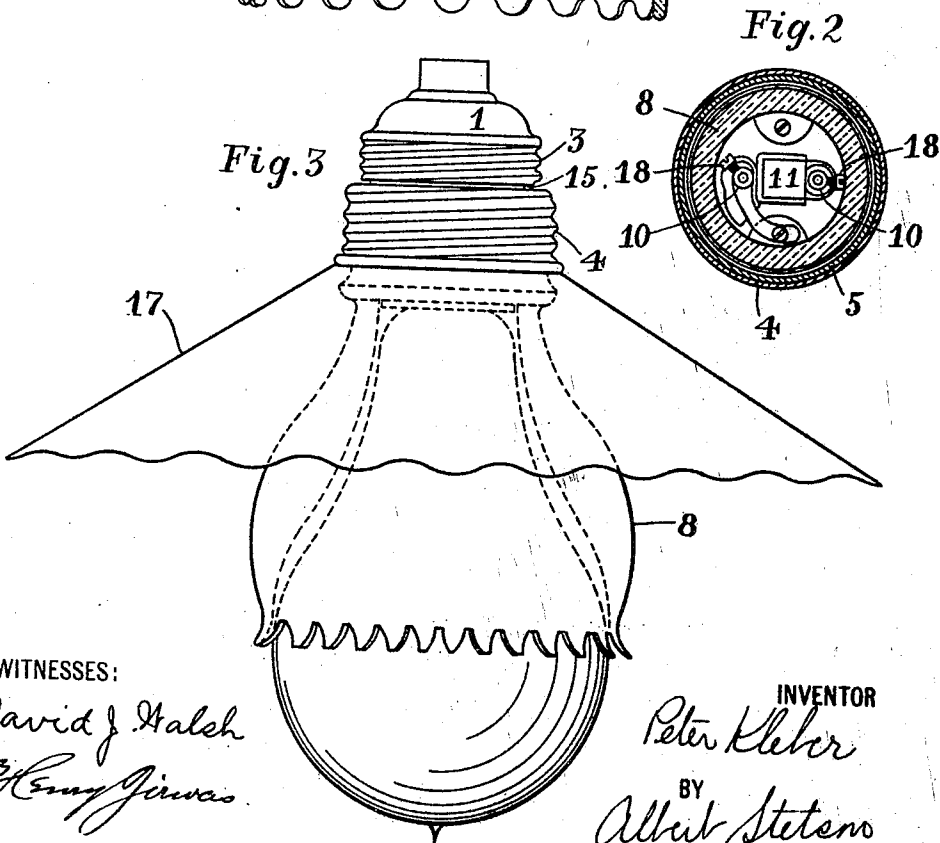
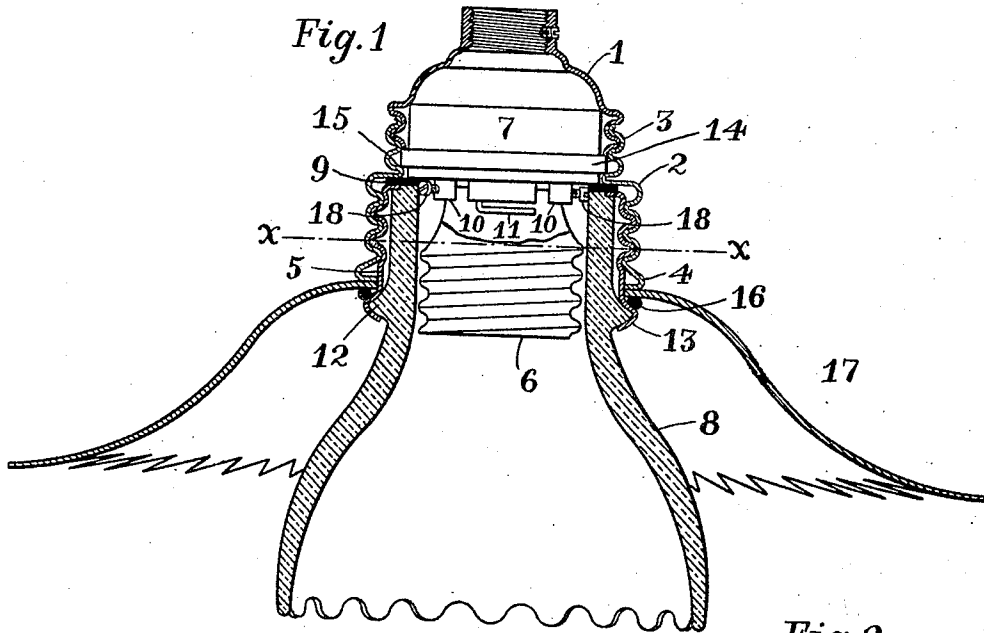


P. KLEBER.  
 INCANDESCENT LAMP SOCKET.  
 APPLICATION FILED JULY 12, 1909.

1,015,963.

