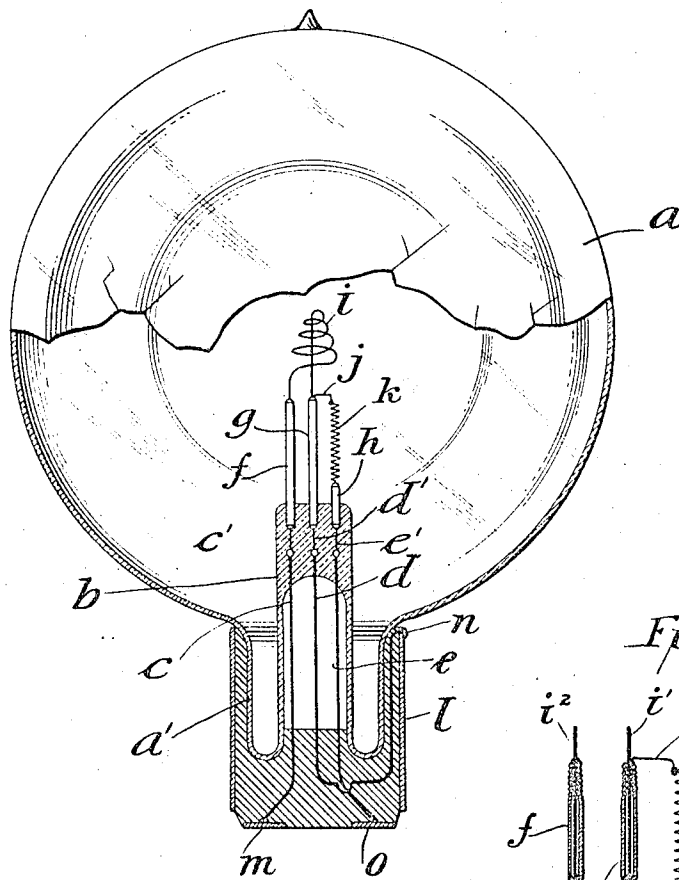


H. J. JAEGER.  
 METALLIC FILAMENT LAMP.  
 APPLICATION FILED JAN. 27, 1914.

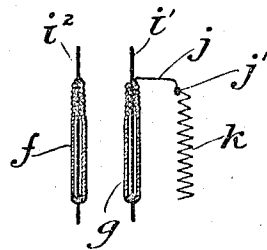
1,121,368.

Patented Dec. 15, 1914.

*Fig. 1.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

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## METALLIC-FILAMENT LAMP.

1,121,368.

Specification of Letters Patent.

Patented Dec. 15, 1914.

Application filed January 27, 1914. Serial No. 814,618.

*To all whom it may concern:*

Be it known that I, HERMAN J. JAEGER, a citizen of the United States of America, and a resident of Weehawken, county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Metallic-Filament Lamps, of which the following is a specification.

This invention has reference to improvements in metallic filament lamps. It pertains particularly to lamps of this type which embody both a high and a low candle power filament. These two filaments are arranged on three leading in wires or leads in a peculiar manner. While the high candle power filament is arranged in the usual manner on an outer and a central lead, the low candle power filament, which preferably is a so-called concentrated filament, is arranged on a shorter, third lead below the high candle power filament and its top end is connected to a small low resistance but conductive strip which in turn is connected to the middle lead. All the leads, the two long leads for the high candle power filament as well as the short lead for the concentrated low candle power filament, are fine tubes which are fused to the short platinum wires that are located in the solid glass portion of the supporting stem. These lamps may be made for any use but are particularly designed for use in automobiles as headlights. Accordingly, both filaments are low voltage filaments, as required for automobile lamps.

When the automobile is running the headlight should be as powerful as possible, therefore, the high candle power filament is thrown into the circuit, but when the automobile stops at the point of destination some light is required and as the big headlights consume too much current the low candle power filament is thrown into the circuit whereby current is saved.

The leads are secured to the base in a suitable manner which base is placed into a socket having corresponding contacts. All the novel features are inclosed in the globe, therefore, the lamps present the usual appearance.

In order to render the invention entirely clear, reference is had to the accompanying drawing in which:

Figure 1 represents in side elevation, partly broken away, an automobile lamp which embodies in desirable form the pres-

ent improvements. Fig. 2, shows on an enlarged scale, partly in section, the upper portion of the long leads with side branch conductor connecting with the low candle power filament.

Similar characters of reference denote like parts in all the figures.

