

1,018,940.

Fig:1,

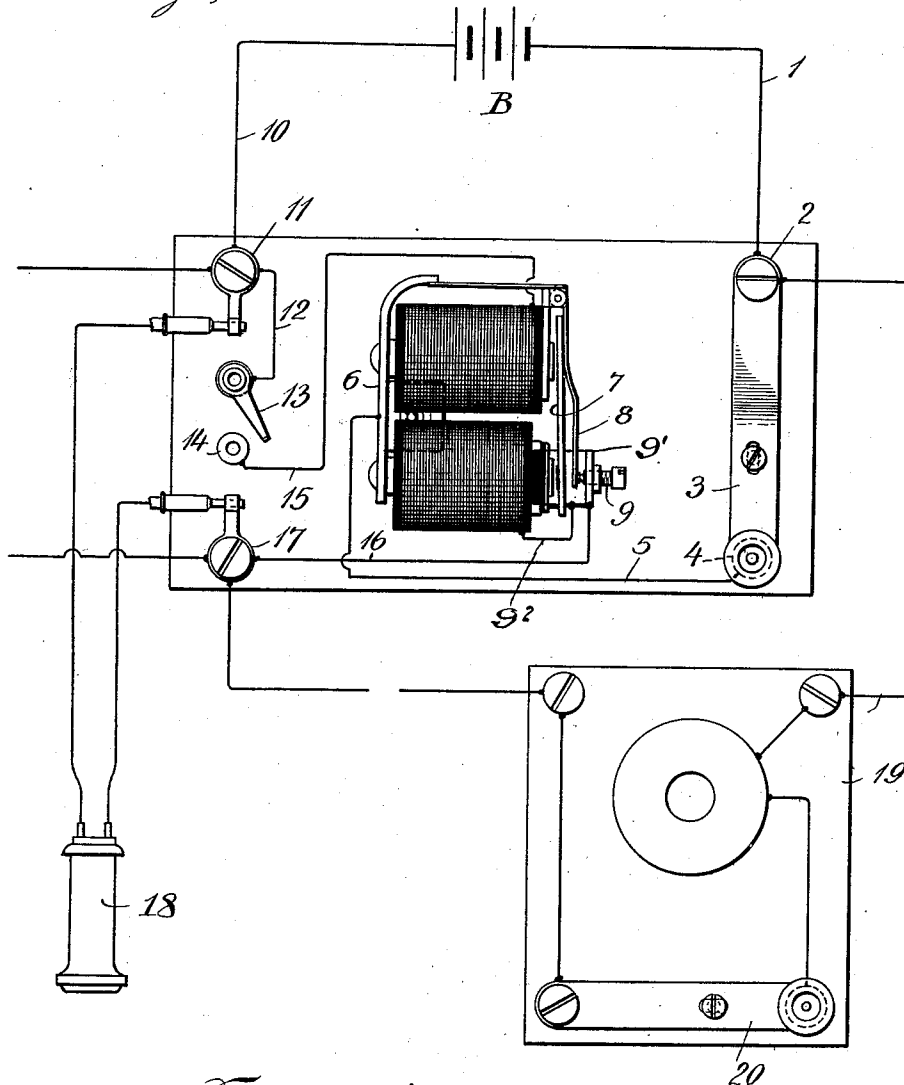
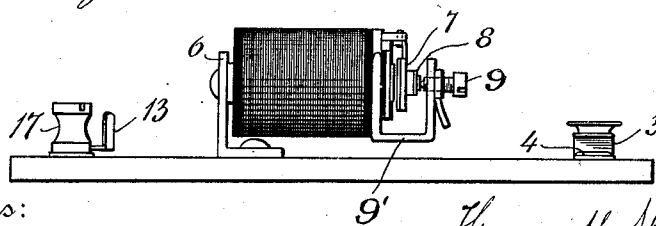


Fig: 2,



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UNITED STATES PATENT OFFICE.

THOMAS M. ST. JOHN, OF NEW YORK, N. Y.

ELECTRICAL COMMUNICATING APPARATUS.

1,018,940.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed December 4, 1909. Serial No. 531,305.

To all whom it may concern:

Be it known that I, THOMAS M. ST. JOHN, a citizen of the United States of America, residing in the borough of Manhattan, city, county, and State of New York, have invented a certain Improved Electrical Communicating Apparatus, of which the following is a specification.

This invention is intended primarily for the use of young-folks and is designed for their amusement, and also for their instruction respecting the use of electricity for telegraphic and telephonic communications.

In the accompanying drawing: Figure 1 is a diagram illustrating the invention and Fig. 2, a side elevation showing more particularly the signal magnet.

B indicates a battery which may be composed of ordinary dry cells. One pole is connected by wire 1 to post 2 which is electrically connected with a normally open spring transmitting key 3 whose bottom contact 4 is connected by wire 5 with the frame 6 of an electro-magnet comprising part of an ordinary electric vibrator or buzzer and thence to the buzzer spring contact 8 carried on the armature lever 7. The other pole of the battery is connected by wire 10 to binding post 11 and thence by wire 12 to switch arm 13 whose stationary contact 14 is connected by wire 15 through the windings of the electro-magnet and thence by wire 9² to an insulated bracket 9¹ carried on one of the pole pieces of the magnet and in which is the fixed adjustable buzzer contact 9. The bracket 9¹ is connected by wire 16 to binding posts 17. The terminals of the main circuit are connected to the binding posts 11 and 17 as are also the terminals of an electro-magnetic telephonic receiver 18.

There is a telephonic transmitter 19 whose terminals are connected with binding posts 2 and 17 and which is provided with a normally open spring switch 20 by which it may be introduced into circuit for telephonic transmission and cut out while the operator is receiving telephonic communication from the receiver 18.

For Morse transmission into the main circuit switch 13, 14, is closed. When Morse key 3 is operated dots and dashes may be transmitted over the main circuit or line and received at the distant station in a telephone receiver such as 18 connected in the manner shown in the drawing—both the sending and receiving stations being correspondingly equipped. The spark gap or circuit breaking contacts 8 and 9 of the buzzer are in derived or parallel circuit with the Morse transmission circuit with the effect that the inductive or static effect of the spark results in the production of Morse signals characterized at the receiving end of the line by great intensity or energy, sharpness and distinctness.

For the telephonic transmission, switch 13, 14, is open and the Morse key 3 is, of course, by its own reaction held open. When speaking into the carbon or other transmitter 19, the operator closes switch 20 and telephonic communication over the main circuit may be conducted. When the operator ceases speaking and listens to the speaker at the distant station, the pressure on switch 20 is released opening the circuit through the transmitter which circuit is a shunt on the circuit containing the telephonic receiver 18. This arrangement I have found productive of great distinctness in articulation in the transmission of spoken words.

I claim:

An apparatus for transmission of telegraphic signals comprising a transmitter, a source of electrical energy, an electro-magnetic buzzer, a circuit connection including the winding of the buzzer, the transmitter and said source, and a derived circuit including the circuit breaking contacts of the buzzer.

In testimony whereof, I have hereunto subscribed my name.

THOMAS M. ST. JOHN.

Witnesses:

JOHN K. MOORS,

EDWARD C. DAVIDSON.