

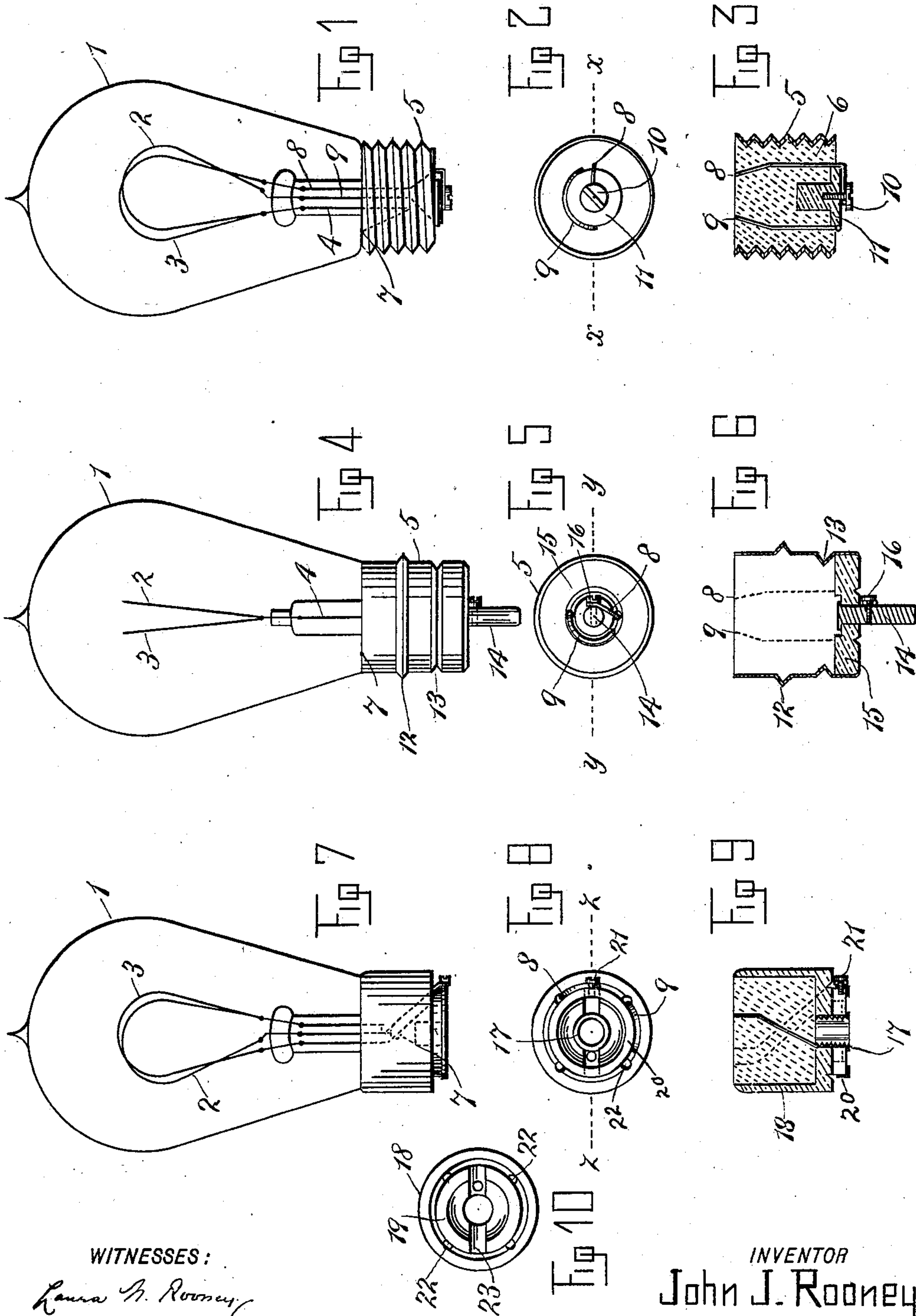
No. 711,532.

Patented Oct. 21, 1902.

J. J. ROONEY.
INCANDESCENT ELECTRIC LAMP.

(Application filed Nov. 14, 1901.)

(No Model.)



WITNESSES:

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JOHN J. ROONEY, OF SCARSDALE, NEW YORK.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 711,532, dated October 21, 1902.

Application filed November 14, 1901. Serial No. 82,192. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. ROONEY, a citizen of the United States, residing in Scarsdale, in the county of Westchester and State of New York, have invented a new and useful Improvement in Incandescent Electric Lamps, of which the following is a specification.

My present invention has relation to incandescent electric lamps having a number of filaments so arranged that any one of them may be put in circuit alone at will whether or not any other be broken; and the principal object of said invention is the provision of a lamp of this character requiring no specially-constructed socket, but adapted to be put into standard sockets already common for use with the ordinary single-filament lamp.

A further object of my invention is the provision of a lamp of the general character above described which neither requires to be turned in its socket for substitution of filaments nor is liable to disturbance in operation by any accidental turning of this character.

Under the conditions hitherto obtaining incandescent lamps burn, say, five hundred hours and then are altogether discarded because of poor lighting value and excessive watts per candle-power. By the use of my present invention any user of a lamp is able to substitute a new filament of high candle-power, affording light under relatively economical conditions, for a filament which has burned so long as to give a poor light with low economy. Thus the light of a lamp is doubled by giving it two filaments, while its first cost is but little raised.

