

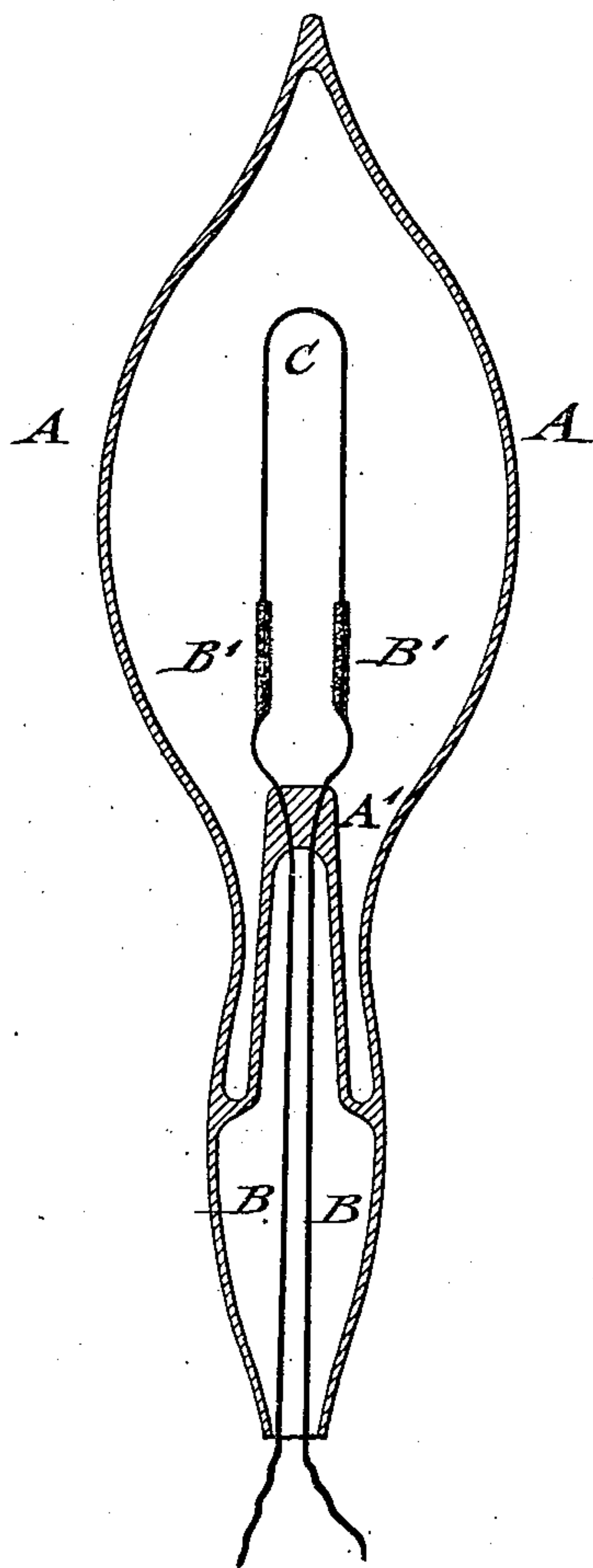
(No Model.)

H. GOEBEL.  
ELECTRIC INCANDESCENT LAMP.

No. 266,358.

Patented Oct. 24, 1882.

