

No. 651,363.

Patented June 12, 1900.

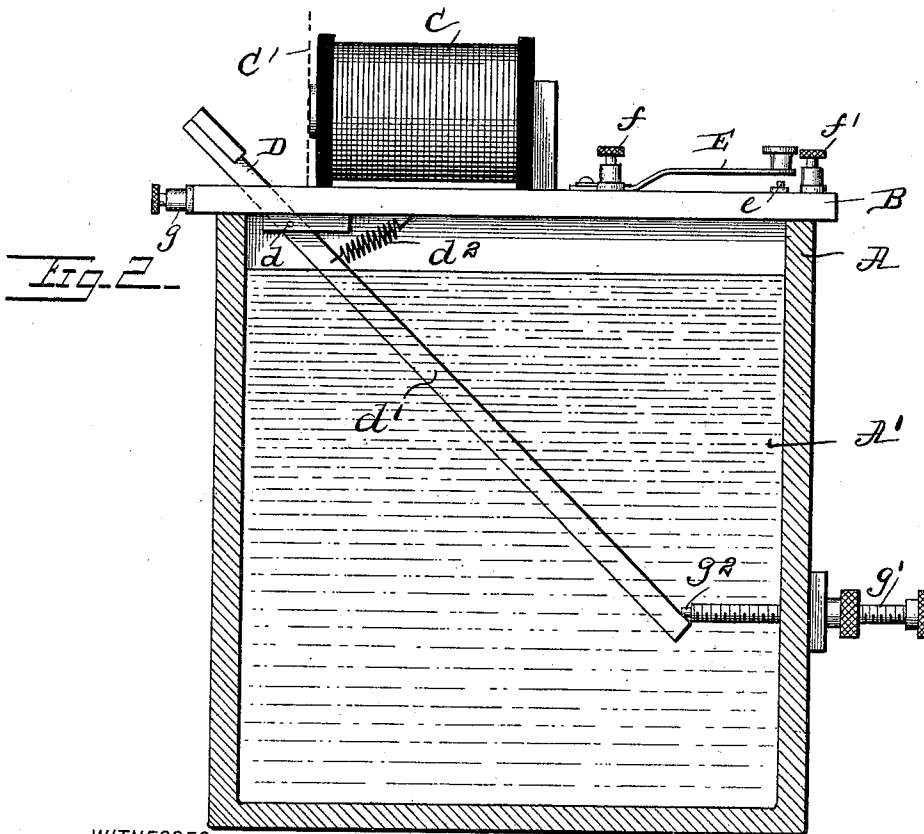
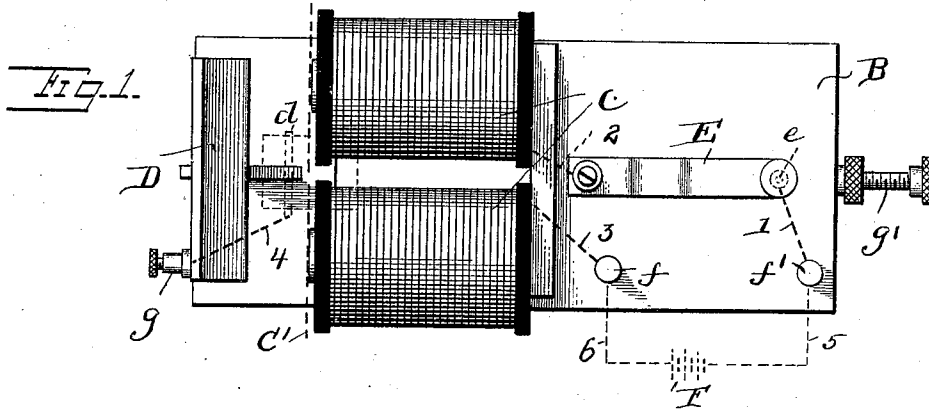
I. KITSEE.

METHOD OF TRANSMITTING ELECTRIC IMPULSES.

