

(No Model.)

H. F. SCHAEDEL.
INCANDESCENT ELECTRIC LAMP.

No. 586,275.

Patented July 13, 1897.

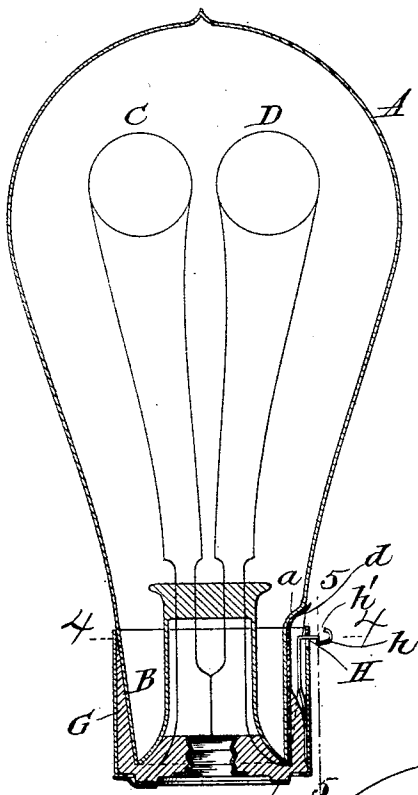


Fig. 1 F

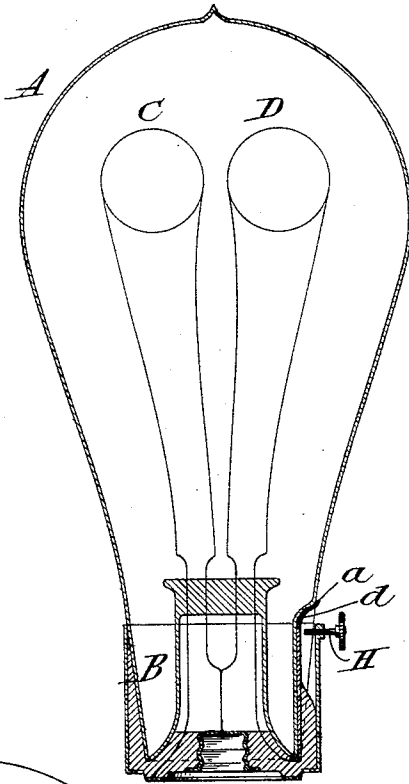


Fig. 2 F

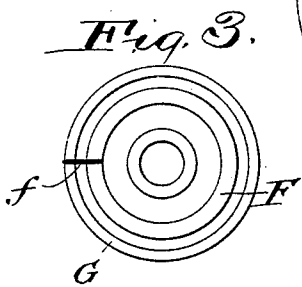


Fig. 3 F

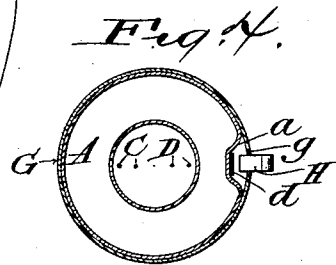


Fig. 4 F

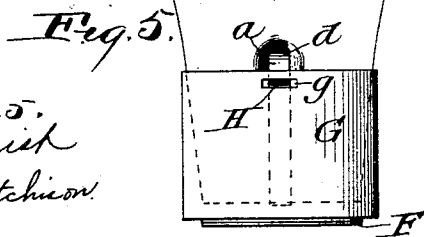


Fig. 5 F

Witnesses.
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UNITED STATES PATENT OFFICE.

HERMANN F. SCHAEDEL, OF CLEVELAND, OHIO.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 586,275, dated July 13, 1897.

Application filed July 6, 1896. Serial No. 598,146. (No model.)

To all whom it may concern:

Be it known that I, HERMANN F. SCHAEDEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Incandescent Electric Lamps; and I do hereby 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.

My invention relates to certain improvements in incandescent electric lamps containing two carbons.

The object of the invention is to produce a double-carbon incandescent lamp adapted to be used with the ordinary lamp-fittings and containing within itself cheap and simple means which permit the use of one carbon alone until it is destroyed, and after that the use of the remaining carbon, or which permits both carbons to be connected whenever desired in multiple arc with the lamp-terminals, whereby both may be used simultaneously.

The invention consists in the construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a sectional side view of my improved lamp. Fig. 2 is a similar view of an alternative construction. Fig. 3 is a bottom view of the lamp shown in Fig. 2. Fig. 4 is a sectional view on line 4 4 of Fig. 1, and Fig. 5 is an elevation of the lamp shown in Fig. 1 viewed from the right side of said figure.

