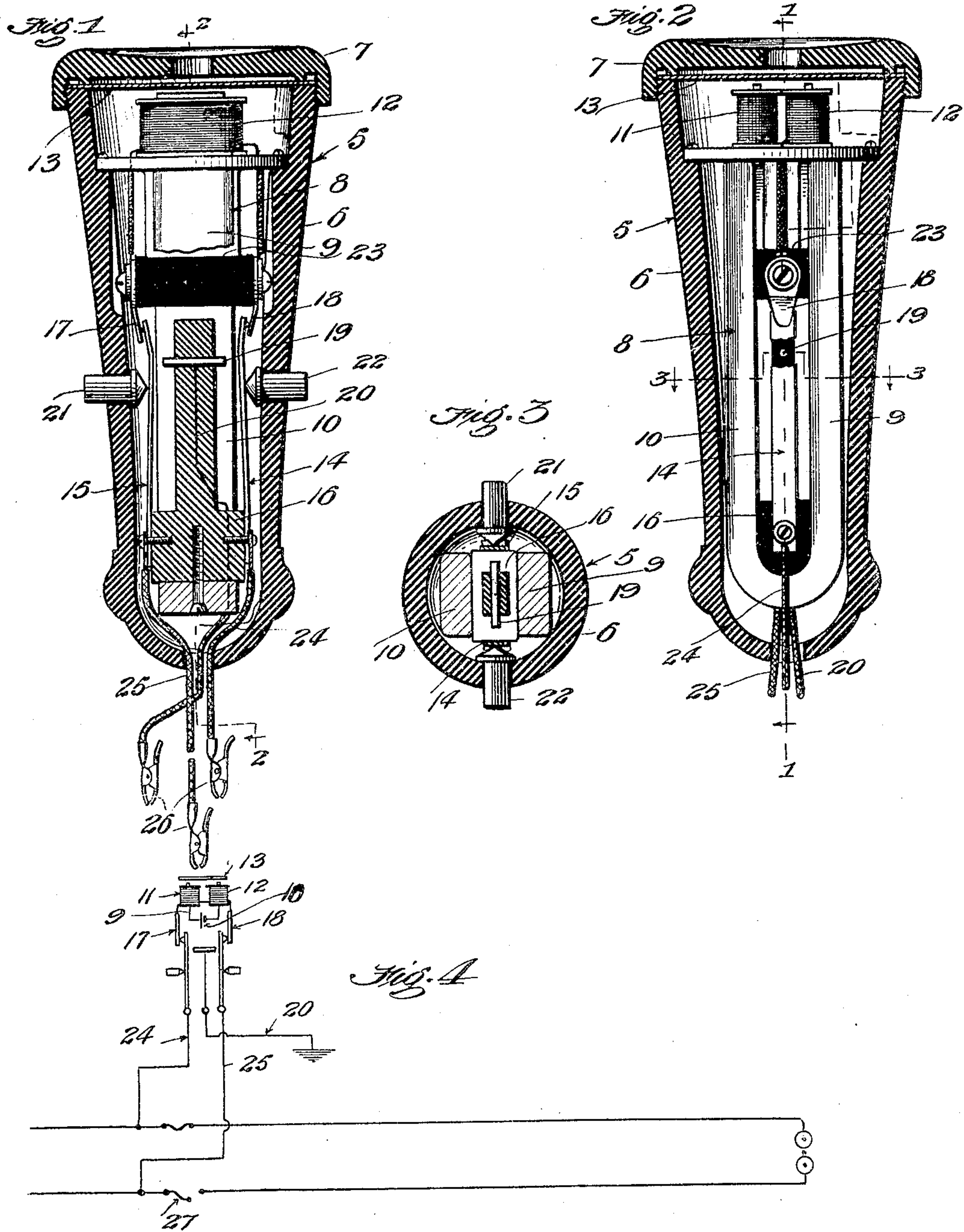


No. 808,868.

PATENTED JAN. 2, 1906.

K. H. POYAS.
TELEPHONE SIGNALING APPARATUS.

APPLICATION FILED JULY 24, 1905.