In the drawing *a* represents the globe, *b* is the stem or support. The leads *c*, *d* and *e* pass through the stem parallel to each other. Each lead connects with a short platinum wire *c*<sup>1</sup>, *d*<sup>1</sup>, *e*<sup>1</sup> in the usual manner. The other ends of the platinum wires are connected each to a fine conductive tube. The platinum wire *c*<sup>1</sup> connects with a fine tube *f*, the wire *d*<sup>1</sup> with a like tube *g*, and the wire *e*<sup>1</sup> with a similar but considerably shorter tube *h*. The lower portions of these fine tubes accordingly are fused into the solid portion of the stem or support, as shown in Fig. 1. The high candle power filament may be of any desired form according to the use for which the lamp is intended. In the automobile lamp illustrated a conical filament *i* is shown having one straight end portion *i*<sup>1</sup> which passes through the center of the filament and is attached to the tube *g* of the central lead that connects with the so-called ground wire. The second end *i*<sup>2</sup> of the coiled filament *i* extends over to the tube *f* and is attached thereto and thus is in connection with the lead *c*. The central tube *g* further carries a short conductor *j* which preferably is flat and extends horizontally and then downwardly for a short distance. A small hole *j*<sup>1</sup> preferably is provided in the short downward portion of this horizontal conductor for the purpose of securing therein a short concentrated filament *k*, which represents the low candle power filament. The width of the branch conductor *j* is so selected that the concentrated low candle power filament *k* is about at equal distance from the tube *g*, as said tube is from the tube *f*. Accordingly, the lower end of the small filament *k* is easily connected to the short tube *h* which in turn forms the top part of the lead *e*.

In Fig. 2 of the drawing the fine terminal tubes *f* and *g* are shown on an enlarged scale. The tube *g* is provided at the top with the horizontal branch conductor *j* previously mentioned, and the concentrated low candle power filament is shown to be connected to said branch conductor. The ends *i*<sup>1</sup>, *i*<sup>2</sup> of the high candle power filament

are connected to the fine terminal tubes  $f$  and  $g$ . The central end portion  $i^1$  of the high candle power filament  $i$  extends through the entire length of the fine tube  $g$  and is secured therein by pressing the top portion of the tube  $g$  together so as to be in good conductive contact therewith. Likewise, the end portion  $i^2$  of the high candle power filament  $i$  extends through the fine tube  $f$  and is secured thereto in a similar manner. This insures a long perfect contact between the ends of the high candle power filament and the fine terminal tubes of the leads.

The neck  $a^1$  of the lamp is surrounded by a base  $l$  and the lead  $c$  connects with a contact point  $m$ , the central lead or ground wire with a contact point  $n$  on the metallic base while the lead  $e$  connects with a contact point  $o$ . The contact point  $n$  is preferably in the top portion of the base  $l$  while the two contacts  $m, o$  are at the bottom of the base insulated from each other and from the base in the usual manner.

The socket employed with this lamp has corresponding contact points which render it possible to place the high candle power filament into the circuit and also the low candle power filament, as required in practice. The two filaments for the usual automobile lamp are preferably made of tungsten and in many instances require about six volts.

The stem is sealed into the globe in the usual manner and the lamp is exhausted as an ordinary metallic filament lamp.

I claim as my invention:

1. A metallic filament lamp consisting of a globe with stem, three leads carried by said stem forming fine terminal tubes at the top ends partly fused into the stem and ex-

tending beyond same, a high candle power filament connected to two of the said leads, and a low candle power filament connected to the third lead and one of the leads of the high candle power filament.

2. A metallic filament lamp consisting of a globe with stem, three leads carried by said stem forming fine terminal tubes at the top ends, two long and a short one, a high candle power metallic filament connected to the two long tube terminals, and a low candle power metallic filament connected in the short tubular terminal and one of the leads of the high candle power filament.

3. In a metallic filament lamp for automobiles, a stem, a side lead and a central lead carried by said stem and forming fine tubes at the top extending beyond the stem, a conical high candle power metallic filament connected to two of said fine tubes, a horizontal conductor connected to the top of the central fine tube, an adjoining third lead with a short fine tube extending but slightly beyond the stem, and a straight concentrated filament secured to said short fine tube and to said horizontal conductor.

4. In a metallic filament lamp, a stem with leads forming fine terminal tubes at the top ends partly fused into the stem and extending beyond same, and a filament having ends reaching down to the bottom of the fine tubes, said fine tubes being pressed with their top portions to the filament ends to form perfect contacts.

Signed at New York, N. Y., this 26th day of January, 1914.

HERMAN J. JAEGER.

Witnesses:

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