Referring to the parts by letters, A represents an incandescent-lamp globe, and B the stem thereof, which is sealed in the globe in the usual manner. C and D represent two carbons contained within said globe, their ends passing through and being sealed in the stem. One end of both carbons is permanently connected with one of the lamp-terminals. The other end of the carbon C is permanently connected with the other lamp-terminal F. This terminal may be an insulated piece of metal having any convenient form—as, for example, a ring set in plaster-of-paris, fiber, or other insulating material contained within the neck of the globe, as shown in Fig. 2, or it may be the metal cap

G, which surrounds the neck of the globe, as shown in Fig. 1, both of which constructions are in themselves old. In the former case the ring is electrically connected with the cap by a wire *f*, whereby the cap becomes a part of said lamp-terminal. The free end of the carbon D is electrically connected with a thin insulated metal plate *d*, which lies between the cap and neck of the globe in a depression or groove *a* in said neck, wherefore said plate does not normally make contact with the said cap. This metal plate may be set in the plaster-of-paris with which the neck of the globes are commonly filled, or it may be held in the described position by any other suitable means.

H represents a switch which is supported by the cap G, and its construction is such that an electrical connection may be made and broken at will between the cap G and the contact-plate *d*. Any form of switch by means of which this result may be attained may be employed. In Fig. 1 the switch consists of a piece of spring metal which is secured to the inside of the cap near its lower edge, from which point it extends upward and then is bent outward, passing through a slot *g* in said cap. Normally this spring lies close to the cap and does not touch the contact-plate *d*; but when its upper end is pushed inward it is brought into contact with said contact-plate *d*, and the outwardly-turned end *h* of the spring is bent, as shown, so as to form a shoulder *h'*, which engages with the upper edge of the slot *g*, and thereby holds the spring in said position, as shown by dotted lines in Fig. 1.

In Fig. 2 the switch is in the form of a screw which is screwed through the metal cap and may be screwed far enough to cause it to engage with the contact-plate *d*.

When the cap G and contact-plate *d* are not electrically connected by the switch, the carbon C is alone connected with the lamp-terminals, and it may be used alone until burned out, if desired, or both carbons may be connected in multiple arc with said lamp-terminals by operating the switch, and thus electrically connecting the contact-plate *d* with the cap G. If the carbon C is used until burned out, the carbon D may be connected with the lamp-terminal F by the described

operation of the said switch, and it may then be used until burned out.

I am aware that I am not the first to construct an incandescent lamp containing two carbons, and I therefore do not make any claim to this construction broadly. My object has been to provide cheap, simple, and practical means forming a part of the lamp whereby both carbons could be simultaneously connected in a circuit in multiple arc, thereby practically doubling the candle-power, or could be successively connected in in said circuit, thereby doubling the life of the lamp, and I believe I am the first to construct a double-carbon incandescent lamp capable of being used with the ordinary lamp-socket and having a switch adapted to be operated without removing the lamp from its socket, whereby both carbons may be connected in the circuit in multiple arc or one carbon may be connected and burned until destroyed and after that the other carbon may be connected and burned.

Having described my invention, I claim—

1. As a new article of manufacture, an incandescent electric lamp consisting of the following parts, in combination, a globe A, the lamp-terminal E, the metal cap G which embraces the neck of the globe and serves as or is electrically connected with the other lamp-terminal, an insulated contact-plate *d*, the two carbons C and D which are contained within the globe, permanent electrical con-

nections between the ends of carbon C and the terminal E and cap G respectively, permanent electrical connections between the ends of carbon D and the terminal E and contact-piece *d*, and a spring-switch secured to cap G and adapted to be thrown into electrical connection with piece *d*, and held in such connection by the resilience of the spring-switch, substantially as and for the purpose specified.

2. As a new article of manufacture, an incandescent electric lamp, consisting of the following parts, in combination, a globe A having a depression *a* in its neck, the lamp-terminal E, and the metal cap G which embraces the neck of the globe, and which serves as or is permanently connected with the other lamp-terminal, an insulated contact-piece which is secured in said depression *a*, the two carbons C and D contained in the globe, permanent electrical connections between the ends of the carbon C and the terminal E and cap G respectively, permanent electrical connections between the ends of the carbon D and the terminal E and insulated piece *d* respectively, and a switch for electrically connecting the cap G and piece *d*, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HERMANN F. SCHAEDEL.

Witnesses:

E. L. THURSTON,
H. M. HUTCHISON.