

Jan. 2, 1923.

1,440,752.

R. B. STONE.
TELEPHONE TEST SET.
FILED SEPT. 9, 1919.

Fig. 1

Fig. 2

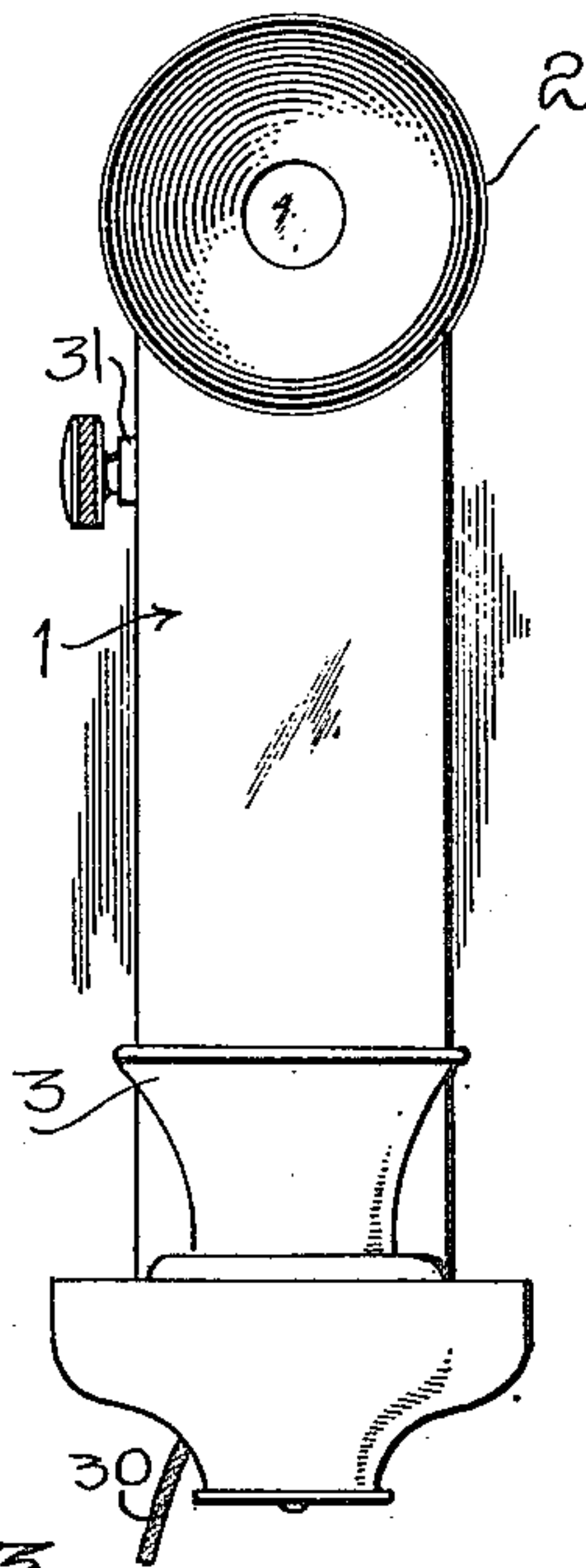
