(No Model.)

W. M. SPENCER.

SPARK ARRESTER FOR ELECTRIC LAMPS.

No. 476,933. Patented June 14, 1892.

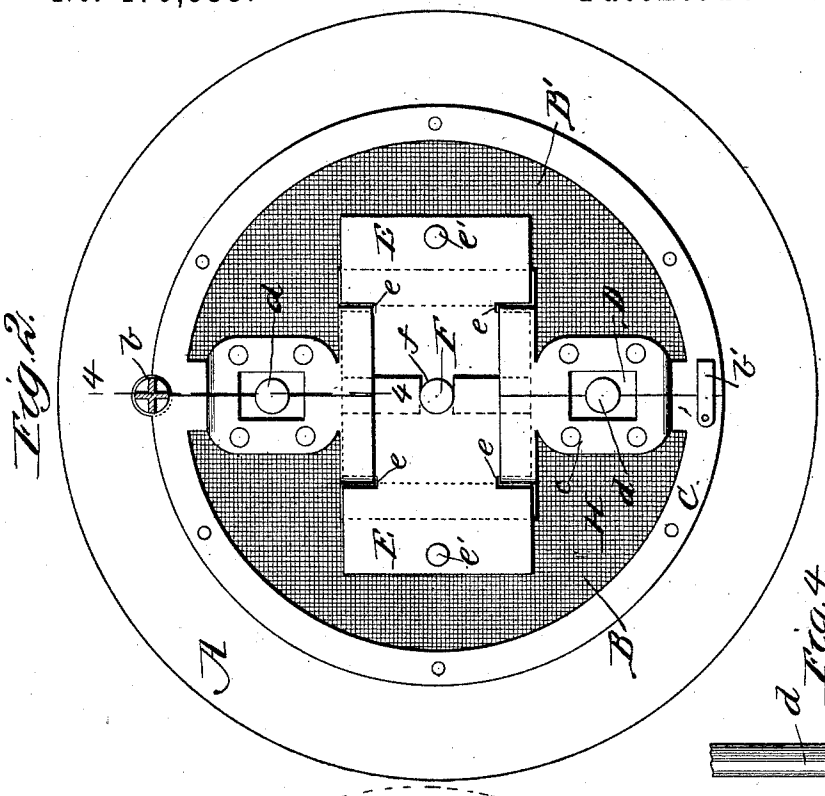

Fig. 2.

Fig. 5.

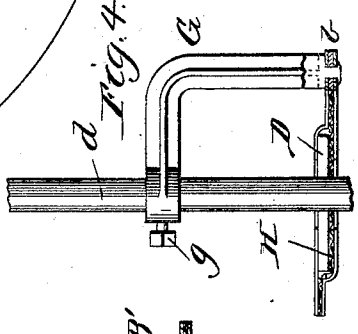

Fig. 4.

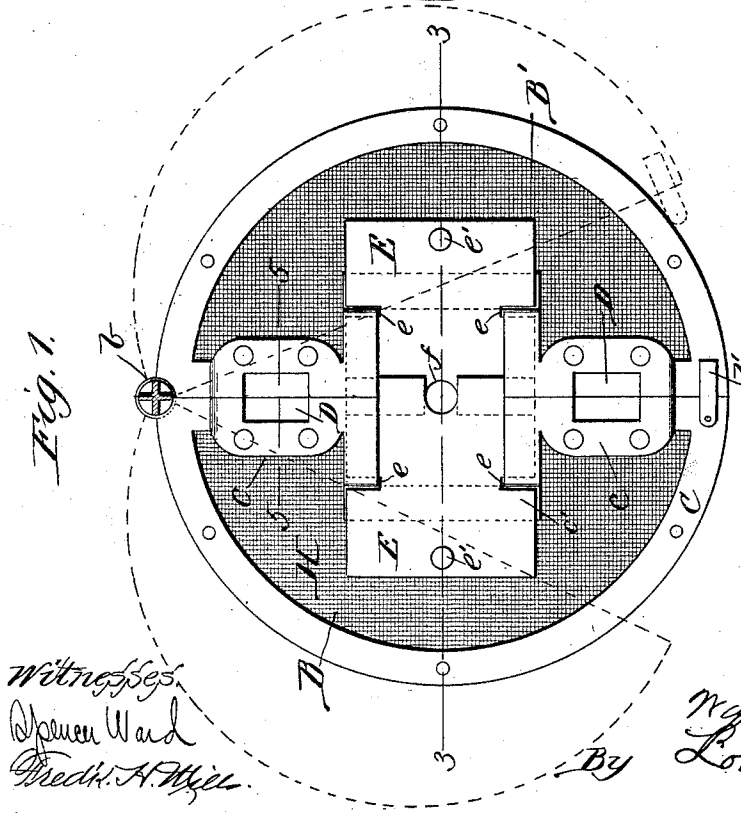

Fig. 1.

