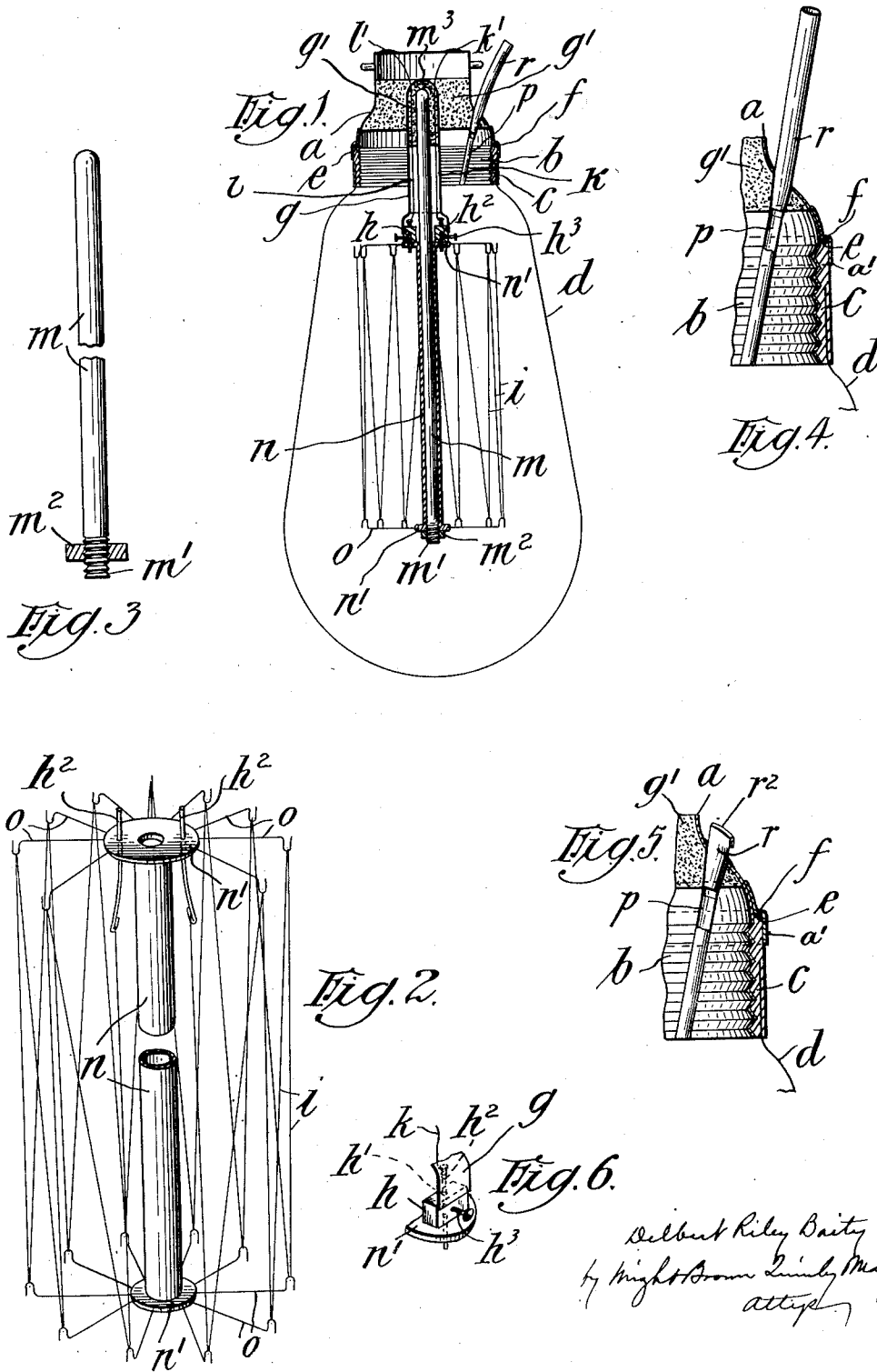


D. R. BAITY.
ELECTRIC LIGHT BULB AND THE FITTINGS THEREIN.
APPLICATION FILED JULY 18, 1916.

1,248,059.

Patented Nov. 27, 1917.



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by Wright Brown Lindley May
attys

UNITED STATES PATENT OFFICE.

DELBERT RILEY BAITY, OF MELBOURNE, VICTORIA, AUSTRALIA.

ELECTRIC-LIGHT BULB AND THE FITTINGS THEREIN.

1,248,059.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DELBERT RILEY BAITY, a citizen of the United States of America, residing at 82 William street, Melbourne, in the State of Victoria, Australia, have invented certain new and useful Improvements in Electric-Light Bulbs and the Fittings Therein; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has been devised to provide improvements in the construction of electric light bulb lamps that is to say those consisting of a metallic head-piece and a glass bowl or bulb in which is a vacuum and in which filaments are used for the giving of light or heat.

I construct the head-piece in somewhat similar external form to those now in general use, having at the top the two contact points for negative and positive adjustment, and the wires from which are led downwardly in the usual way to a holding screw-piece in a lower part hereinafter to be referred to.