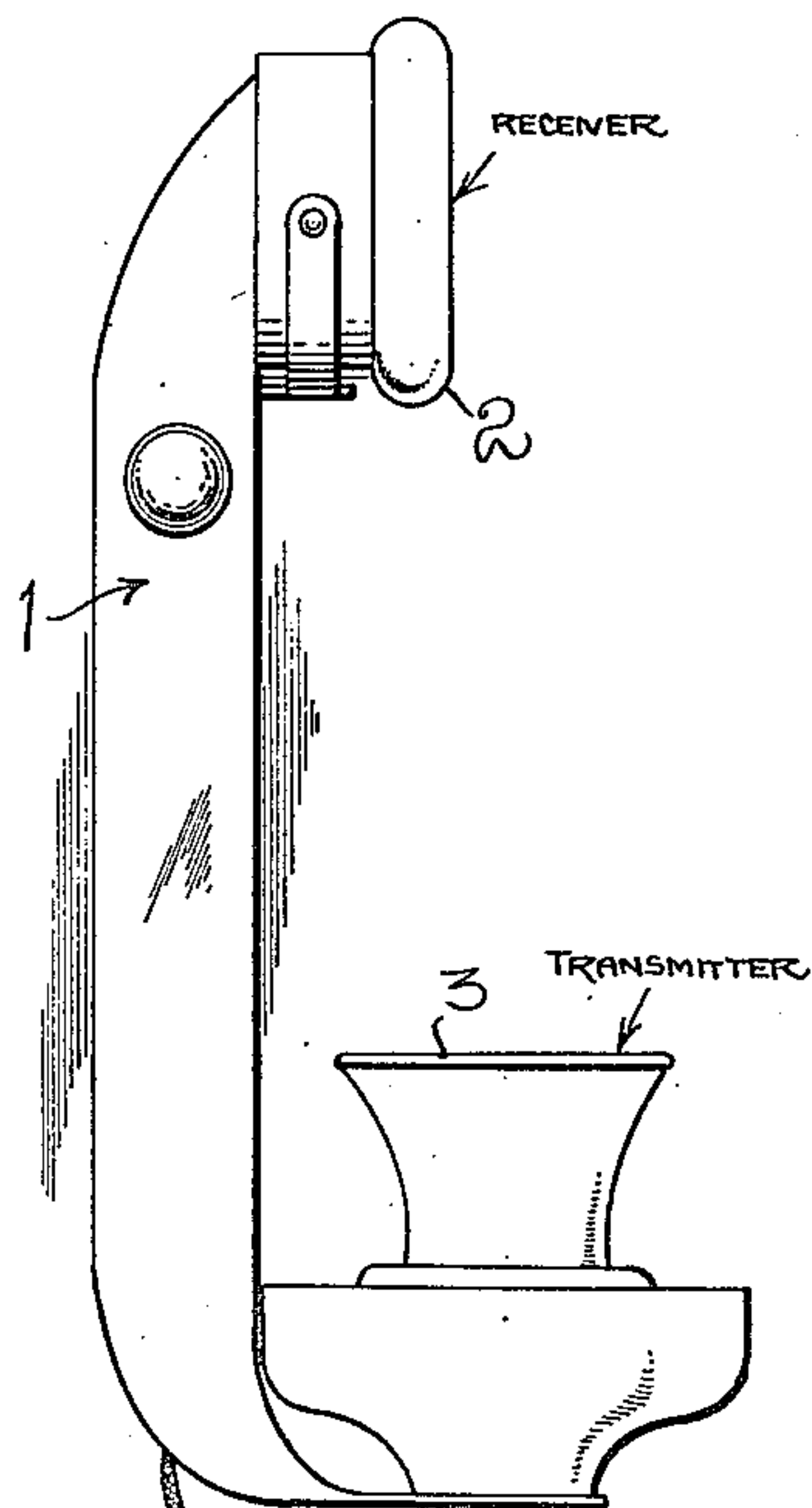
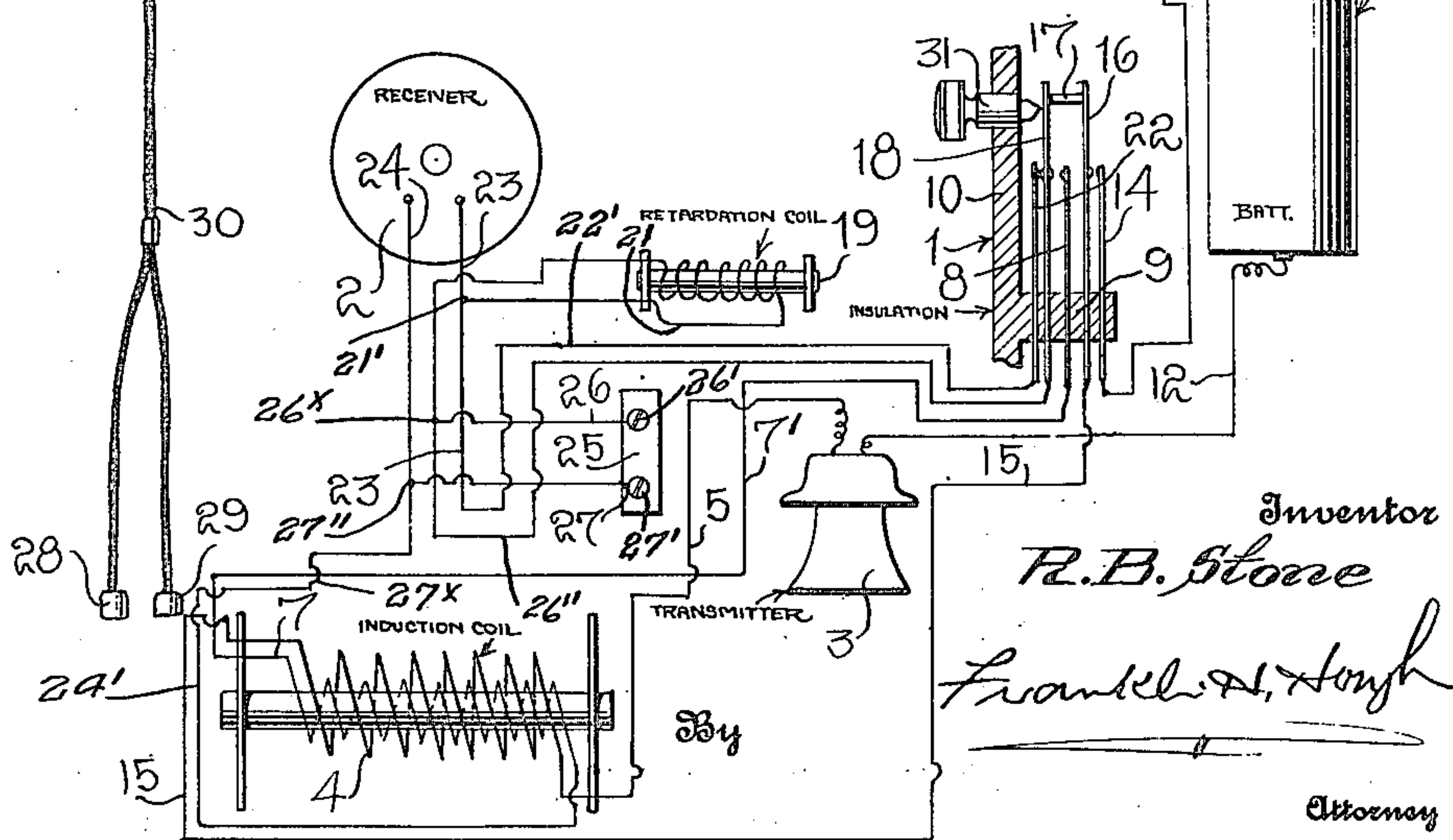


