

N° 887



A.D. 1907

Date of Application, 12th Jan., 1907

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PROVISIONAL SPECIFICATION.

“Improvements in Receivers for Wireless Telegraphy”.

We, GUGLIELMO MARCONI, LL.D., D.Sc., and MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED; both of 18 Finch Lane, in the City of London, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to a method of employing Fleming's glow lamp detector or oscillation valve (described in the Specification No. 24850 of 1904) in wireless telegraphy.

The valve is placed in circuit with the secondary of the step up transformer or jigger of the aerial and with the secondary of a step down induction coil (such as an ordinary coil which would give say a 10 inch spark) the primary of the 10 induction coil being connected to a telephone or relay.

A condenser may be placed in the connection between the valve and the induction coil and a second condenser in a shunt across the ends of the secondary of the jigger.

Dated this 12th day of January 1907.

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CARPMAEL & Co.,
Agents for Applicants.

COMPLETE SPECIFICATION.

“Improvements in Receivers for Wireless Telegraphy.”

20 We, GUGLIELMO MARCONI, LL.D., D.Sc., and MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, both of 18 Finch Lane, in the City of London, 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:—

25 This invention relates to a method of employing Fleming's glow lamp detector or oscillation valve (described in the Specification No. 24850 of 1904) in wireless telegraphy.

The valve is placed in circuit with the secondary of the step up transformer or jigger of the aerial and with the secondary of a step down induction coil (such as an ordinary coil which would give say a 10 inch spark) the primary of the 30 induction coil being connected to a telephone or relay.

A condenser should be placed in the connection between the valve and the induction coil and a second condenser in a shunt across the ends of the secondary of the jigger.

The values of the inductance and capacity of the transformer or jigger and

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Improvements in Receivers for Wireless Telegraphy.

the values of the capacities of the condensers associated with it should be such as to bring the jigger into resonance with the period of the transmitted oscillations.

The circuit may be connected conductively instead of inductively to the aerial as is well understood.

The drawing is a diagram of the arrangement it is preferred to adopt.

a is a glass bulb, and *b* is a carbon filament like the carbon filament of an incandescent lamp, suitable say for taking a current of 6 to 8 volts and 2 to 4 amperes. *c* is a cylinder of aluminium open at the top and bottom which surrounds but does not touch the filament. The cylinder *c* is suspended and steadied by platinum wires *d*, and the ends of the filament *b* are connected to platinum wires connected to the leads *e* and *f*. The platinum wires are sealed through the glass in the ordinary manner.

h is a battery by which the filament *b* is heated. This arrangement is one form of the oscillation valve described in the said former specification.

One of the wires *d* is connected to the secondary *j* of the jigger, the primary *k* of which is connected to the ordinary aerial *l* and to earth. The other end of the secondary *j* is connected by a wire *m* to one end of the secondary of an induction coil *n* (which should be such as usually manufactured to give say a 10 inch spark) the other end of its secondary being connected by a wire *o* through a condenser *p* to the lead *e*. The ends of the primary of the coil *n* are connected to a circuit *q* containing a detector *s* of any ordinary type such as a telephone or a relay operating a printing instrument. *t* is a condenser in a shunt across the secondary *j* of the jigger.

The resistance of the primary of the induction coil *n* should preferably be the same as that of the telephone *s*.

The term "aerial" is intended to embrace any conductor in which oscillations are set up by the incoming electric waves.

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

1. In a receiver for electric oscillations the combination of a circuit containing an oscillation valve and the secondary of an induction coil and a second circuit containing the primary of the induction coil and a detector substantially as described.

2. The combination with the subject matter of Claim 1 of a condenser in the first circuit substantially as described.

3. Receivers for wireless telegraphy substantially as described and illustrated in the drawings.

Dated this 27th day of June 1907.

