

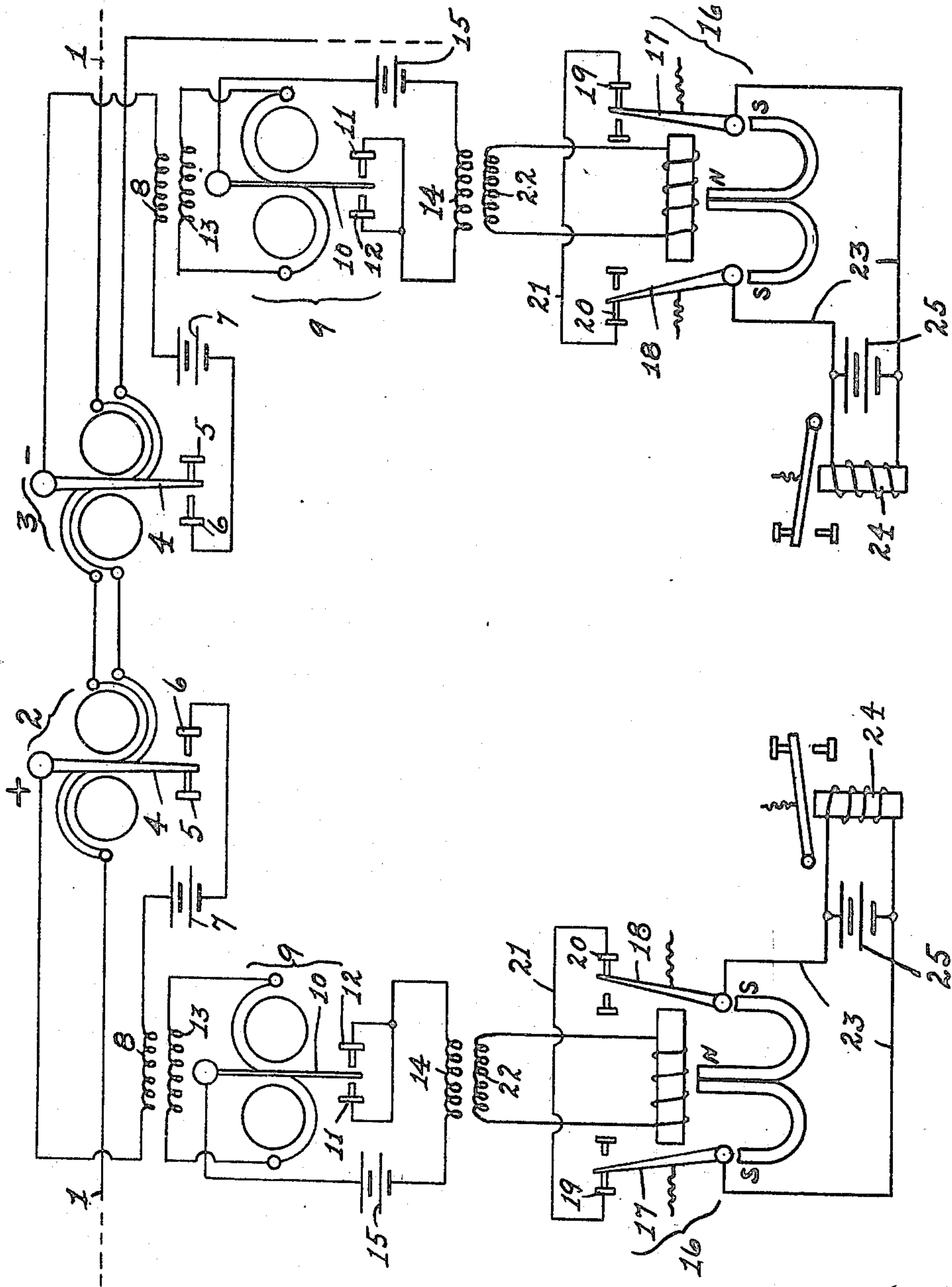
I. KITSEE.

TELEGRAPHIC RECEIVING ORGANISMS.

APPLICATION FILED JULY 25, 1914. RENEWED JAN. 5, 1917.

1,222,771.

Patented Apr. 17, 1917.



Witnesses

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TELEGRAPHIC RECEIVING ORGANISMS.

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Specification of Letters Patent.

Patented Apr. 17, 1917.

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To all whom it may concern:

Be it known that I, ISIDOR KITSEE, citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Telegraphic Receiving Organisms, of which the following is a specification.

