No. 627,106. Patented June 20, 1899.

H. C. FARQUHARSON.

APPARATUS FOR ELECTRICALLY LIGHTING LAMPS.

(Application filed Dec. 8, 1898.)

(No Model.)

Fig. 1.

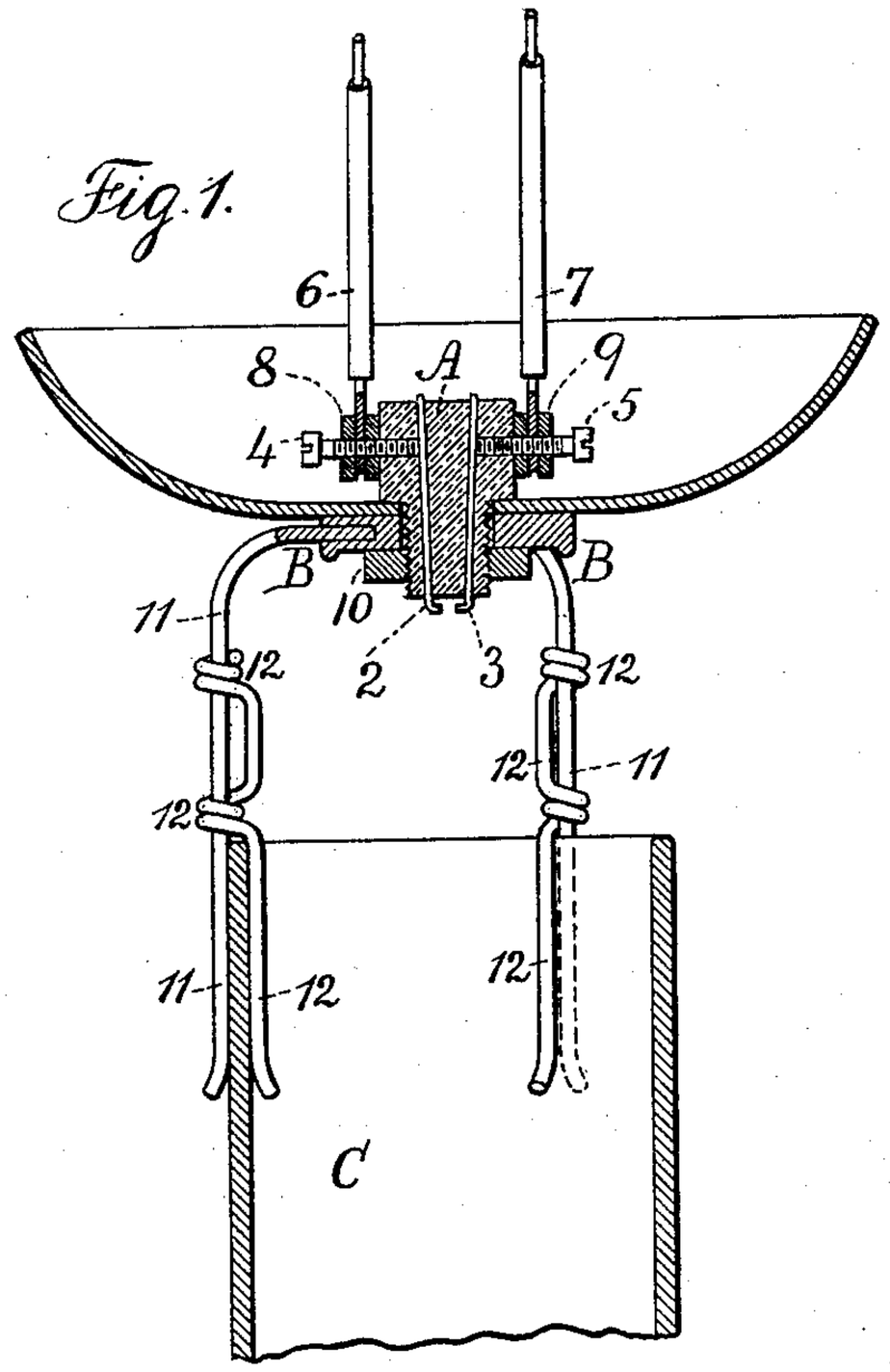
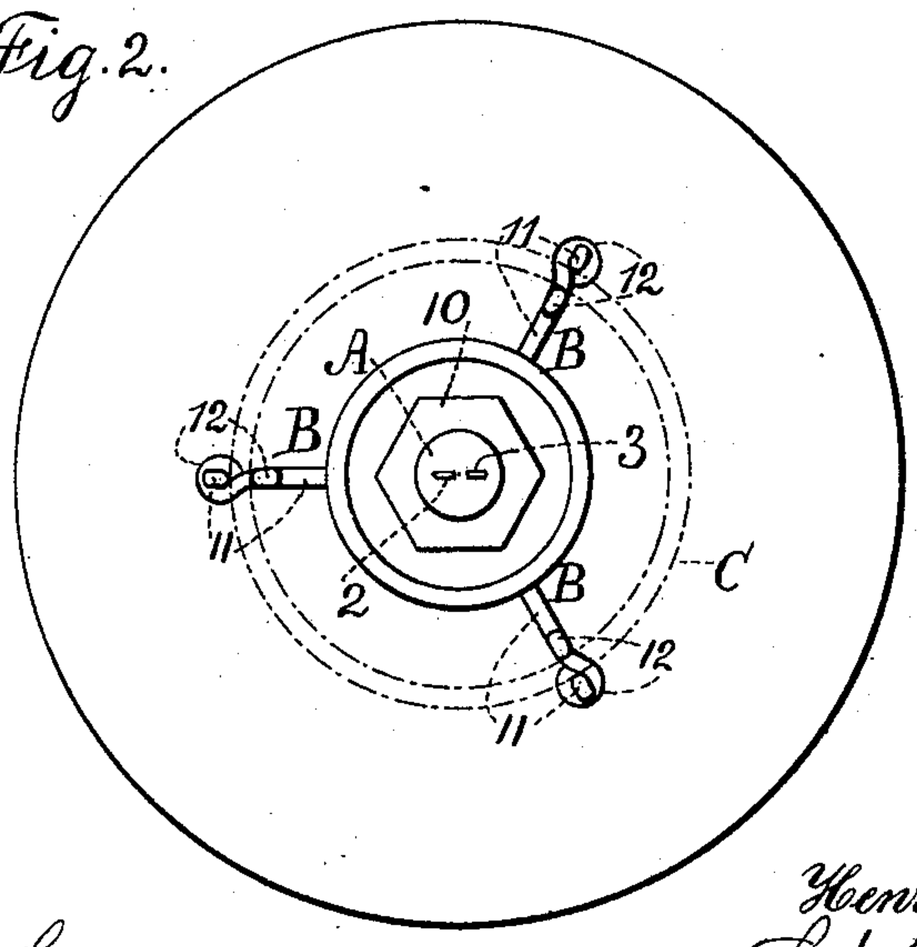


