H. R. VON TRAUBENBERG.

RADIO TELEGRAPHY.

APPLICATION FILED FEB. 10, 1908..

912,209. Patented Feb. 9, 1909.

Fig. 1.

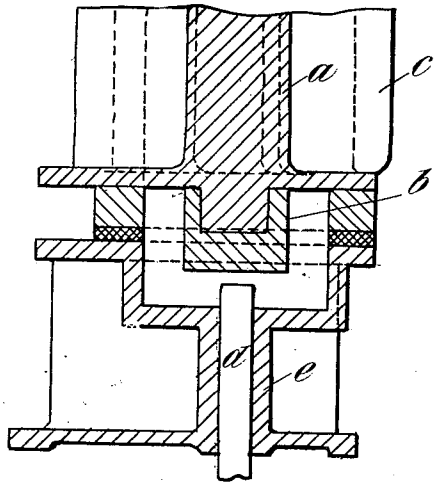


Fig. 2.

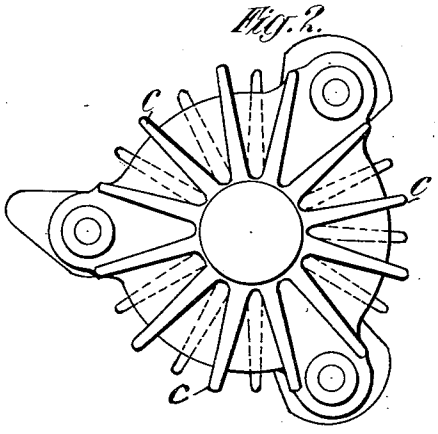
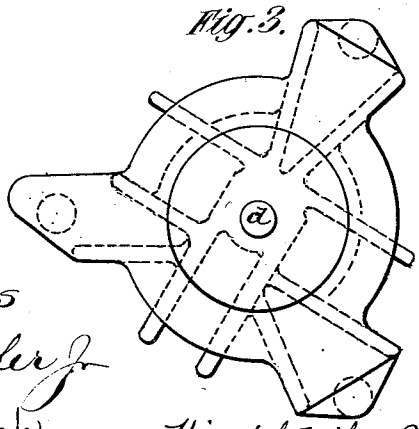


Fig. 3.



Witnesses

J. M. Fowler Jr.

W. T. Stamp.

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By Mason Fenwick Lawrence & Sons Attys

UNITED STATES PATENT OFFICE.

HEINRICH RAUSCH VON TRAUBENBERG, OF BERLIN, GERMANY, ASSIGNOR TO AMALGAMATED RADIO-TELEGRAPH COMPANY, LIMITED, OF LONDON, ENGLAND.

RADIO-TELEGRAPHY.

No. 912,209. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed February 10, 1908. Serial No. 415,179.

To all whom it may concern:

Be it known that I, HEINRICH FREIHERR RAUSCH VON TRAUBENBERG, a subject of the Emperor of Germany, residing at 13 Mathieustrasse, Berlin, in the Empire of Germany, have invented certain new and useful Improvements Relating to Radio-Telegraphy, of which the following is a specification.

This invention relates to radio-telegraphy and has particular reference to apparatus of the kind disclosed in the prior British specification No. 15599 of 1903 for producing continuous oscillations. This arrangement contains between cooled electrodes an arc burning in an atmosphere of hydrogen and influenced by a magnetic field. In order to obtain sufficient cooling of these electrodes one of them is made hollow for the purpose of allowing water to circulate through it. But there is a great disadvantage in the fact that the working of the lamp depends upon the free and constant circulation of water through this electrode, and any interruption of such circulation may prove disastrous at a critical moment, while using the apparatus for radio-telegraphy.

The chief object of the present invention is to avoid such disadvantage.

According to this invention the electrodes comprising the arc lamp are formed or provided with cooling or radiating surfaces to enable the heat produced during the working of the arc to become readily dissipated.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be more fully described with reference to the accompanying drawings in which:—

Figure 1 is a vertical section of a portion of one form of arc lamp, constructed according to this invention. Fig. 2 is a plan from above and Fig. 3 a plan from below of the construction shown in Fig. 1.

One of the electrodes consists of a casting *a*, carrying at its lower part a massive cylinder of metal *b*. The upper part of this electrode is formed in such a way that the cooling surface is enlarged by a radial arrangement of ribs *c*, thus facilitating the dissipation of heat. The lower part of the lamp contains an electrode *d*, which is held by a casting *e*. This electrode is also provided with ribs which are arranged in such a way that their vertical planes are intermediate between the ribs of the upper electrode so that the heated air in rising, will not come into contact with the upper ribs.

What I claim and desire to secure by Letters Patent of the United States is:—

1. In a device of the character described, electrodes, means for rapidly dissipating the heat therefrom, the said means of one electrode being arranged in staggered relationship to the means of the other electrode.

2. In a device of the character described, an electrode formed of a casting having radiating heat dissipating fins, a comparatively large cylinder secured to said electrode at the end thereof, and a second electrode coacting with the first mentioned electrode, said second mentioned electrode being supported by a housing formed with heat dissipating members arranged to readily convey heat from said second mentioned electrode.

3. In a device of the character described, an electrode, means for rapidly dissipating the heat therefrom, a cap for one end of said electrode, a second mentioned electrode coacting with said first mentioned electrode, and arranged to permit current to pass from said second mentioned electrode, to said cap, means for radiating heat from said second mentioned electrode, and means connecting the heat radiating means of said first mentioned electrode and the heat radiating means of said second mentioned electrode, said means forming a housing for the ends of both of said electrodes.

4. In an arc lamp for producing rapid electrical oscillations, ribs upon one electrode for dissipating the heat thereof during the working of the arc, and ribs upon the other electrode arranged with their planes intermediate between the planes of the ribs on the first mentioned electrode.

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

HEINRICH RAUSCH VON TRAUBENBERG.

Witnesses:

ERICH BEHSE,

JOH RUNGL.