(Application filed May 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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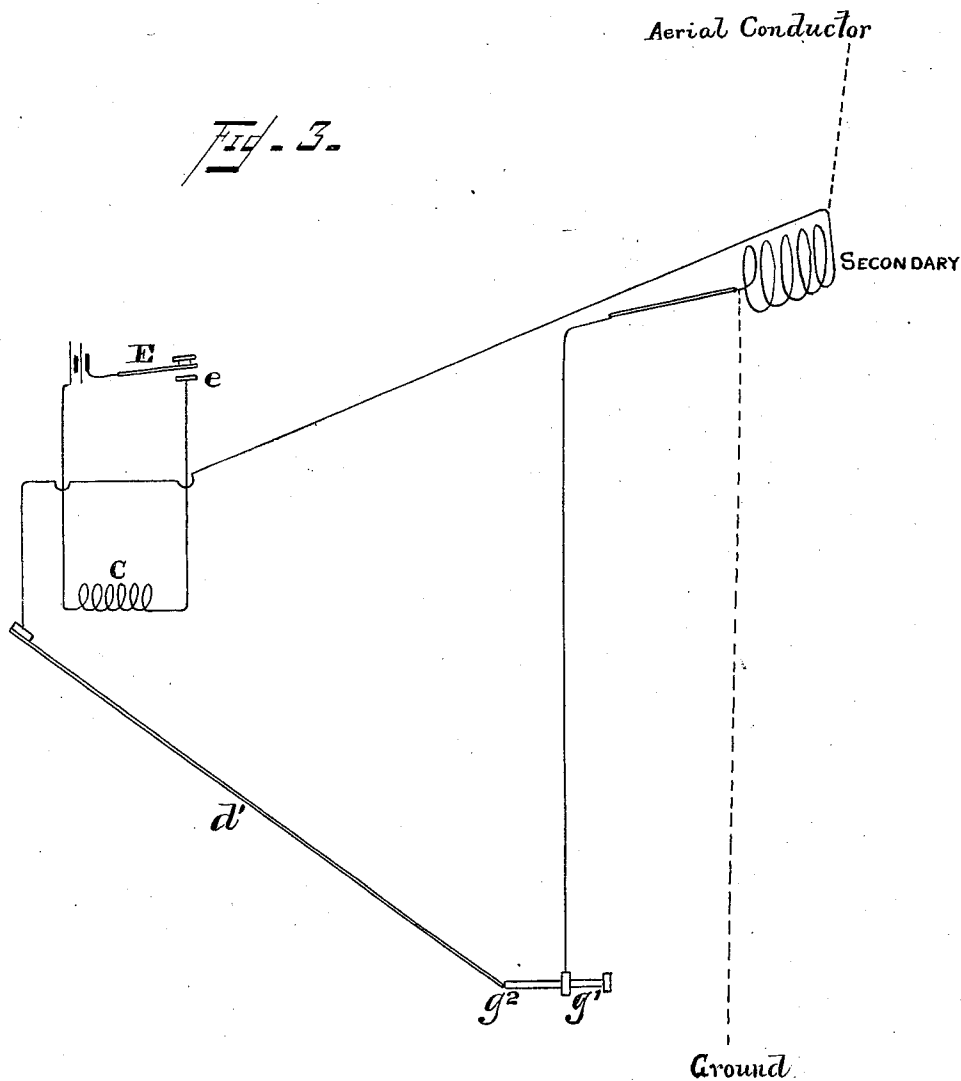
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(No Model.)

2 Sheets—Sheet 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ISIDOR KITSEE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO CHARLES E. WILSON, OF SAME PLACE.

METHOD OF TRANSMITTING ELECTRIC IMPULSES.

SPECIFICATION forming part of Letters Patent No. 651,363, dated June 12, 1900.

Application filed May 20, 1899. Serial No. 717,617. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in the Method of Transmitting Electric Impulses, of which the following is a specification.

My invention relates to the transmission of electric impulses, and has more special reference to the transmission of electric impulses of high intensity as used in wireless or space telegraphy.

The object of my invention is to transmit messages more specially in wireless or space telegraphy with the aid of a device capable of shunting and opening said shunt of the secondary of an inductorium.

Generally speaking, my invention consists in a novel mode or method for transmitting telegraphic messages.