My invention relates to an improvement in receiving telegraphic messages.

Its object is to convert a series of vibratory pulses into one continuous signal.

It may be practised with simplex, duplex, diplex or quadruplex systems.

In the accompanying drawing I have illustrated the receiving arrangement of one terminal of a quadruplex system.

In this drawing, 1, 1 is the line of transmission. 2 and 3 are the two line relays adapted to receive positive and negative pulses respectively. Each of these relays is provided with a localized circuit, so as to convert the vibrations of the tongues of these relays into a signal with the aid of a sounder. As the arrangement of the local circuit of relay 3 is a duplicate of the circuit of relay 2, I will only describe the different parts and their functions as pertaining to relay 2. This relay is provided with the tongue 4 normally resting at stop 5. The stop 6 is connected to battery 7 and primary 8 of an inductorium, and through the same with tongue 4. 9 is a localized relay with the tongue 10 normally positioned between the stops 11 and 12. The coil of this relay is connected to the secondary 13 of said inductorium. Both of the stops 11 and 12 are connected together and with interposition of the primary 14 and battery 15 to the tongue 10. 16 is a second localized relay provided with the two armatures 17 and 18 held by their respective springs against the stops 19 and 20 respectively. These stops are connected together through wire 21. The coil of the electro-magnet is connected to the secondary 22; 23 is a local circuit connected with one of its terminals to the armature 17 and with its other terminal to armature 18. In this circuit are in multiple the coil of sounder 24 and the battery 25.

The operation of this arrangement is as follows:—Normally, the tongue of relay 2

rests against stop 5. It is supposed that this relay answers to positive pulses. As soon as positive pulses are transmitted from the far-off station, the tongue 4 will vibrate and alternately connect with and disconnect from stop 6. This contacting with stop 6 will generate in the secondary 13 a pulse in one direction and the disconnecting with this stop 6 will generate in the secondary a pulse of opposite direction. The relay 9, being polarized and having a tongue normally standing between the two stops, will throw its tongue through the first impulse to, say, the stop 11 and make contact therewith, and through the second impulse the tongue will contact with the stop 12, and will then resume its normal position between these two contacts.

Through each contacting of the tongue with one or the other of the stops a pulse will be generated in the secondary 22, so also will a pulse be generated in the secondary 22 through the disconnecting of the tongue with one or the other of the stops. These pulses will be successively of opposite direction and they will in their turn energize the core of the polarized relay 16 alternately with opposite polarities; the armatures 17 and 18 will therefore be alternately and in succession drawn toward the core and away from it, and will alternately and in succession disconnect from their stopping point and again connect therewith. These vibrations will be in such succession that, as long as the pulses are generated in the secondary 22, the armature 17, after being drawn from its stopping-point 19, will not connect again with its stopping-point till the armature 18 has been disconnected from its point 20, and therefore battery 25, which is normally short-circuited by these armatures, will have this short-circuit broken till the generation of the pulses in the secondary ceases. And as the battery 25 is free to exert its influence on the sounder 24 as long as the short-circuit is broken, it is obvious that the armature of the sounder will be drawn down and will stay down till these pulses cease. In other words, the vibratory movements of the tongue of the relay 2, due to a series of quick pulses will be translated on the sounder in one down stroke, translating these pulses into one unbroken signal.

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

1. In combination with a telegraphic line, 5 means to receive signals impressed upon said line in combination with means to translate said signals comprising vibratory line relay, an electric circuit therefor, a second relay, an inductorium, the primary inserted in the 10 circuit of the first relay and the secondary inserted in the circuit of the second relay, a second localized relay operatively related to said first localized relay and translating means operatively related to said second lo- 15 calized relay.

2. In a system of telegraphy, in which a series of pulses are transmitted for each signal, a line relay, a vibratory tongue therefor, a local circuit comprising the primary of an 20 inductorium and a source of current adapted to be made and broken through said vibratory tongue, a localized relay connected

to the secondary of said inductorium, a circuit comprising the primary of a second inductorium and a source of current therefor, 25 a second localized relay connected to the secondary of said second inductorium, a source of current and a sounder, said source of current normally shunted through the armature of said second relay and adapted to op- 30 erate said sounder when the shunt is broken.

3. In combination with a telegraphic line, two vibratory relays in said line, each of said vibratory relays provided with inducto- 35 riums and localized relays operatively related thereto and means to translate the vibrations of one or the other of the localized relays.

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

ISIDOR KITSEE.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."