Patented Jan. 30, 1912.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## INCANDESCENT-LAMP SOCKET.

1,015,963.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Application filed July 12, 1909. Serial No. 507,057.

*To all whom it may concern:*

Be it known that I, PETER KLEBER, a subject of the King of Prussia, and resident of Wiesbaden, in the Province of Hesse-Nassau and State of Prussia, Germany, have invented certain new and useful Improvements in Incandescent-Lamp Sockets, of which the following is a specification.

My invention relates to sockets for incandescent lamps.

It relates particularly to a new and improved socket in which the shell holding the insulation is formed in two parts, one of said parts, the outer, being provided with two screw-threads, the upper thread screwing onto the cap, and the lower thread receiving internally the second screw threaded insulated shell portion.

It relates further to a socket, in which a glass, or similar cup, permanently fixed to the lower shell portion, forms the insulation between the shell and the current carrying parts of the socket.

The object of the invention is to produce a simple, solidly constructed socket, which shall render contact with or short circuiting of the current conducting portions practically impossible, and which shall be cheaply made, easily mounted and demounted, while doing away with all the fragile members found in many constructions of sockets.

Moreover, a further object is to provide a socket which, when put together shall so solidly and firmly hold the various parts that unintentional displacement, unscrewing or dropping out becomes practically impossible, even under the roughest treatment.

In the drawings accompanying and forming part of this application: Figure 1 is a longitudinal section through the socket and attached cup and shade. Fig. 2 is a cross-section on line *a-a*, of Fig. 1, and Fig. 3 shows a side elevation of a similar socket with a modified form of insulating cup.

Referring to the drawing:—1 is the usual cap provided with the ordinary nipple through which the conductors pass, and having also a screw-thread for attachment to the shell.

2 is the outer socket shell, divided into two screw-threaded portions, the upper portion 3 screwing into the cap, the lower screw-thread 4, serving partially as a set thread,

engaged internally by the inner screw-threaded shell portion 5.

6 is the ordinary lamp screw attached to the base of an insulating material 7. Permanently attached to the inner screw threaded shell portion 5 is an insulating cup 8, for decorative and other reasons preferably made of glass.

10 are the circuit terminals secured to the insulating base 7, one being connected with the lamp thread 6, and the other with the spring contact 11, against which screws the upper lamp contact.

The insulating cup 8 is provided on the lower part of its neck with a projecting collar 12, over and about which is bent the lower edge of the inner shell 5. This screw-threaded inner shell portion 5 is permanently attached to the outside of the cup neck, secured against loosening, and is, preferably, bent partly over the upper edge of the cup neck, as shown in the drawing. It is evident that the cup itself could be screw-threaded, and serve the same purpose, but metal threads are more durable and more easily manipulated than those cut in brittle materials.

Interposed between the insulating cup neck and the insulating base 7 is an elastic packing 9, for insuring an air tight and current safe joint between cup 8 and the insulating base 7. For the purpose of a firmer hold, the abutting faces of the cup and base are preferably roughened. On the lower circumference of the insulating base 7 is a projecting collar 14, against which screws, at the top, the thread of cap 1, and the under side of which engages the inward spring collar 15, formed by a thread of the shell portion 2. Between the lower end of the shell part 4 and the projection formed by the shoulder 12, of the insulating cup 8, and seated on an elastic ring 16 or similar device, can be fixed, a shade 17, rigidly clamped by screwing together the inner and outer shell portions of the socket. It is evident that if the cup has cut into it the inner shell thread, it can form the shade holder.

The construction and setting up of my socket is extremely simple. By rolling, the thread is formed on the cap. The outer shell 2 is also rolled with two threads, an upper one 3, for engaging the screw-thread

of the cap 1, and a lower threaded portion 4. The inner shell portion 5 is permanently fastened to, or fashioned on, the insulating cup 8, the insulating base 7, carrying the electric terminals, is inserted into and secured against rotation within the cap 1.