G. MARCONI.

Carpmael & Co.,

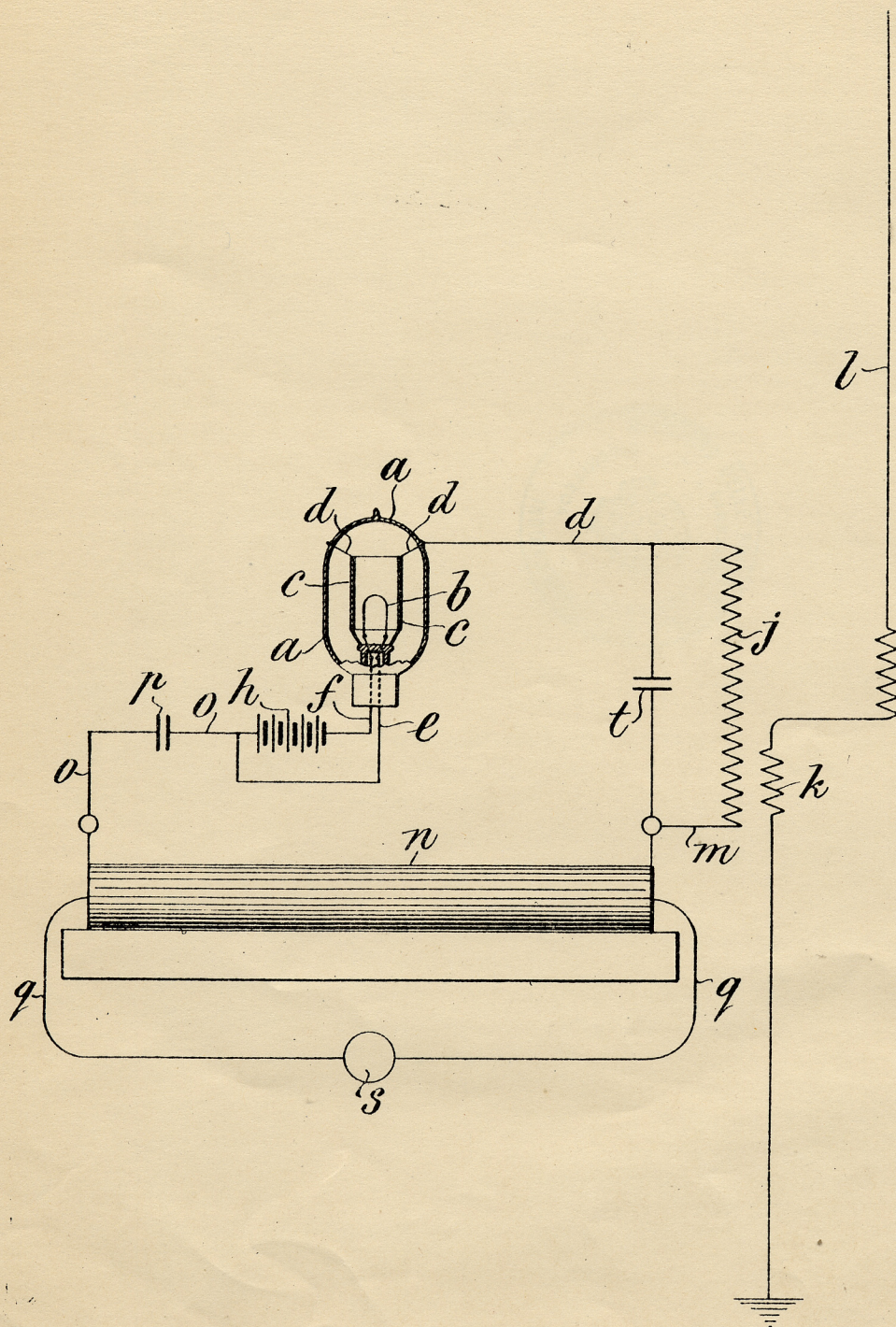
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[This Drawing is a reproduction of the Original on a reduced scale.]