My invention is susceptible of various modifications of form; but I have shown three preferred embodiments thereof in the accompanying drawings, wherein—

Figure 1 is an elevation of a preferred form of my lamp adapted for use with the well-known Edison screw-socket. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical section taken on the plane xx in Fig. 2. Figs. 4, 5, and 6 are similar views of my lamp as adapted to a second form of socket. Fig. 7 is an elevation of still another form of my lamp. Fig. 8 is a bottom view thereof. Fig.

9 is a similar view of the same with the ring-contact removed, and Fig. 10 is a sectional view on the plane zz of Fig. 8.

Heretofore double-filament lamps have been constructed so as to permit of putting one or the other of the two filaments into circuit at will; but so far as I am aware these require specially-constructed sockets. Moreover, the operation of substituting one or the other of the filaments depends upon turning the lamp in its socket. The accepted standard sockets in this country are principally of the screw variety, wherein the lamp is screwed into its place. It is, furthermore, a characteristic of the great majority of incandescent lamps used here that one of the terminals is placed centrally in the bottom of the lamp and fits into or upon a centrally-placed terminal in the socket. Such an arrangement is not well fitted for use with lamps arranged to substitute filaments by turning in their sockets.

My improved lamp is of a character for use with any of the commonly-used standard lamp-sockets accepted in United States practice and does not depend upon the turning of the lamp or upon the use of eccentrically-placed contacts or other parts either in the lamp or socket.

The bulb of an incandescent lamp is shown in the drawings at 1, the two interior filaments being shown at 2 and 3, the same having a common return connection 4.

The particular form of the lower end of the lamp and the material used therein are both immaterial to my present invention. In Fig. 1 I have shown the exterior or male screw on the neck as used in the common Edison lamp, and in Fig. 3 the plaster or other insulating base is shown at 6.

As shown at 7 in Fig. 1, the common return 4 is soldered or otherwise connected to the screw-sleeve 5, which latter acts in a well-known manner as the exterior terminal of the lamp. Connecting-wires 8 and 9 lead, respectively, from filaments 3 and 2, and their ends are left protruding from the lower end of the lamp-neck.

The second terminal of the lamp is supplied by the head of the screw 10, under which one of the wires, as 8, is secured. (See Fig. 100

2.) The screw 10 is preferably inserted into an insulating stud or support 11, embedded in the plaster or other appropriate material 6.

While the filament 3 is in circuit, the wire 8 is secured under the screw 10, as shown, the wire 9 then being pressed down upon the base of the lamp and around the washer or stud 11. (See Figs. 2 and 3.)

If it is desired to substitute the filament 2 for 3, however, the wire 9 is secured under the screw, while the wire 8 is pressed down, as shown for wire 9 in the drawings. By making this simple change one or the other filament 2 or 3 may be put in circuit independently of any change in the lamp-socket, and therefore my lamps may be sold to customers employing well-known forms of standard sockets.

In Figs. 4, 5, and 6 another form of lamp is illustrated, adapted for use with well-known spring-sockets. Here the sleeve 5 has a circular ridge 12 and a circular depression 13, adapted to be held by corresponding parts in the spring-socket. The outer terminal is the sleeve 5, to which the common return-wire 4 is connected, as at 7. The other lamp-terminal is a central one, as commonly employed in these lamps, and is composed of a metallic projection 14. This is held by an insulating-washer 15 in the base of the lamp. A screw 16 is employed for connecting to this central terminal either of the wires 8 or 9, according as the filament 3 or 2 is to be in circuit.

It is not essential to my invention that the permanent connection should be made with an eccentric terminal, as 5, and the changeable connection with a central terminal. This arrangement may be inverted—as, for instance, in the form shown in Figs. 7 to 10. These figures show another well-known form of lamp as modified to accord with my invention. Here the sleeve-terminal is not used. The central terminal is a screw-socket 17, set into the insulating-base 18. There is a circular projection 19 in the under side of this base 18, (see Fig. 9,) and onto this projection fits the circular terminal 20, preferably of the cross-sectional form shown in Fig. 10. The wires 8 and 9, respectively, leading from the two filaments may be connected to

the eccentric terminal 20 by means of the screw 21. The holes 22 are to admit the wires 8 and 9, and the radial cross-channels 23 are to give room to the head of the screw 21. The holes through the base for admission of wires are shown duplicated on the two sides. This is found convenient in manufacture, as it makes it possible to fasten the wires 8 and 9 to either side of the ring-terminal 20.

I am aware that lamps have been hitherto proposed wherein a new filament could be substituted for an old one without using special sockets; but this substitution, so far as I am aware, has been only practicable in these earlier forms of lamp after the old filament was broken. Such devices do not accomplish my object, since they afford no remedy for merely worn-out lamps, such as have now to be discarded, as heretofore described.

A number of modifications may be made in the lamp, as herein shown and described, without departing from the spirit of my invention, and I am not to be understood as limiting myself to the precise details set forth in said description.

What I claim is—

1. In an incandescent electric lamp, a base having two external contact-pieces, two filaments in the lamp, a common electric connection between said filaments and one of said contact-pieces and wires from the opposite end of each filament leading out of the base and protruding from it near the other of said contact-pieces.

2. In an incandescent electric lamp, a base having two external contact-pieces, two filaments in said lamp, a common electric connection between said filaments and one of said contact-pieces, wires from the opposite end of each filament leading out of said base and protruding from it near the second contact-piece and said second contact-piece being provided with means whereby one or the other of said wires may be temporarily connected thereto at will.

JOHN J. ROONEY.

Witnesses:

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