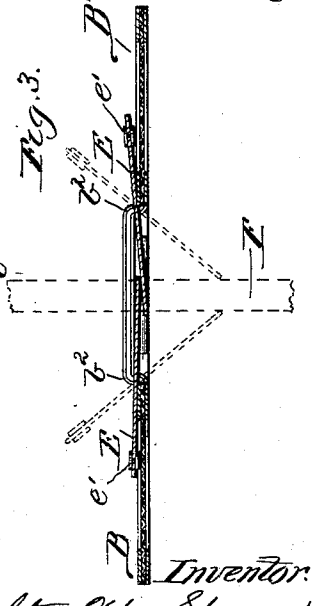

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

WALTER M. SPENCER, OF CHICAGO, ILLINOIS.

SPARK-ARRESTER FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 476,933, dated June 14, 1892.

Application filed February 5, 1892. Serial No. 420,425. (No model.)

To all whom it may concern:

Be it known that I, WALTER M. SPENCER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spark-Arresters for Electric Lamps; and I do 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to spark-arresters for electric-arc lights; and it consists in the adaptation of a reticulated screen to the top of the globe, whereby sparks are effectually prevented from escaping, while ample provision is made for ventilation.

In the accompanying drawings, Figure 1 is a plan view of the device, dotted lines showing its position when open for trimming the lamp. Fig. 2 shows a plan view of the lamp with the spark-arrester attached. Fig. 3 is a sectional view on the line 3 3 of Fig. 1. Fig. 4 is a sectional view on the line 4 4, Fig. 2. Fig. 5 is a sectional view on the line 5 5, Fig. 1.

The globe of the lamp is represented at A. The two halves of the circular spark-arrester are represented at B B′. Inasmuch as these two sections are in all respects alike, the description will be limited to one of them. Section B is bounded by a metal frame C, which is in the form of the arc of a circle, with a cord irregular in shape, as hereinafter described. The two sections of the device are secured together by a pivot-pin *b*, upon which each of them turns, and which is extended upwardly, as shown at G, and bent inwardly and terminating as a clamp, which is secured to one of the supporting-posts *d* of the lamp by the set-screw *g*. While the spark-arrester is designed to rest upon the upper edge of the globe A, it is supported by the rod *d*, so that the lamp-trimmer can readily remove both sections, as shown by the dotted lines in Fig. 1, without displacing it entirely from the lamp or being under the necessity of finding a temporary support for it. The two sections are fastened together when replaced upon the lamp by a spring-clasp *b′* of any desired pattern. It being necessary to insulate the lamp-supporter *d*, insulators D, which I prefer to be of fiber, are secured to the metal frame C at *c c*, these portions of the frame being recessed, so as to allow an aperture to be cut into the fiber to accommodate the rods *d*. It will be advisable to form the recesses at *c* of sufficient width and depth to enable the device to be applied to the various styles of lamps, which will not always be found of uniform construction, the distance between the supporting-rods *d* not always being the same. The outer edge of the insulator D may be left straight in the manufacture of the spark-arrester and the aperture trimmed out when fitting the article to the lamp upon which it is to be used. A recess *c′* is also formed in the frame C, so as to leave an ample aperture for the carbons, only one F of which is shown in the drawings, but which are often two in number. These recesses at *c′* in the two sections of the device being opposite, an aperture of considerable size is provided. It being necessary to close this aperture in order to prevent the escape of sparks, and it being necessary also to provide for this purpose an insulating material, I fit into each of the recesses at *c′* a plate of mica E, which is hung pivotally in the recess by means of slots cut into each side of the plate to receive the metal frame C. These slots are midway of the length of the mica plate, so that it is nearly balanced. A small counter-weight *e′* is fixed upon the outer end of the plate, so as to bring the latter into a horizontal position. Recesses are cut into the forward edge of the mica plate at *f*, so as to fit it nicely around the carbon. As the mica plates are so nearly balanced, the carbon is free to move downwardly without any material hinderance. To prevent the mica plates being overturned, the metal frame C is upset at each side of the recess *c′*, as shown at b^2, Fig. 3. It is advisable to form the frame C of two thicknesses of sheet metal, which should be securely riveted together. Between the two thicknesses of metal is secured a piece of wire fabric H, which fills entirely the intermediate space of each of the frames.

I claim—

1. In a spark-arrester for electric lamps, the combination, with a centrally-apertured re-

ticulated screen for covering the lamp, of tilting plates for closing the central aperture and adapted to fit closely around the carbon, said plates being non-conductors of electricity, substantially as described.

2. In a spark-arrester for electric lamps, the combination, with a centrally-apertured screen for covering the lamp-globe, of tilting plates for covering the aperture, said plates having transverse recesses to engage the sides of the screen-aperture, substantially as described.

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

WALTER M. SPENCER.

Witnesses:
J. H. DORIAN,
M. H. L. WING.