

(No Model.)

J. E. BRAUNSDORF.
Carbon Pencil for Electric Light.

No. 235,203.

Patented Dec. 7, 1880.

Fig. 1.

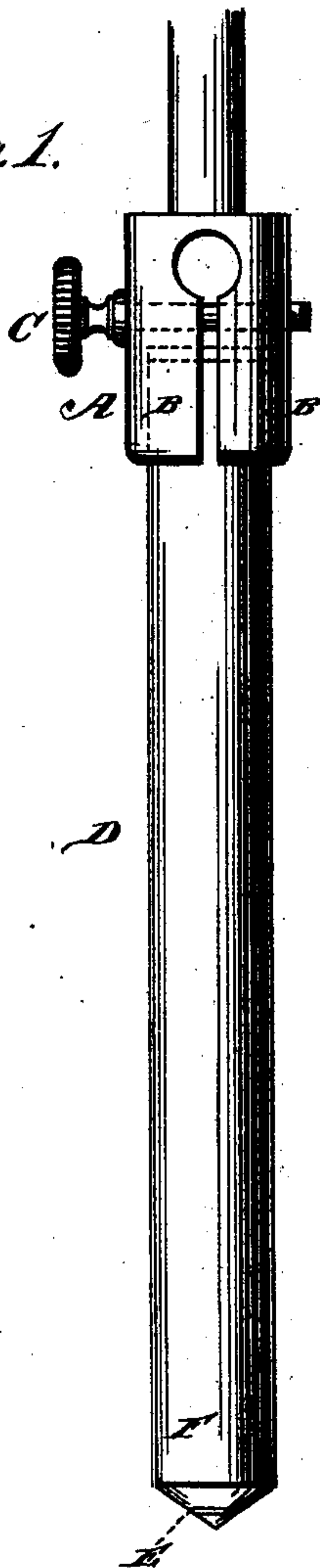


Fig. 2.

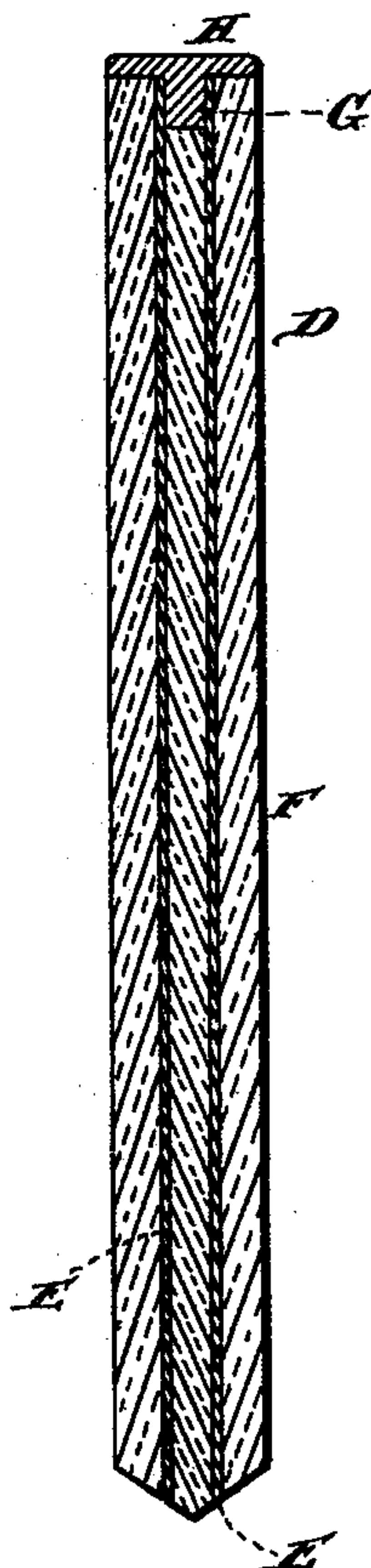
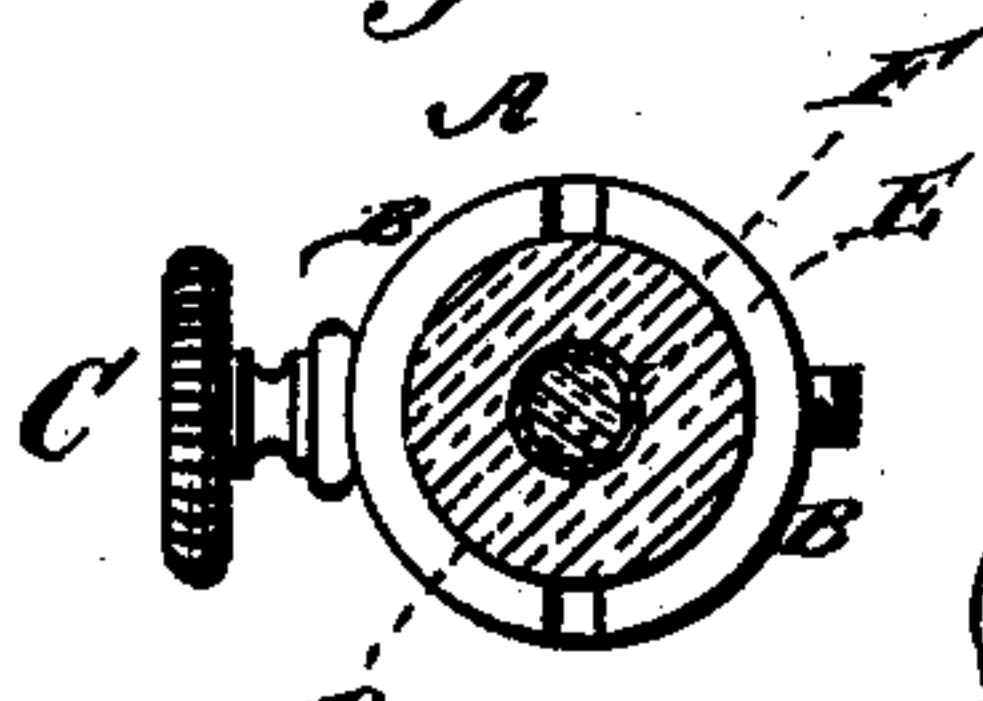