Witnesses
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KARL H. POYAS, OF LOS ANGELES, CALIFORNIA.

TELEPHONE SIGNALING APPARATUS.

No. 808,868.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed July 24, 1905. Serial No. 270,960½.

To all whom it may concern:

Be it known that I, KARL H. POYAS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Telephone Signaling Apparatus, of which the following is a specification.

My invention relates more particularly to linemen's test-call apparatus for use on automatic telephone-lines, and has among its objects the production of a combined receiving, transmitting, and calling device which is compact in form, having but few parts, and taking up no more room than an ordinary receiver.

A further object is to provide a device that can be attached to any receiver and that can be used on common-battery lines to a great advantage, as the line can be grounded or opened at will.

I attain these objects by the device described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a partial central vertical section of my improved signaling device, taken on line 1 1 of Fig. 2. Fig. 2 is an elevation of my improved signaling device looking in the direction indicated by the arrows on line 2 2 of Fig. 1, the inclosing shell being in section. Fig. 3 is a transverse section taken on line 3 3 of Fig. 2. Fig. 4 is a diagrammatic view showing my device in operation on an automatic telephone-line.

Referring to the drawings, 5 is the inclosing shell of an ordinary telephonic receiving instrument consisting of the body 6 and ear-cup 7, preferably made of insulating material. Secured in this inclosing shell is the usual magnet 8, consisting of pole-pieces 9 and 10 and coils 11 and 12, above which is located the usual vibrating diaphragm 13, the ear-cup 7 holding it firm in place. The connections to the coils are made through two spring-switches 14 and 15, which are secured to an insulating-base 16, located in the lower end of the instrument between the pole-pieces. Secured in the upper part of the insulating-base 16 is the ground-plate 19, to which the ground-wire 20 is attached. This ground-plate projects from either side of the base 16 in close proximity to the free ends of the spring-switches, forming contact-points for the switches. The spring-switches are operated by push-buttons 21 and 22, made

of insulating material, and project through apertures in the side of the inclosing shell. The connections with the coils are made in the usual manner and are carried downwardly to the upper terminals 17 and 18 of the switches 14 and 15 and are secured to an insulating-base 23, located directly under the coils of the magnet. The lines leading from the spring-switches 15 and 16 and from the ground-plate terminate in spring-clips 26 of any preferred construction. These clips are adapted to complete a temporary connection with the circuit.

In operation when it is desired to call a desired number the operator first opens the line at the fuse 27 between himself and the subscriber and then attaches his instrument to both sides of the line and to ground through the cable, thereby completing the circuit with the office. In order to call a number, he first pushes the vertical side of the line 24 and then rotary 25 and again the vertical, which calls the desired numbers. If he should get no response, he knows immediately that he has pressed rotary side of the line instead of vertical, so he releases and reverses the operation, as above described, which elicits a response from the number he desired. When he desires to call a particular number—such, for instance, as No. 25,468—he first presses the button controlling the switch on vertical side of the line two times. He then presses the button controlling the switch on the rotary side of the line once. He continues to press the buttons alternately until he has made the calls, always pressing the button on the vertical side the specific number of times as the number in the call indicates. After he has finished his call he releases the line by pressing the buttons of both rotary and vertical sides at once.

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

1. In a telephonic receiving instrument of the character herein described, a base of insulating material in said instrument, two normally closed manually-operated make-and-break switches mounted on said base and forming a part of the instrument-circuit, one switch in each branch thereof, a ground-plate secured to said base at a point to be engaged by said switches when the same are moved to open the circuit and a connection from said plate to ground.

2. In a telephonic receiving instrument of the character herein described, a base of insulating material in said instrument, two normally closed manually-operated make-and-break spring-switches mounted on said base and forming a part of the instrument-circuit, one switch in each branch thereof, a ground-plate secured to said base at a point to be engaged by said switches when the same are

moved to open the circuit and a connection to from said plate to ground.

In witness that I claim the foregoing I have hereunto subscribed my name this 13th day of July, 1905.

KARL H. POYAS.

Witnesses:

HENRY T. HAZARD,
MYRTLE A. JONES.