

(No Model.)

C. HEISLER.

INCANDESCENT ELECTRIC LAMP.

No. 330,586.

Patented Nov. 17, 1885.

Fig. 1.

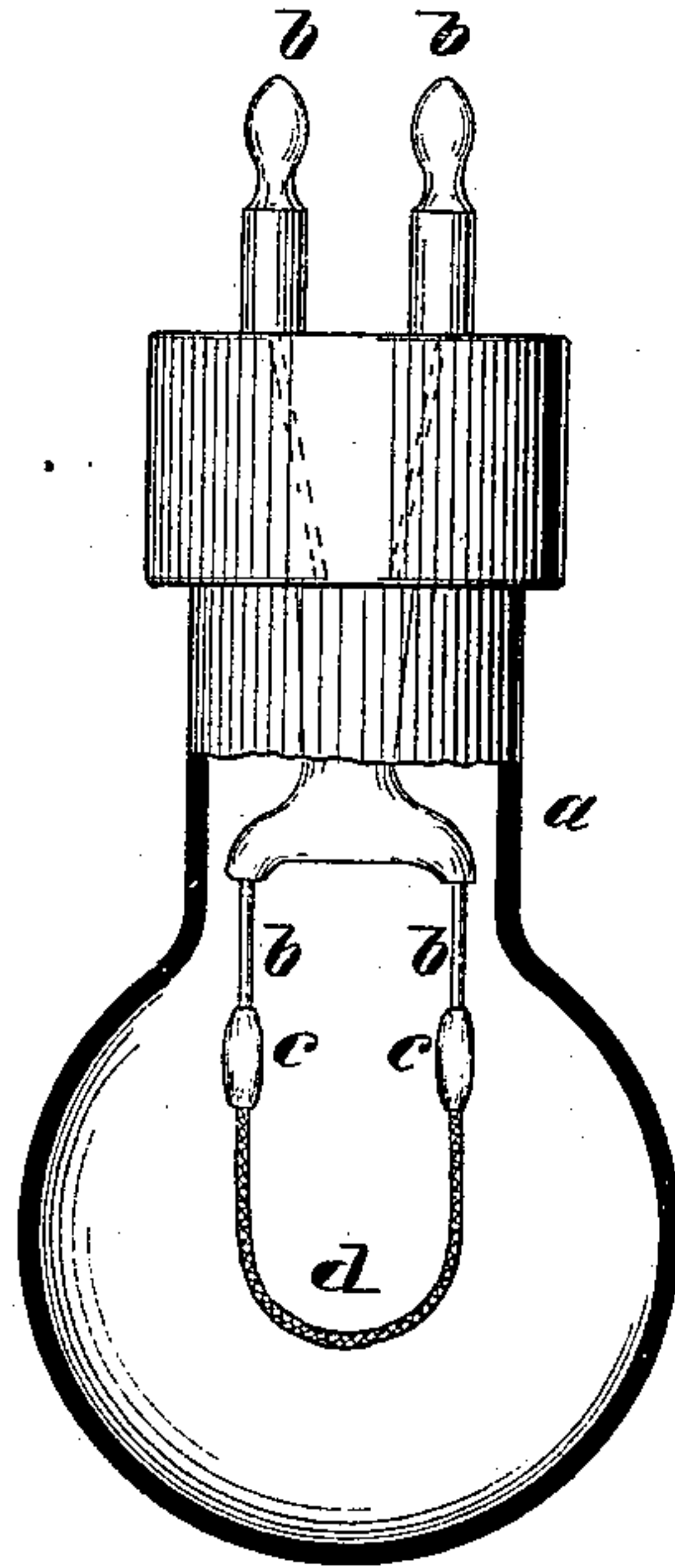


Fig. 2.

