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Date of Application, 18th Nov., 1899—Accepted, 20th Jan., 1900

COMPLETE SPECIFICATION.

Improvements in Radioconductor Tubes or Electric Coherers.

I, EUGÈNE DUCRETET, of 75, Rue Claude-Bernard, Paris, France, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement;—

The present invention relates to radioconductor tubes or electric coherers charged with iron or metal filings, and has for its object to produce a tube of this kind provided with a reserve chamber for the filings communicating with the action chamber of the tube, so as to permit of an exact and precise regulation of the sensitiveness or power of the radioconductor.

The new arrangement enables the plug-electrodes of known forms of such tubes to be dispensed with and to be replaced by arrangements which are more sensitive, and examples of which are represented on the accompanying drawings.

On the drawings:—

Figure, 1, represents one form of construction of the radioconductor tube with a reserve or store chamber, showing the same as formed as a doubled or bent tube and as provided with a new arrangement of contact; and

Figs. 2, and 3, show two variations of the contact arrangement.

In the double tube, B, B^1, represented by way of example, B, is the reserve or store chamber for the filings, g^1, and B^1, is the action chamber which is terminated by a double conical head.

In the enlarged part of this head are sealed the metal contact wires, P, P^1, which descend to the bottom of the tube where contact is established by the metal filings, *g*. The wires may end in the neighbourhood of one another, end to end, as in Fig. 3, or parallelly as in Fig. 2, or may be arranged in any other suitable manner, and at suitable distances apart.

The tube may contain metal filings or grains of steel alloyed with unoxidizable metals, in suitable proportion. The metals or alloys may be of any suitable kind; the filings or metal grains introduced into the branch, B^1, establish the contact between the metal wires, P, P^1, (of platinum, nickel, or other suitable metal.) The regulation of the sensitiveness of this tube for Hertz electric waves or undulations depends on the quantity of the metal grains or filings in contact with P, P^1; and such regulation is obtained by causing the metal grains or filings to pass from B, into B^1, or *vice-versa*.

In order to obtain a desired atmosphere within the interior of the tube, an amalgamized metal rod may be introduced therein during its construction, which will enable mercurial vapors of the desired degree to be obtained.

The tube, B, B^1, may be void of air or may contain air or inert gases at suitable pressure. The tube is closed by flame, by known means, according to the internal pressure.

The new radioconductor may be connected to apparatus that it is desired to control in any suitable manner.

[*Price* 8*d*.]

Ducretet's Improvements in Radioconductor Tubes or Electric Coherers.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A radioconductor tube characterized by having a reserve or store chamber for the filings or metal grains, communicating with the tube proper and designed to permit the exact regulation of the sensitiveness or power of the radioconductor, as set forth.

2. A form of construction of the radioconductor as in Claim 1, consisting of a double tube one branch of which serves as a reserve or store chamber for the filings or metal grains and the other branch of which as the action chamber in which the contact arrangement is situate, the regulation of the sensitiveness or power of the radioconductor being effected by the passage of metal grains or filings from one to the other chamber, as set forth.

3. The combination with the radioconductor tube as in Claim, 1, of metal contact wires sealed in the walls of the tube and designed to replace the plug-electrodes of ordinary radioconductors, as set forth.

3. A regulable radioconductor tube, substantially as hereinbefore described with reference to the accompanying drawings.

Dated this 15th day of November 1899.

DAY, DAVIES & HUNT,
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Agents for the Applicant.

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Fig. 1.

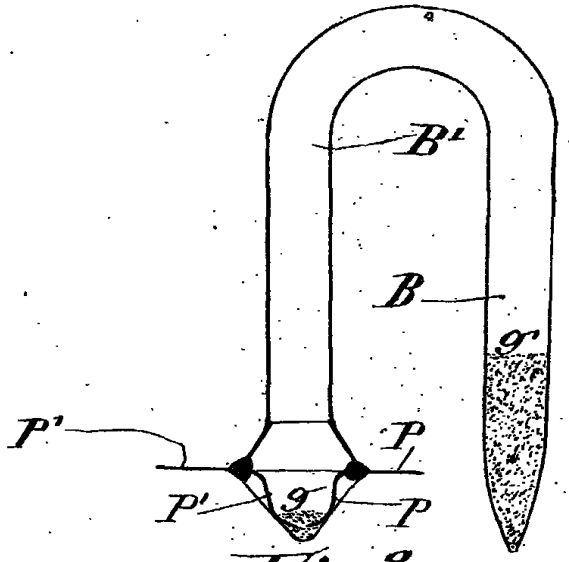
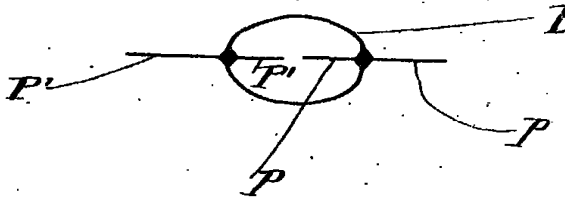


Fig. 2.

Fig. 3.



[This Drawing is a full-size reproduction of the Original.]

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