In wireless or space telegraphy as practiced to-day the sending-key is placed in the primary circuit, and with the aid of this key this circuit is made and broken; but to produce the required impulses of high intensity in the secondary of an inductorium it is necessary to send through the primary comparative large currents. A mechanism making and breaking these currents will soon be destroyed through the oxidation or burning of the contact-points. Again, in wireless or space telegraphy the frequency with which the intensity of the current is changed bears a certain relation to the force of the current-waves to penetrate space. I therefore have recourse to the following arrangement: I place the sending-key in the secondary of an inductorium in such manner that normally the secondary coil is shunted and the shunt opened when the key is depressed. The connection of the secondary is therefore as follows: one terminal connected to one point of the device operated by the key and also to the aerial conductor and the other terminal to the other point of the device operated by the key and to the ground.

In my experiment I have also placed in the conductors terminating in the ground connection and aerial conductor, respectively, condensers of comparative large capacity.

Referring now to the drawings, in which

similar letters and numerals indicate similar parts, Figure 1 is a plan view; Fig. 2, a side elevation with the vessel in section. Fig. 3 is a diagrammatic view illustrating the circuits.

A is a vessel containing, preferably, the acidless oil A'.

B is the covering of the vessel.

C is the electromagnet, of which D is the armature, pivoted at *d*.

d' is the arm attached to the armature; *d*², the spring keeping the arm *d'* in position.

E is the key proper, of which *e* is the lower contact-point.

f f' are binding-posts for the terminals of the coils of the electromagnet C. Wire 1 connects the binding-posts *f'* with the contact *e* of the key. Wire 2 connects the arm of the key to one terminal of the electromagnet, and wire 3 connects the other terminal of the electromagnet to the binding-post *f*. Wires 5 and 6 are leading from the binding-posts *f f'* to the battery F. The terminals of the secondary circuit are connected to the binding-posts *g g'*, of the latter of which *g*² is the contact-point inside of the vessel.

Between the cores of the electromagnet and the armature of the same is preferably placed a shield, made of mica, hard rubber, or any other suitable material, for the purpose that the high-tension current shall not find an easy path from the arm *d'* through the armature and core if the same shall come in contact.

The connection and operation of this device are as follows: As said above, the terminals of the secondary coil of the inductorium are connected, through binding-posts *g g'*, with the arm *d'* and contact-points *g*², respectively. Normally when the lever of the key is out of contact with its lower point *e* the electromagnet C is not energized, and the arm *d'* being one of the terminals of the secondary will rest with its lower point on the contact-point *g*², connected to the other terminal of the secondary. This coil is therefore for all practical purposes short-circuited. No matter, therefore, how large a circuit may pass through the primary of an inductorium or how often this current may be interrupted or reversed the (in the secondary coil) induced

electrical impulses will only flow through the short circuit and will not be transmitted over the sending-circuit. If the operator wishes to transmit a message, he only needs to manipulate the key in the usual manner—short stroke for dots and long stroke for dashes. As soon as the lever of the key touches the lower contact-point then the circuit, including the battery and the electromagnet, is closed and the
10 cores of the magnet energized, and the armature will be drawn toward the cores. Through this action the arms connected to the armature will be brought out of contact from g' . The short circuit will therefore be opened and
15 the secondary impulses will travel over the sending-circuit.

In the drawings the key is placed on the same cover on which the electromagnet and one of the terminals of the secondary circuit
20 are placed; but in practice if currents of very

high intensity are manipulated it may be preferable to remove the key proper from the box, so that the operator shall not be inconvenienced by the generated high current.

Having now described my invention, what 25 I claim as new, and desire to secure by Letters Patent, is—

The method of transmitting messages with the aid of currents of high intensity which consists in opening the shunt of a secondary 30 of an inductorium forming part of the transmitting-circuit in accordance with the signs or signals to be transmitted.

In testimony whereof I sign my name, in the presence of two subscribing witnesses, this 35 19th day of May, A. D. 1899.

ISIDOR KITSEE.

Witnesses:

WALLACE B. ELDRIDGE,
E. R. STILLEY.