In order that my invention may be the more easily understood reference may be made to the accompanying drawings, in which—

Figure 1 illustrates an electric bulb lamp (partly in vertical section) embodying my improvements.

Fig. 2 the filament supporting sleeve.

Fig. 3 the standard on which the sleeve is placed and held.

Figs. 4, 5 and 6 are details hereinafter referred to.

In these drawings *a* is the metal head-piece having an external screw-thread *b*, around and on which a corresponding annular nut *c*, forming the top of the glass bulb or cylinder *d* screws.

At the top of the screw-thread *b* around the lower part of the head-piece *a* is an annular channel *e* formed at an increased diameter by an added annulus *a'* such channel *e* containing a soft washer of metal or other suitable sealing material *f* to keep out the air from entering into the glass bulb *d*.

In the head-piece *a* is a vertical glass tube *g* which is fixed in cement at *g'* and carries at its base, where it is dilated, metal blocks *h* in which are plug holes *h'* to receive the plugs *h²* arising from a cap-piece *n'* of a special construction to hold the filament *i*. Negative and positive wires *k* and *l* respectively run from the connections *k'* and *l'* at the top of the head-piece *a* to such metal blocks. The perforated blocks *h* may, if desired be provided with set screws *h³*. The glass tube *g* is, as aforesaid, held in position by approved cement *g'* and centrally placed therein and depending from a cemented position at *m³* is a rod *m* preferably of brass, its bottom end *m'* terminating in a screw-thread for engaging with a supporting nut *m²*. This rod *m* forms a supporting and steadying standard for a sleeve *n*, placed thereon, the latter being kept up to its work by the supporting nut *m²* aforesaid.

In the cap-piece *n'* of the sleeve *n*, are the negative and positive pins *h²* which enter into contact with the perforated blocks *h* hereinbefore referred to and respectively receive their supply of electrical energy therefrom, the set screws *h³* being tightened to effect electric connection with their respective parts.

Integrally with, or securely fastened to, the top and bottom cap-pieces *n'* of the sleeve *n* (which latter is constructed preferably of glass,) are the filament supporting wires *o* hooked at their ends and attached or depending therefrom is set or arranged the filament *i* for giving off the light and heat. The bottom of the sleeve *n* is provided with an enlarged base under which the supporting nut *m²* goes.

A tubular passage preferably of brass piping *p* enters near the lower portion of the head-piece *a* to enable the vacuum condition to be attained in the interior of the bulb.

The upper portion of this tube *p* is slightly flared as shown to receive a soft metal tube *r* which is lightly soldered therein, the whole being so arranged that when the whole construction is completed and a condition of vacuum is brought about in the bulb by suction through such pipe *p* from pumps or other suitable means, the soft metal tube *r* may be squeezed flat by pliers and so collapsed to effect an hermetic closure—the upper part of the tube *r* may then be cut off at such flattened part, and metal solder *r²* may be applied to the end of the flattened part to reinforce the closure.

By the construction I have above described, I am enabled, when a filament as *i* has become fractured, burnt out or exhausted, to nip off the closed outer end of such soft metal tube *r*, unscrew the annular nut *c* at its screwed joint, and by removing the bottom supporting nut *m*² from under the standard rod *m* to remove the sleeve *n* and send same to the workman for refitting.

By such means as I have described the glass bulb *d* and the interior and exterior fittings are re-usable indefinitely, whereas at present such parts are wasted.

I claim:—

1. An incandescent electric lamp comprising a headpiece and a glass bulb having co-operative connecting screw threads, a ring of packing material arranged to be compressed by said headpiece and bulb, jointly, to form an air-tight seal, a body of cementitious material fastened in said headpiece, a stem fastened in said material and projecting therefrom into said bulb, a sleeve of non-conducting material arranged on said stem and removable endwise therefrom, detachable means carried by said stem and arranged to retain said sleeve thereon, a filament carried by said sleeve, means for feeding an electric current through said cementitious material to and from said filament, said means including contact members permanently fastened to said headpiece, and including contact members carried by said sleeve so as to coöperate with the contact members first mentioned, and means carried by said headpiece for obtaining and retain-

ing a condition of vacuum in the bulb, substantially as described.

2. An incandescent electric lamp comprising a headpiece screw-threaded at its lower portion, a glass bulb having at its upper portion a corresponding screw thread to engage therewith, means to effect a sealed joint between the headpiece and the bulb, a depending standard fastened in the headpiece, a filament-holding sleeve to fit adjustably on the standard, a bottom nut for supporting the sleeve, a depending tube fixed in cement in the headpiece and holding metal blocks shaped to receive the metal plugs leading from the filament, means for conveying the electric current to the filament, and means for obtaining and retaining a condition of vacuum in the bulb substantially as and for the purposes set forth.

3. In an incandescent electric lamp, a headpiece and a detachable glass bulb having co-operative connecting portions, sealing means arranged to make air-tight the joint between them, and an air-exhausting tube extending through the wall of said head-piece, the outer portion of said tube being composed of soft ductile metal and being capable of being flattened to close the passageway there-through.

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

DELBERT RILEY BAITY.

Witnesses:

ALICE HARKER,
FLORENCE SINCLAIR.