

N° 21,641



A.D. 1904

Date of Application, 8th Oct., 1904

Complete Specification Left, 6th July, 1905—Accepted, 10th Aug., 1905

PROVISIONAL SPECIFICATION.

**“Improvements in Safety Devices in connection with Radio
Telegraphic Transmission Circuits.”**

We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, EDGAR BERRY, and HARRY ALEXANDER ELRICK EWEN, all of 18 Finch Lane, in the City of London, Electricians, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to safety devices for protecting electrical apparatus from the high potentials produced in the transmitting circuits through resonance and induction between the circuits and the transmitting aerial, or otherwise.

For this purpose we employ as shunts across the conductors to be protected and as earth connections from them non-inductive resistances in the form of electric lamps.

For low tension apparatus we employ glow lamps, preferably with straight filaments since coiled filaments cause inductance and for high tension apparatus we employ vacuum tubes or lamps without filaments.

Dated this 6th day of October 1904.

MARCONI'S WIRELESS TELEGRAPH CO. LTD.,

H. CUTHBERT HALL,

H. JAMESON DAVIS,

Directors,

HENRY W. ALLEN,

Secretary,

E. BERRY,

H. A. ELRICK EWEN.

COMPLETE SPECIFICATION.

**“Improvements in Safety-devices in connection with Radio
Telegraphic Transmission Circuits.”**

We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, EDGAR BERRY, and HARRY ALEXANDER ELRICK EWEN, all of 18 Finch Lane, in the City of London, Electricians, 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:—

This invention relates to safety devices for protecting electrical apparatus from the high potentials produced in the transmitting circuits through resonance and induction between the circuits and the transmitting aerial, or otherwise.

35 For this purpose we employ as shunts across the conductors to be protected and as earth connections from them non-inductive resistances in the form of electric lamps.

[Price 8d.]

PRICE 8d.

M. inv. NSI 10786



Safety Devices in connection with Radio Telegraphic Transmission Circuits.

For low tension apparatus we employ glow lamps, preferably with straight filaments since coiled filaments cause inductance and for high tension apparatus we employ vacuum tubes or lamps without filaments.

The drawing shows diagrammatically part of a transmitting instrument for wireless telegraphy.

a is a guard lamp in a shunt across the magnet coils in the exciting circuit. *b b* are guard lamps connected to earth and to the rotor and stator of the alternator. *c c* are guard lamps in shunts across the circuit connecting the rotor and stator. *d* is a fuse and *d'* a condenser in another shunt across the same circuit. *e* is the usual switch in the exciting circuit and *f* is the sending key. *g* is the primary of the induction coil of the transmitter, the secondary coil and the remaining parts of the instrument not being shown. It is desirable but not essential to introduce coreless inductance coils *h* in the positions shown.

It is not essential to use lamps in all the positions shown, for example the lamps *b b* may often be omitted without detriment. The fuse *d* and condenser *d'* are also not essential.

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:—

The employment of electric lamps as non-inductive resistances for protecting radio-telegraphic transmission circuits substantially as described.

Dated this 23rd day of June 1905.

MARCONI'S WIRELESS TELEGRAPH CO. LTD.,

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