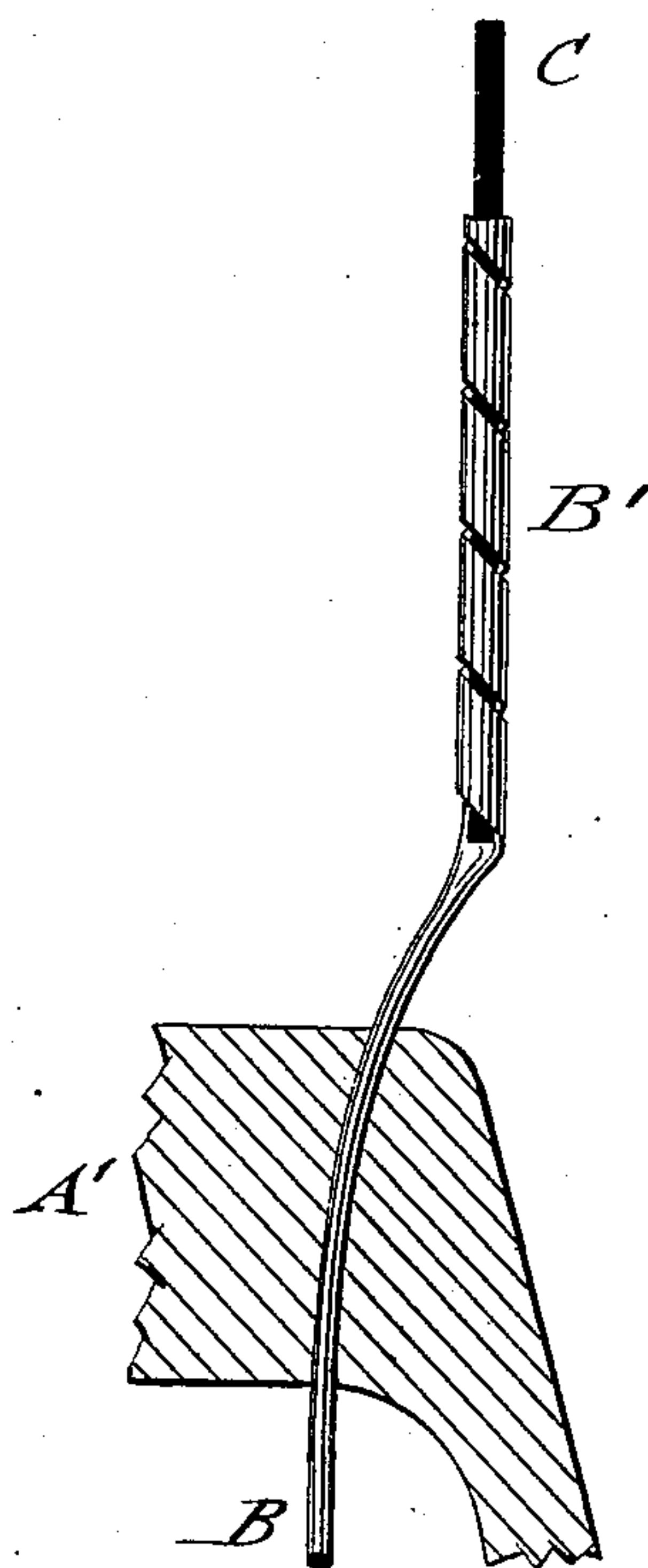
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

HENRY GOEBEL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN W. KULENKAMP, OF SAME PLACE.

## ELECTRIC INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 266,358, dated October 24, 1882.

Application filed January 23, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY GOEBEL, of the city, county, and State of New York, have invented certain new and useful Improvements in Electric Incandescent Lamps, of which the following is a specification.

This invention has reference to an improved electric lamp based on the principle of incandescence; and the invention consists of an electric vacuum-lamp in which the carbon conductor is secured into the flattened and spirally-coiled ends of the metallic conducting-wires and cemented thereto.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved electric lamp. Fig. 2 is a detail side view of the flattened end of one of the conducting-wires; and Fig. 3 is a side view of the flattened and spirally-coiled end of the conducting-wire. Similar letters of reference indicate corresponding parts.

A in the drawings represents a glass bulb, in which a high vacuum is established by any approved apparatus. Through the glass-sealed neck A' of the bulb A are passed the metallic conducting-wires B, which support the carbon conductor C, that forms the light-giving part of the lamp when the current is passed through the same. Any carbonized filament may be employed for the carbon conductor C, the ends of which are secured into sockets B', formed at the interior ends of the conducting-wires B, said sockets being obtained by first flattening and then spirally coiling the ends of the wires B. A cement made of lamp-back or finely-ground plumbago is laid with a brush over the

sockets B', so as to fill up the interstices between the spiral coils of the sockets and form an intimate connection between the carbon conductor and the terminal sockets B' of the wires B. In this manner a large contact-surface between the conducting-wires and the light-giving portion of the lamp is obtained, which has the advantage that the carbon conductor is quickly and easily attached to the wires without requiring any extra plating or carbonizing of the contact-points, and that it is not liable to break at the points of connection therewith.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an electric vacuum-lamp, the combination, with a carbon conductor, of sockets made of flattened spirally-coiled wire integral with the conducting-wires, the lower end of the spiral being bent in toward the center of the sockets, thereby forming a seat for the carbon, substantially as described.

2. In an electric vacuum-lamp, sockets made of flattened spirally-coiled wire integral with the conducting-wires, in combination with the carbon conductor and a coating of carbonaceous cement applied to the ends of the sockets and to the space between the coils, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence two subscribing witnesses.

HENRY GOEBEL.

Witnesses:

PAUL GOEPEL,  
CARL KARP.