Fig. 2.



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UNITED STATES PATENT OFFICE.

HENRY C. FARQUHARSON, OF NEW YORK, N. Y.

APPARATUS FOR ELECTRICALLY LIGHTING LAMPS.

SPECIFICATION forming part of Letters Patent No. 627,106, dated June 20, 1899.

Application filed December 8, 1898. Serial No. 698,593. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. FARQUHARSON, a citizen of the United States, residing in the city, county, and State of New York, have invented an Improvement in Apparatus for Electrically Lighting Lamps, of which the following is a specification.

Car and other lamps have been made with a chimney above the burner, and the gas or mixture of gas and air has been ignited above the burner. This is especially the case with lamps having incandescing mantles. In lamps or lights of this character difficulty has been experienced in obtaining access to the upper part of the chimney so as to apply a match or torch at this place, and this difficulty is augmented where the lamp is a fixture in the upper part of a car.

When electrical appliances are employed for igniting the fluids, it is important that these should be substantially central to the chimney in order that the electric spark may be within the ascending column of hydrocarbon fluids, because such ascending column is usually central to the chimney, and it is advantageous to support the electrical devices by arms the lengths of which can be varied so as to bring the spark-points central to the chimney.

The present invention is made with reference to supporting the spark-points substantially central to the chimney or in the position at the upper part of the same where the hydrocarbon fluids ascend, so that the electric spark may be reliable in its action in igniting such hydrocarbon fluids. With this object in view the spark-points are retained in a holder of fireproof non-conducting material, and there are arms extending from the same and preferably adjustable in length and resting upon the upper end of the chimney, so as to hold the spark-points within the column of hydrocarbon fluids that ascend from the burner in order that the electric spark between the points may act reliably in igniting such hydrocarbon fluids.

In the drawings, Figure 1 is a vertical section illustrating the present improvement as applied to a lamp-chimney; and Fig. 2 is an inverted plan view of the same, indicating the position of the chimney in dotted lines.

Where the lamp has two or more chimneys, the device herein described may be applied to more than one of the chimneys, the electric connections being such as to give the necessary sparks at two or more places; but I have only herein described one of the devices.

The holder A is to be of feldspar or other refractory non-conducting material, and through it are two holes for the spark-point wires 2 and 3, and the ends of these wires project and are sufficiently near for the electric spark to be drawn between them, and the spark-point ends are to be downward or toward the burner or gas-jets, and the spark-point wires are secured into the holder by lateral screws 4 5, and the electric conductors or wires 6 7 are brought in any suitable manner and connected with the spark-point wires, preferably by looping the ends of the wires around the screws and to which they are confined by clamping-nuts 8 9.

The spark-point holder A is passed through a central opening in the spider or frame B, that is adapted to rest upon and connect with the upper end of the chimney C, and the holder and spider are advantageously permanently connected by a nut 10 upon the spark-point holder, serving to clamp the spider between the nut and the head of the holder, and the arms of this spider are extensible, so as to adapt such spider to chimneys of different sizes. A convenient way of making the arms is to use three wires 11, that extend out from the central portion of the spider B, so that they can be bent to suit the size of the chimney, and to use wires 12, with loops or eyes on their upper ends, through which the wires 11 pass, and which rest upon the upper end of the chimney or adjacent to the burner and form clips to hold the parts in position, and the electric device can be raised or lowered, the eyes on the wires 12 applying the friction necessary to hold the parts, and such electric devices can be applied with facility to any lamp already constructed or in position without materially changing such lamp, and by the adjustable arms to the spider the spark-points can be brought into position for the hydrocarbon fluid to ascend directly against the end of the spark-point holder, so that the spark between the points of the wires 2 and

3 will be directly in the ascending column of hydrocarbon fluid and ignite the same, the flash extending down to the burner-jets.

In consequence of the spark-point holder being of refractory material and a non-conductor of electricity the same is not injured by the heat from the flame, and the spark-point wires are protected and the entire device is not liable to injury by the heat and can readily be applied to any burner already in use.

I claim as my invention—

1. The combination with the spark-point holder having holes through it and spark-point wires in such holes and clamping devices for the spark-wires, of a spider having an opening through which the spark-point holder passes and arms variable in length and adapted to rest upon and be supported by the lamp-chimney, substantially as set forth.

2. The combination with the spark-point holder having holes through it and spark-point wires in such holes and clamping devices for the spark-wires, of a spider having an opening through which the spark-point holder passes, arms, each made of two parts, one sliding upon the other, and clips at the outer ends adapted to rest upon the upper end of the lamp-chimney and to connect the spider therewith, substantially as set forth.

Signed by me this 5th day of December, 1898.

HENRY C. FARQUHARSON.

Witnesses:

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