Fig. 3.



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CARBON PENCIL FOR ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 235,203, dated December 7, 1880.

Application filed July 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, JULIUS E. BRAUNSDORF, a citizen of the United States, resident at Pearl River, in the county of Rockland and State of New York, have invented certain new and useful Improvements in Carbon Points for Electric Lights; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has relation to carbon pencils for electric lights; and it consists in the improved features of construction and combination hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side view of my improved carbon pencil and carbon-holder. Fig. 2 is a vertical longitudinal sectional view of the same, and Fig. 3 is a vertical cross-sectional view.

Referring by letter to the drawings, A designates the carbon-holder, composed of the spring-jaws B B, provided with a clamping-screw, C, by which they may be expanded or contracted to release or to grasp the carbon pencil.

D designates the improved carbon pencil, composed of a metallic tube, E, filled with carbon mixed with either lime, magnesia, alumina, soda, strontian, potassium, or any material for coloring or increasing the light, surrounded by a covering, F, of pure carbon, and provided at its butt-end with a metallic pin, G, having a flat annular head, H, which practically covers the end of the carbon pencil D.

The coloring materials used are non-conductors of electricity, and, as heretofore applied, have been mixed with the carbon of which the pencil was formed, and in many instances were not thoroughly mixed. They, therefore, not only reduced the conducting power of the carbon pencil, but, as the latter became highly heated, burned unevenly and produced a flame that played all around the carbon pencil, being sometimes on one side and sometimes at the other of the same.

By separating the carbon mixed with the coloring material from the pure carbon, and placing the same in a metal conducting-tube connected with the carbon-holder through which the electricity is supplied, and placing the non-conducting material so separated in the center of the carbon pencil, I have overcome these defects, and have produced a carbon pencil in which the resistance to the current of electricity is reduced, the light is colored and increased, the carbon burns more evenly and lasts longer, as the metal tube and the non-conducting material therein are consumed with the outside carbon, and the point is of smaller diameter and produces a stronger light.

It will also be understood that a non-conducting material that is not intended to produce any specific color may be mixed with carbon and placed in the metallic tube, which will give to the carbon pencil all of the advantages above enumerated except that of varying the color; also, that the tube may be filled with pure carbon or other conductor of electricity, and present a carbon pencil with a central metallic conducting-tube that will possess superior advantages over the present carbon pencils.

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

1. A carbon pencil provided with a central metallic conducting-tube filled with non-conducting material for increasing or coloring the light, as set forth.

2. In a carbon pencil for electric lights, the metallic conducting-tube filled with non-conducting material and provided with the metallic pin at one end, as described, substantially as and for the purposes set forth.

3. The combination of the central metallic tube filled with non-conducting coloring material, the pure carbon surrounding it, the metal pin, and the clamp carbon-holder, substantially as and for the purposes set forth.

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

JULIUS E. BRAUNSDORF.

Witnesses:

JOHN H. BRAUNSDORF,
J. SERVEN.