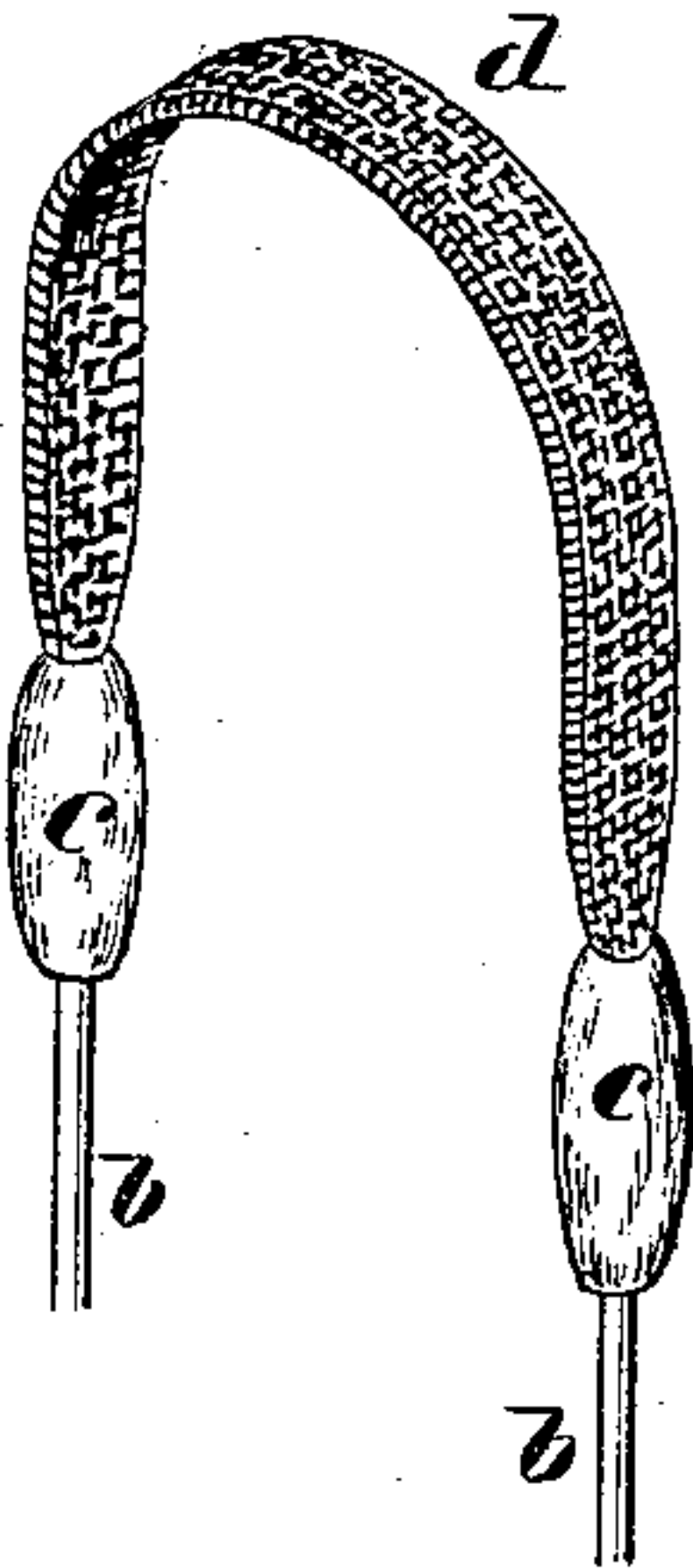


Fig. 4.

