

M. SIDON.
 FILAMENT LAMP.
 APPLICATION FILED APR. 27, 1911.

1,079,804.

Patented Nov. 25, 1913.

Fig. 1

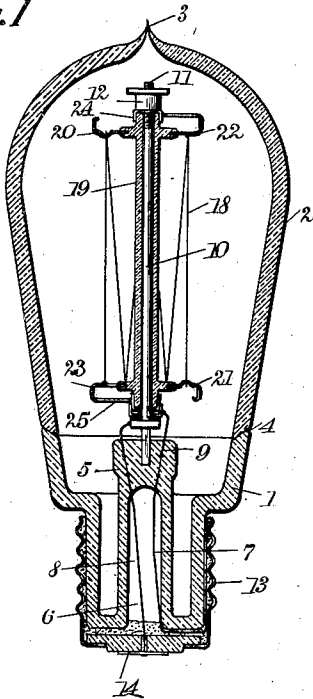


Fig. 3

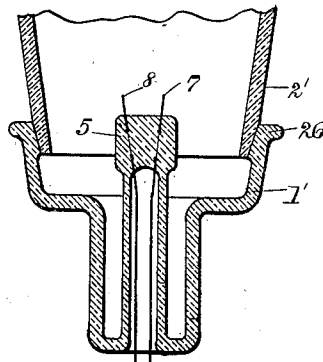


Fig. 2

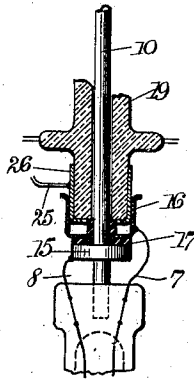
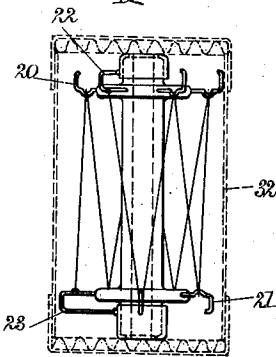


Fig. 5

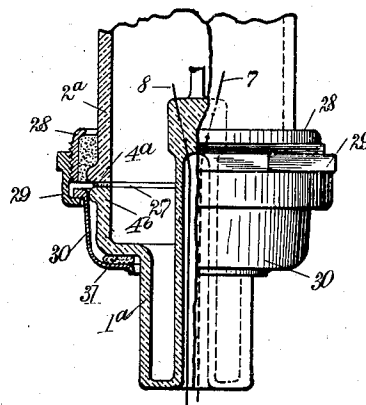


Fig. 4

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UNITED STATES PATENT OFFICE.

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FILAMENT-LAMP.

1,079,804.

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To all whom it may concern:

Be it known that I, MAXIMILIAN SIDON, a citizen of Austria, and a resident of the city of New York, borough of the Bronx, in the county and State of New York, have invented a new and Improved Filament-Lamp, of which the following is a full, clear, and exact description.

My invention relates generally to filament lamps and more particularly it involves a lamp of this type in which the bulb is made of a plurality of parts adapted to fit closely together whereby the proper vacuum within the bulb may be secured.

The principal object of my invention is to provide a filament lamp having the bulb thereof of a plurality of parts, adapted to be separated, whereby the filament contained therein may be made accessible.

A further object of my invention is to provide an improved method of mounting the filament and its support within the bulb whereby the support and filament may be easily withdrawn when the filament is burned out and a new filament is to be placed in position.

A further object of my invention is to provide as an article of manufacture a filament device for incandescent lamps having a suitable supporting frame, the same being adapted for quick insertion and removal from the bulb.

Reference is to be had to the accompanying drawings forming a part of this specification, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a vertical sectional view of a lamp embodying my invention; Fig. 2 is a detail view, partly in section, of the contacting means adjacent the end of the filament supporting frame; Fig. 3 illustrates a modified form of joint between the parts of the bulb; Fig. 4 illustrates a further modification thereof; Fig. 5 is a side view of my filament supporting frame with the filament thereon, the same being inclosed in a suitable carton for shipping purposes.

The bulb of the lamp comprises the inner end portion 1 and the outer end portion 2 having the usual tip 3 thereon, these portions being in engagement with each other at 4, adjacent surfaces of the portions 1 and 2 being ground in order to provide a tight joint. The interior of the portion 1 is provided with a suitable extension 5 having the

usual recessed part 6 within which the leading-in wires 7, 8, extend, these wires being embedded in the inner end 9 of this extension. The extension is further provided with a longitudinally extending supporting rod 10 of any suitable conducting material, the outer end 11 thereof being provided with screw threads on which a thumb nut 12 is adapted to fit. The portion 1 carries on its outside the usual base 13 having also the contacting end portion 14, the leading-in wires connecting with the base portion which is adapted for insertion into the standard socket.

One of the leading-in wires, as 8, is in metallic contact with the supporting rod 10, this rod being provided with a flange 15, the other leading-in wire 7 being connected to a shell 16 carried on the supporting rod, there being suitable insulating material 17 between the rod and the shell.

The supporting frame for the filament 18, which may be of any desirable material, comprises the longitudinally extending body portion 19 which is adapted to be positioned on the supporting rod 10, the end portions of this body member having transversely extending arms 20, 21, designed to support the convolutions of the filament which may be of any desired number; there are also provided other arms 22, 23, which are adapted to make electrical contact with the conductors, the upper arm 22 having a ring 24 adapted to be engaged by the thumb nut 12 whereby one end of the filament is placed in electrical connection with the leading-in wire 8, the other end of the filament being in electrical connection with the other leading-in wire 7, by means of the end portion 25 of the arm 23, this end portion being in contact with a ferrule 26, carried by the end portion of the body member 19 and adapted to be received within and in contact with the shell 16.

