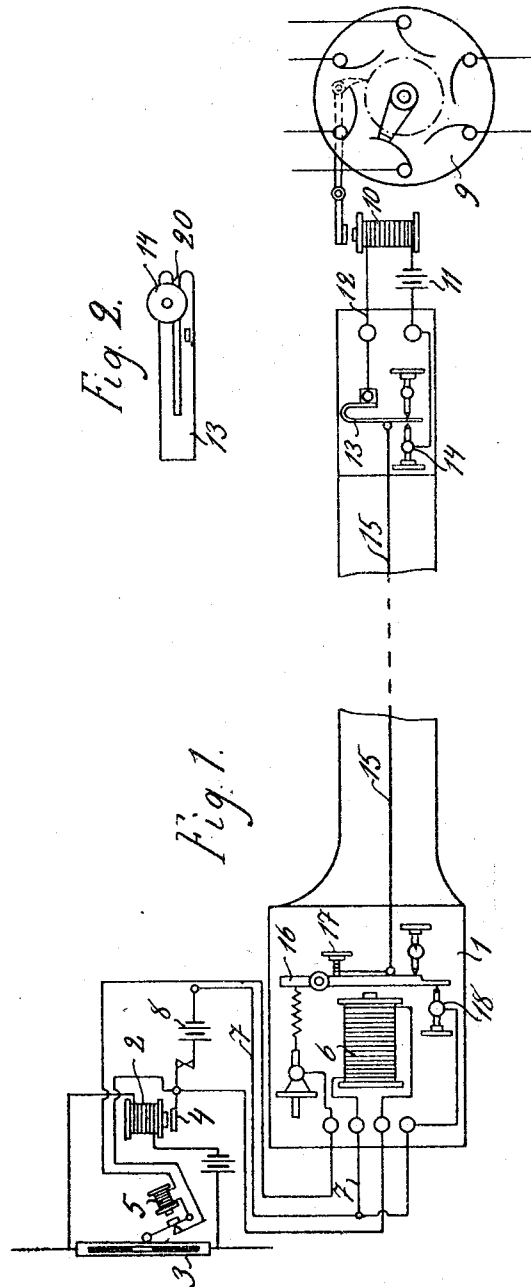


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WIRELESS CONTROLLED CURRENT DISTRIBUTER.
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1,029,573.

Patented June 11, 1912.



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WIRELESS-CONTROLLED CURRENT-DISTRIBUTER.

1,029,573.

Specification of Letters Patent.

Patented June 11, 1912.

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To all whom it may concern:

Be it known that I, CHRISTOPH WIRTH, a subject of the Empire of Germany, residing at 15 Wurzelbauerstrasse, Nuremberg, Empire of Germany, have invented certain new and useful Improvements in Wireless-Controlled Current-Distributers, of which the following is a specification.

The invention relates to electrical devices serving to render machines or the like operative or inoperative by means of electrical waves transmitted from a distant point in the manner described in U. S. Patent No. 930588. In devices of this kind the sparking and the wave oscillations thereby produced and which are propagated specially well in the metallic connections, might readily exert a prejudicial effect upon the coherer of the receiver. In order to obviate this defect, polarization cells or condensers have been employed for damping the oscillations. These means, however, only fulfil their purpose in the case of weak currents and fail completely when it is a question of currents of higher amperage or voltage.

The present invention has for its object to remedy this defect which cannot be eliminated by inserting ordinary relays and this object is attained owing to the fact that the circuit conveying the electrical oscillations is located at the maximum distance from other circuits and is insulated itself and also relatively to other circuits in such a manner that the connections serving for transmission of mechanical movement are insulators.

An embodiment of a relay-like device of this kind is illustrated by way of example in Fig. 1 of the accompanying drawing, Fig. 2 illustrates a detail.

The arrangement shown in Fig. 1 illustrates the manner in which the receiver circuit is protected relatively to the circuit influencing the current distributor from prejudicial action of the electric waves produced by sparking.