The insulating base, with its circuit terminals being thus secured within the cap 1, the setting up proceeds as follows: Upon the outside of the cap is screwed the double screw-threaded shell 2, whose upper thread 3 engaging by the inwardly projecting spring collar 15, the rim collar 14, of the insulating base 7, holds the same firmly fixed within the cap 1. The outer shell having been tightly screwed up, it only remains to screw the thread carried by the insulating cup 8 into the lower portion 4 of the double screw shell. The packing 9 between the roughened surfaces of insulating base 7, and cup 8, assures an immovable joint between the two, and the thread 5 compresses the spring collar 15, and tightly fastens the insulating base 7, within the cap 1. If it is desired to attach a shade 17, the same is laid on the projection 12 of the cup, or the screw 5 of the inner shell, separated therefrom by a preferably elastic substance, to secure a firm clamping between the two parts of the shell, when the inner and outer shell portions are screwed together. Thereby the ordinary double shade holder is done away with. The lower surface of the insulating base 7 is left level, in order to allow of screwing the insulating cup against the same, which would not be possible, if there were projections, springs, etc., thereon. The thickness of the insulating cup is so chosen that, on screwing it into place, its inner edges rest against the heads of the screw-thread terminals 13, and assure against their working loose.

For the insulating cup 8, glass is naturally preferred, because by its use a variety of decorative effects can be secured at will, while it answers perfectly the more practical purpose of insulating the electric terminals from the outer shell. It is evident that any insulating material may be used, instead of glass, and that its shape may be varied within wide limits.

A glance at the complete socket shows there is obtained, in the simplest manner, the most perfect insulation between the metal portions and the current carrying conductors. On inserting, or withdrawing a lamp, the hand cannot come in contact with the lamp screw 6, or the terminals 10, 11, and thereby is assured perfect safety against shocks. Contacts 10 and 11 have the best insulation against short circuit, and with the screw threaded insulating cup 8 in place, the lamp screw 6 cannot get into contact with the metallic shell. Moreover, the several means by which the insulating base

7 is held in place, including the spring collar 15, prevents its falling out or becoming loose, even if the insulating cup is removed, although, of course, the lamp can be changed, without disturbing any parts of the socket, or their relation to each other. By this method of fastening of the insulating cup there is overcome the defects inherent in former sockets, in which the insulating ring easily worked loose, fell out, and was not replaced by the consumer. The shape of the insulating cup, moreover, allows of using any kind of carbon or metallic filament lamps. The present socket is, therefore, to be regarded as a porcelain socket, in which contact with current carrying terminals, on inserting the lamp into the socket, is just as impossible as a short circuit to the socket shell, and a socket in which the screw terminals on the bottom of the insulating base are doubly insulated.

Having thus fully described and illustrated my invention, what I claim is:

1. In an incandescent lamp socket, a screw-threaded cap, a shell composed of two members, an outer and an inner member, the outer shell member having two screw-threads, the upper one engaging the screw on the cap, in combination with a cup formed of insulating material having fixedly attached thereto the inner screw-threaded shell member engaging the lower thread on the outer shell member, substantially as set forth.

2. In an incandescent lamp socket, a screw-threaded cap, a shell formed in two members, an inner and an outer member, the outer shell member having two screw-threads, the upper thread engaging the screw threaded cap, in combination with an insulated inner shell member engaging the lower thread on the outer shell member, substantially as set forth.

3. In an incandescent lamp socket, the combination of a screw-threaded cap, a shell composed of two separate members, an outer and an inner, the outer shell member provided with two screw-threads, the upper one of which engages the cap thread, in combination with an ornamental safety cup provided with the inner shell member and supported within the lower outer shell screw, substantially as set forth.

4. In an incandescent lamp socket, the combination of a screw-threaded cap, an insulating base lying within said cap, an inwardly projecting collar on said base, in combination with an outer shell member having an inwardly projecting spring collar engaging the collar on the insulating base, and held firmly within the cap, substantially as set forth.

5. In an incandescent lamp socket, a screw-threaded cap, an insulating base carried therein and having a projecting collar

resting against the end of the cap screw, an outer shell member carrying two screw threads, an inwardly projecting spring shoulder formed between the two outer shell screws, said spring shoulder engaging the under portion of the cap collar, in combination with an insulated inner shell thread engaging the under thread of the outer shell member, substantially as set forth.

10 6. In an incandescent lamp socket, a shell composed of two members, an outer and an inner, the outer member having two screw-threads, a screw-threaded cap engaged by

the upper screw of the outer member, the outer shell member having a bead and being screw-threaded and insulated, in combination with a shade rigidly clamped between the lower end of the outer threaded shell and the bead on the inner threaded shell. 15

Signed at Wiesbaden, Germany, in the Province of Hesse-Nassau and State of Prussia this 29th day of June A. D. 1909.

PETER KLEBER.

Witnesses:

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MAX FIESCHE.