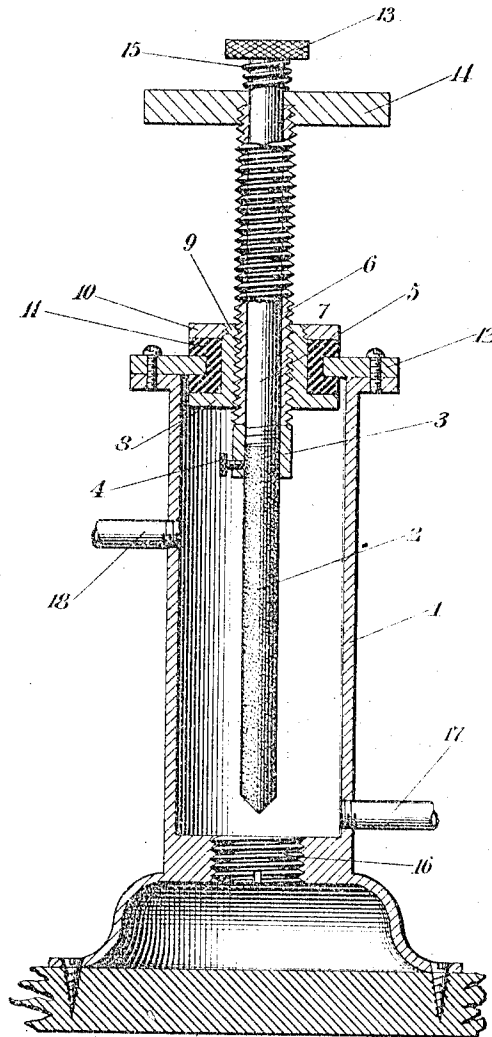


W. DUBILIER.
ELECTRODE DEVICE FOR HIGH FREQUENCY APPARATUS.
APPLICATION FILED OCT. 20, 1911.

1,121,077.

Patented Dec. 15, 1914.



Witnesses:
V. S. Lloyd
J. F. Fendernoll

Inventor
William Dubilier
By *Attorneys*
Prindle & Wright

UNITED STATES PATENT OFFICE.

WILLIAM DUBILIER, OF BROOKLYN, NEW YORK.

ELECTRODE DEVICE FOR HIGH-FREQUENCY APPARATUS.

1,121,077.

Specification of Letters Patent.

Patented Dec. 15, 1914.

Original application filed November 21, 1910. Serial No. 593,365. Divided and this application filed October 20, 1911. Serial No. 655,725.

To all whom it may concern:

Be it known that I, WILLIAM DUBILIER, whose residence is No. 176 North Fourth street, Brooklyn, New York, have invented a certain new and useful Improvement in Electrode Devices for High-Frequency Apparatus, and do hereby declare that the following is a full, clear, and exact description thereof.

10 The object of my invention has been to provide an electrode device for high frequency apparatus, which shall be simple, reliable, capable of being easily re-started, and capable of using a hydro-carbon atmosphere, and to such ends my invention consists in the electrode device for high frequency apparatus hereinafter specified.

In the accompanying drawings the figure is a vertical sectional view of the device.

20 I have illustrated that form of my device which is the best form known to me, but it is to be regarded as typical only of many possible embodiments.

25 The form chosen for illustration comprises a hollow casing 1 of any suitable conductive material, and an electrode 2 within said hollow electrode. The electrode 2 is clamped in a sleeve 3, as by a screw 4. The sleeve is secured on a rod 5, that is mounted in a threaded sleeve 6, the latter being threaded into a bushing 7. The bushing consists of a disk 8, a sleeve 9 and a disk 10, screwed on the sleeve, the said disks clamping between them insulating material 11, which is placed on opposite sides of and against a disk 12 screwed to the open end of the hollow electrode. A hand-wheel 14 is secured to the sleeve 6, so that the latter may be adjusted up and down in the bushing. A collar 13 is secured to the upper end of the rod 4, and a spring 15 is interposed between said collar and the hand-wheel, so that it tends to draw the sleeve 3 against the lower end of the sleeve 6. The lower electrode 16 is preferably made separate from the cup 1

so that it can be readily renewed. By this arrangement, the electrode 2 can be adjusted the proper distance from the lower electrode 16, by turning the hand-wheel, and the arc can then be started by simply depressing the rod 5. Upon releasing the said rod, the spring will raise the electrode 2, so that the proper degree of separation will automatically occur between the electrodes. The hollow electrode is provided with a pipe 17, through which gas may be introduced or a mixture of gas and air, and with an escape 18 for the products of combustion, thus enabling an atmosphere of hydro-carbon or other gas to be provided, in which a high frequency arc may be formed.

This application is a division of my application for high frequency apparatus, Serial No. 593,365, filed Nov. 21st, 1910, now Patent Number 1,023,135, issued Apr. 16, 1912.

I claim:

In a device of the character described, an electrode in the form of a hollow cup and having a removable piece in the closed end thereof, a bushing mounted in the open end of said cup and insulated therefrom, a sleeve provided with a hand wheel and threaded in said insulated bushing, a rod provided with a collar and slidably mounted in said sleeve, a coil spring mounted on said rod between said hand wheel and said collar, a sleeve mounted on the lower end of said rod and adapted to limit the upward movement of said rod, and an electrode mounted in said last-named sleeve with its sparking end opposite said removable piece in the closed end of said cup.

In testimony that I claim the foregoing I have hereunto set my hand.

WILLIAM DUBILIER.

Witnesses:

V. G. LLOYD.

J. FRENDENVOEL.