Fig. 3



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UNITED STATES PATENT OFFICE.

ROBERT BURNS STONE, OF NASHVILLE, TENNESSEE.

TELEPHONE TEST SET.

Application filed September 9, 1919. Serial No. 322,704.

To all whom it may concern:

Be it known that I, ROBERT B. STONE, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Telephone Test Sets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in railway test telephone, and the object in view is to produce a simple and efficient device of this nature affording means whereby a person may connect up with a telephone line intermediate stations for the purpose of sending or receiving messages at any station.

Heretofore it has been the practice in apparatus of this nature to employ a test set having a magneto generator which is necessarily of heavy weight and inconvenient to carry from place to place intermediate stations, and as a consequence maintainers frequently take chances on calling from a railroad station, while in the meantime it may be desirable for the home station or wire chief to get into communication with the maintainer in the event of any trouble developing and necessitating being cleared up at once. The maintainer not having at hand an apparatus to call in at any location around the line intermediate stations, a delay necessarily ensues until communication can be had with the nearest station.

It is the object of the present invention to produce a simple and efficient test set of light weight and which may be conveniently carried by the operator or maintainer for immediate use at any pole along the line.

The invention comprises further details of construction, combination and arrangement of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings which, with the numerals of reference marked thereon, form a part of this application, and in which:

Figure 1 is a side elevation of the test set,

Figure 2 is a front elevation of the same, and Figure 3 is a diagrammatic view showing the wiring used in connection with my apparatus.

Reference now being had to the details of the drawings by numerals:

1 designates a casing containing the operative parts of the apparatus and upon the upper end of which is mounted a receiver 2, and 3 designates a transmitter positioned conveniently upon a lateral extension of the casing. Within the casing 1 is located an insulation block 25, having connected thereto wires 26 and 27 by binding posts 26' and 27' respectively. To the binding posts 26' and 27' are connected the wires which terminate in the clips 28 and 29, forming the cord 30 by which the device is connected to the line when in use. The wire 26 connects through the wire 26'' with the switch blade 18, which is in normal contact with the switch blade 22 connecting thereby through the wire 22' with the wire 23 to the receiver 2, and through the receiver 2 and wire 24 back to the wire 27 and the binding post 27', whereby when the several parts are in the position shown in the diagrammatic Figure 3, the receiver 2 thus connected is in circuit with the line and the instrument in condition to "listen in". In this condition the instrument is not in condition to talk through the transmitter 3. To accomplish the connection of the lines so that the transmitter 3 may be employed, the push button 31 is manipulated, throwing the switch blade 18 out of contact with the blade 22 and into contact with the blade 8, and by reason of the insulating spacer 17 also actuating the switch blade 16 to throw it into contact with the switch blade 14. The transmitter is now in a local circuit in which the wire 5 from the transmitter 3 leads to the primary winding of the induction coil 4, then through the wire 15 to the switch blade 16 and from the switch blades 16 and 14 through the wire 13 to battery 11, and through the wire 12 to the transmitter 3. The closing of this local circuit with the battery 11 in such circuit and the vibration of the transmitter by speaking induces in the induction coil a secondary current in the secondary winding, whereby current through the wire 7 is transmitted to the switch blade 8 and through the blade 18 and wire 26'' to the resistance coil 19, then through the wire 21 to the point 21'. From the point 21' a shunt is taken to the receiver

through the wire 23 across the receiver to the wire 24, through the wire 24' to the secondary winding of the induction coil. The other branch is from the secondary winding 5 7 of the induction coil through the wire 7', through the switch blade 8, then through the switch blade 18 to the wire 26'' to the point 26^x to the wire 26 and binding post 26', through the line returning to the binding 10 post 27' to the wire 27 to the point 27'', and through the wire 27^x, to the secondary winding of the induction coil. In a plugging in of the line, therefore, the receiver only is in circuit so that the operator only "listens in". 15 When, however, the manual key 31 is actuated, throwing both of the switch blades 16

and 18, the circuit is so changed that the transmitter is now in its local circuit, inducing the current to the receiver and to the line.

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What I claim to be new is:

A casing for a portable telephone test set carrying a transmitter and receiver, the casing comprising a tube having one flat face, the tube compressed together at one end and 25 bent to carry the transmitter, the receiver mounted on the flat face at the other end, the tube serving as a container for electrical elements and apertured to receive leads.

In testimony whereof I hereunto affix my 30 signature.

ROBERT BURNS STONE.