From what has been said it will be seen that the filament, which is suitably removably supported within the bulb, is in electrical circuit with the leading-in wires, the construction and arrangement, however, being such that merely removing the thumb nut 12 will enable the supporting frame and filament to be removed. The proper vacuum is maintained within the bulb, this vacuum being insured by the tight joint 4; when it is desired to renew the filament, the bulb may be opened by removing the tip 3 which al-

lows the air to enter, thereby equalizing the pressure on each side of the bulb and permitting easy separation of the parts thereof. The filament and its support may then be taken off the supporting rod 10 and another one put in position thereon, after which the parts 1 and 2 of the bulb may be brought together again and the tip 3 sealed.

In Fig. 3 I have shown the parts 1', 2', which go to make up the bulb, provided with a modified form of joint; in this instance the length of contact between the adjacent portions of these parts is more extended than in the form shown in Fig. 1, the part 2' entering within the flanged portion 26 of the part 1'.

Fig. 4 shows a further modification in that the parts 1^a and 2^a are provided with matching end portions 4^a, 4^b, with a suitable packing ring 27 between, the parts 4^a and 4^b being designed to be held closely together by means of the flanged portion 28 carried on the part 2^a which engages with a nut 29 carried on the part 1^a, a suitable metallic supporting member 30 being provided to support this nut, a packing material 31 being placed between the metallic supporting member and the part 1^a of the bulb.

The supporting frame with the filament thereon is designed to be disposed of as an article of manufacture to be placed in suitable bulbs and to this end I have shown it in Fig. 5 inclosed in a suitable carton 32, the arms 20, 21, 22, and 23, being suitably extended in order to prevent contact of the filament against the sides of the carton, thereby preventing breaking of the filament.

While I have shown the method whereby the different parts of the bulb engage each other, it is, of course, obvious that many other methods may be employed, the idea being to provide a bulb made up of a plurality of parts whereby they may be suitably separated in order to provide a new filament when the one inclosed therein has been burned out. It is also to be noted that the particular form of the supporting member for the filament may be varied in order to meet the requirements of different makes of filaments or different sizes of bulbs without departing from the spirit of the invention as defined in the following claims.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

1. An incandescent lamp provided with a supporting rod, one of the leading-in wires of the said lamp being in electrical connection with the said rod, a shell carried by the rod and insulated therefrom, a frame removably carried by said supporting rod, the lamp filament being carried on the frame, one end of the filament being in electrical contact with the said shell.

2. An incandescent lamp provided with a supporting rod, one of the leading-in wires being in electrical connection with the said supporting rod, a shell carried on the said rod and insulated therefrom, the other leading-in wire being in electrical connection with the said shell, and a frame having a filament thereon mounted on the said supporting rod, the frame being provided with members adapted for electrical contact with the said supporting rod and the said shell, whereby the leading-in wires are placed in circuit with the said filament.

3. As a new article of manufacture, a supporting frame having an opening extending therethrough and a plurality of arms thereon, a filament carried by the said arms, one of the said arms being adapted for engagement with one end of a suitable supporting rod carried within an incandescent bulb, another of the said arms being adapted for connection with an insulated shell carried by the said supporting rod, the said rod and the said shell being in electrical contact with the leading-in wires of the lamp.

4. As a new article of manufacture, a supporting frame having an opening extending longitudinally therethrough, the said frame being provided with a plurality of arms, filament on the arms, one of the said arms being provided with a ring, another of the said arms terminating in a ferrule positioned on the said frame, the said ring and the said ferrule being adapted for contact with portions connected to the leading-in wires of an incandescent lamp when the said frame and filament are positioned on a suitable supporting rod contained within a lamp.

5. An incandescent lamp provided with a supporting rod adapted to conduct current, one of the leading-in wires of the lamp being connected to the said rod, a shell carried by the rod and insulated therefrom, the other leading-in wire being connected to the shell, a frame having a filament thereon, the frame being mounted on the said rod, one end of the filament being in electrical contact with the said shell, the other end of the filament being in contact with the said rod, and means for engagement with the said rod, whereby the frame will be held thereon.

6. As a new article of manufacture, a supporting frame for a filament for use in incandescent lamps, the frame being of non-conducting material and being provided with a passageway extending longitudinally thereof, the said frame comprising a plurality of arms, the filament being carried by the said arms, one end of the frame being provided with a ferrule, one end of the filament being in electrical contact with the said ferrule, the other end of the frame

being provided with a conducting element in electrical contact with the other end of the filament.

7. An incandescent lamp provided with a supporting rod, one of the leading-in wires of the lamp being in electrical connection with said rod, an electrical connecting element adjacent said rod insulated therefrom, a frame removably carried by said rod, a lamp filament carried on said frame, one end of the filament being in electrical connection with one of said leading-in wires, said element being in electrical connection with the other leading-in wire, and the other end of the filament being in electrical connection with said rod.

8. An incandescent lamp provided with a supporting rod, one of the leading-in wires of the said lamp being in electrical connection with the said rod, an element adjacent the rod and insulated therefrom, a frame removably carried by the said rod, the lamp filament being carried on the frame, one end of the filament being in electrical contact with the said element.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAXIMILIAN SIDON.

Witnesses:

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