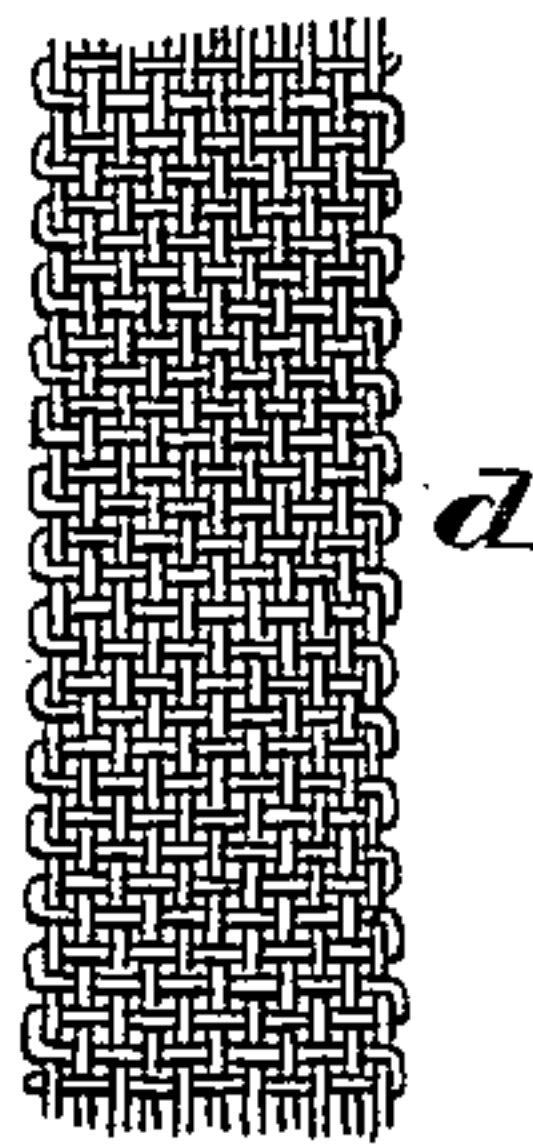


Fig. 3.

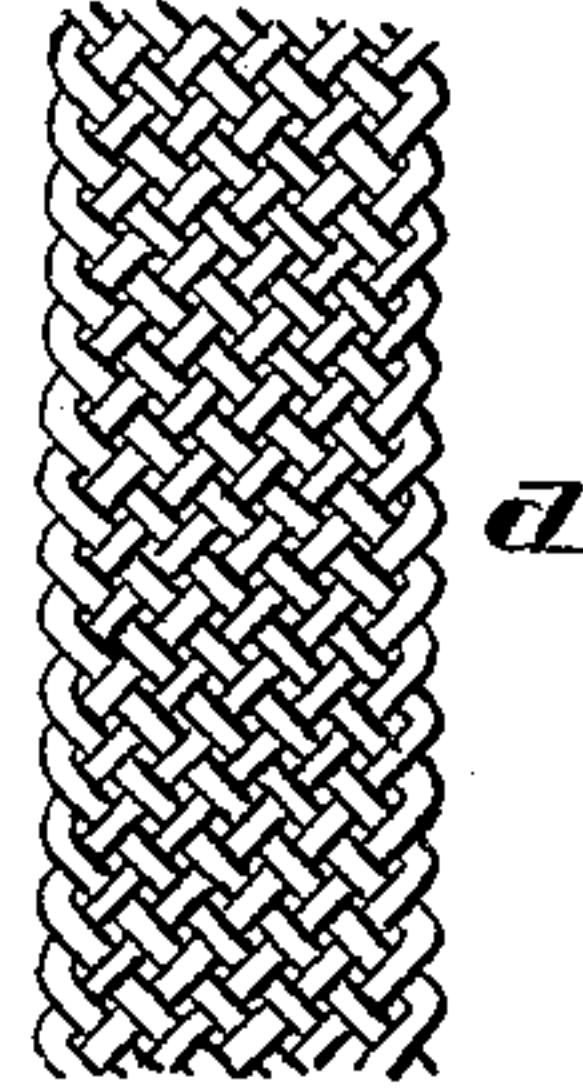
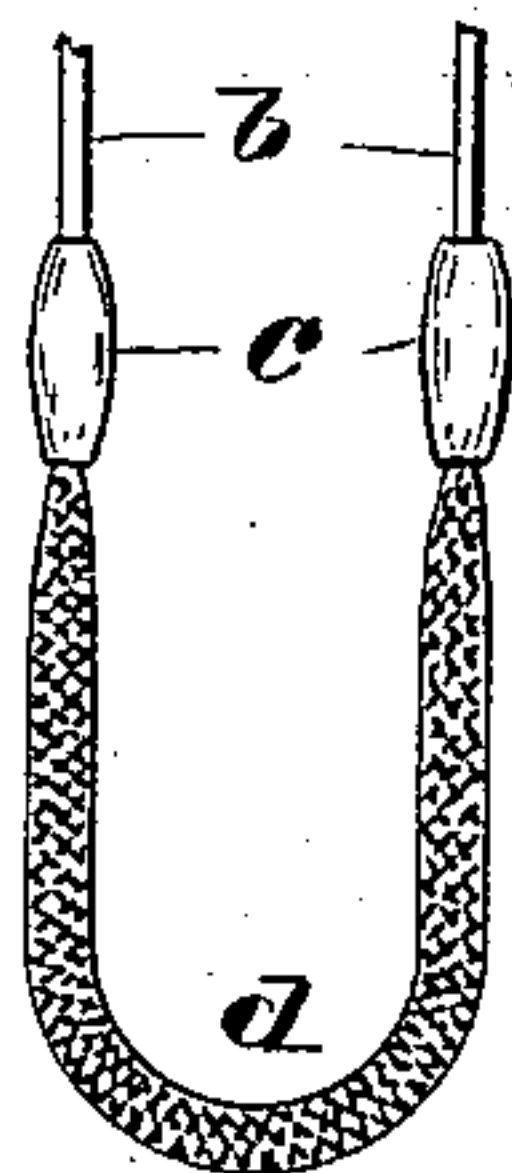