On a base plate 1 is mounted an electro-magnet 2, connected with the coherer 3, and adapted to act upon the armature 4 secured to the arm 4' which is pivotally supported upon the base plate 1. The pivotal point of this contact arm is connected on the one hand with one pole of the striker 5 of the coherer while on the other hand it is con-

nected with the winding of the electro-magnet 6. The other end of this winding passes over the conductor 7 and the battery 8 to the end of the armature 4. The current distributor 9 is located at a relatively considerable distance from the receiver approximately 1 meter but this interval is dependent upon the strength and tension of the current employed and must increase in proportion with these magnitudes. In order that, notwithstanding the considerable distance it may be possible to connect up the current distributor 9 in the proper manner from the coherer, the electro-magnet 10 of this current distributor is arranged in a circuit 11, 12 containing the source of current 11 which circuit can be closed by pressing a contact spring 13 connected with one pole of the magnet winding against the contact screw 14 connected with the other pole of the magnet winding. The contact spring 13 is connected with the armature 16 of the electro-magnet by means of a traction member 15 of insulating material such as silk thread or the like in such a manner that by rotating the winding device or set screw 17 on which the traction member is wound the tension of this member can be regulated.

The operation of the apparatus described corresponds with that in Patent No. 930588. When electrical waves reach the coherer in the first place the electromagnet 2 is energized and its armature 4 closes the circuit serving to energize the magnet 6. As a result the armature 16 is attracted until it touches the contact screw 18 and thereby closes the circuit of the striker magnet 5. The striking is thus retarded until the electromagnet 6 is sufficiently saturated to become operative. The movement of the armature 16 is transmitted by the traction member 15 formed of insulating material and therefore prevents the transmission of electrical oscillations on to the contact spring 13 which on contact with the contact screw 14 closes the circuit 11, 14, 13, 12 of the current distributing magnet 10 and thereby imparts a partial rotation to the current distributor. In order to insure a sufficiently long contact for producing the saturation of the current distributing magnet and in order to effect the closing of the striker circuit with certainty the arrangement illustrated in Fig. 2 is adopted. In this arrangement the contact spring 13 is divided by a longitu-

dinal slit 20 into two resilient portions one of which is connected with the traction member 15 while the other is located opposite the contact screw 14. Consequently the portion of the contact spring 13 which is connected with the traction member is able to continue to move when the other portion of the spring is already bearing against the contact screw 14. In other words, the circuit of the distributor operating electro-magnet 10 will be closed before the decoherer circuit is closed by the armature 16 engaging the contact 18, the armature and contact being in the circuit of the electro-magnet 5 of the decoherer. By thus closing the distributor operating circuit before the decoherer comes into action, the electro-magnet 10 that controls the distributor has ample time to come into full operation. This successive closing of the distributor controlling circuit and the decoherer operating circuit by the make and break device formed by the armature 16 and contact 18 is conducive to efficient results and simplicity of construction.

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

1. The combination of a coherer circuit including an electro-magnet, a second circuit controlled by the electro-magnet and itself containing an electro-magnet, a decoherer circuit including an armature operated by the second electro-magnet, a distributor controlling circuit including a make and break device, a traction element connected with the make and break device, and means on the armature for adjustably connecting the traction element therewith whereby the armature controls the make and break device.
2. In a system of the class described, the combination of a distributor operating circuit including a movable and a fixed contact,

a circuit including a movable and a fixed contact, means for operating the last-mentioned contact, a connecting element between the movable contacts and insulating one from the other, and a winding device carried by the second-mentioned movable contact for changing the length of the element and thereby the relation of the two movable contacts.

3. The combination of a coherer circuit, a decoherer circuit including an armature, means controlled by the coherer circuit for operating the armature, a distributor operating circuit including a movable contact having a flexible member, and an insulating connection between the flexible member and armature whereby the armature operates the movable contact to close the distributor circuit before the armature closes the decoherer circuit.

4. The combination of a coherer circuit, a decoherer circuit including an armature, means controlled by the coherer circuit for operating the armature, a distributor operating circuit including a movable contact having a flexible member, an insulating connection between the flexible member and armature whereby the armature operates the movable contact to close the distributor circuit before the armature closes the decoherer circuit, and an adjusting means on the armature for attaching the said insulating connection therewith and for adjusting the relation of the said movable contact and armature.

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

CHRISTOPH WIRTH.

Witnesses:

CHRISTOPH BECK,
HEINRICH KNAUSS.