Fig. 5.



Attest;

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INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 330,586, dated November 17, 1885.

Application filed March 30, 1885. Serial No. 160,617. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HEISLER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Filaments for Electric Incandescent Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My improvement consists in forming an incandescent conductor or filament by weaving, knitting, or plaiting textile material into a flat strip or ribbon and then carbonizing the same; or, rather, it consists of the incandescent conductor or filament so formed.

The object of my invention is to produce an incandescent conductor of sufficient resistance, and at the same time to present as large a radiating-surface as possible.

In the drawings, Figure 1 is a side view of an incandescent lamp provided with my improved filament bent to form a curve in the usual manner, the lamp globe or receiver being in section. Fig. 2 is an enlarged view of the filament arranged so that its flat sides form the convex and concave sides of the curve. Figs. 3 and 4 are enlarged details illustrating different modes of combining the textile threads; and Fig. 5 is a view of the filament arranged so that its edges form the convex and concave sides of the curve. The glass globe *a*, conductors *b*, and couplings *c* may have any suitable construction, my invention relating to the incandescent conductor or filament only. This filament is shown at *d*. It consists of a carbonized flat strip, braid,

or ribbon formed of woven, plaited, or knitted threads of textile material. The preferred material is silk.

I am aware that textile material in tubular form has been used for this purpose, and that flat strips of pasteboard and of paper have been so used, and to these I make no claim. In a tubular filament the light radiated from the interior surface of the tube is lost, while with a flat ribbon or strip the whole of the radiating light is available. The resistance of the carbonized woven or plaited strip is greater than that of the carbonized pasteboard, so that a greater amount of heat is produced in the passage of the electric current and an increased amount of light radiated from the filament.

By reference to Figs. 2, 3, and 4 it will be seen that the filament is so braided as to leave spaces or openings between the several threads or groups of threads. The design of this is to increase the radiating-surface of the filament without lowering its electrical resistance.

I claim—

A light-giving conductor for incandescent lamps, consisting of a carbonized flat strip, braid, or ribbon made up of threads of textile material, the said strip, braid, or ribbon having spaces or openings between the threads or groups of threads, substantially as and for the purpose set forth.

CHARLES HEISLER.

Witnesses:

SAML. KNIGHT,
GEO. H. KNIGHT.