(No Model.)

G. L. ANDERS.

AUTOMATIC INDICATOR SWITCH FOR TELEPHONE SYSTEMS.

No. 280,707. Patented July 3, 1883.

Fig. 2.

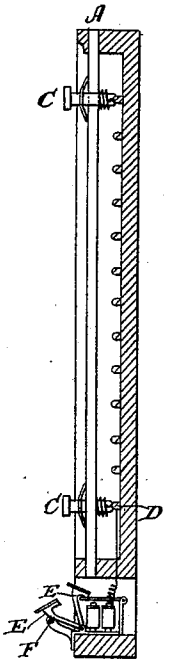
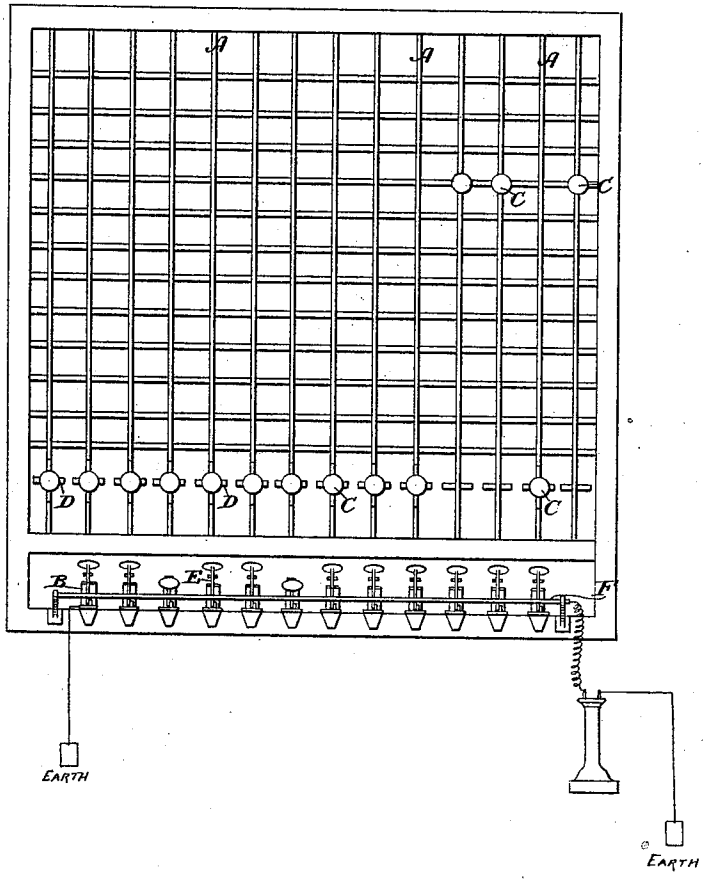


Fig. 1.



Witnesses.
C. J. Hedrick.
Philip Mauro.

Inventor.
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UNITED STATES PATENT OFFICE.

GEORGE L. ANDERS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO AMERICAN BELL TELEPHONE COMPANY, OF SAME PLACE.

AUTOMATIC INDICATOR SWITCH FOR TELEPHONE SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 280,707, dated July 3, 1883.

Application filed April 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LEE ANDERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Automatic Indicator Switches for District-Telephone Systems, of which the following is a specification, reference being had to the accompanying drawings.

In the district-telephone system the central office is provided with a series of electro-magnetic apparatus, each connected, respectively, to one of the circuits entering the office and operated from any station on said circuit, to indicate to the operator at the central office that some one station on the circuit desires to communicate telephonically.

The object of this invention is to obviate the necessity of the operator at the central office being required to switch in his telephone after receiving a call; and to this end it consists in combining with the electro-magnetic indicating apparatus a device whereby the operation of any indicating apparatus automatically connects the line-circuit connected thereto with the central-office operator's telephone and earth.

The electro-magnetic indicating apparatus generally used at the central office is the well-known drop-annunciator, which, when its electro-magnet is excited by a momentary current, releases a metallic plate so that it drops into such a position as to bring into view a number upon its inner face, the said plate being normally turned up so that the number thereon is not seen. Each circuit is provided with its annunicator, and passes through the coils of the electro-magnet of the same to earth through the metallic parts of the apparatus; and my invention can be carried into effect with this form of indicating apparatus by placing a metallic bar in front of the annunciators in such a position that when any number-plate drops down to give a signal its lever will come into contact with said bar, and by connecting said bar to one terminal of a telephone having its other terminal connected to earth.

In the accompanying drawings is shown a central-office switch-board provided with this device, Figure 1 being a view of said switch-board in elevation, and Fig. 2 being a sectional view of the same.

In these several figures the same letters refer to the same part.

Referring to the drawings, A A are bars, each connected, respectively, to a circuit, and B B are a series of drop-annunciators, the electro-magnets of which are respectively normally connected by means of the sliding connectors C C and insulated bars D D with the several circuits.

E E are metallic levers carrying number-plates, and F is a metallic bar arranged in front of the annunciators in such a position that when any drop falls into the position in which it gives a signal its metallic lever comes into contact with the matallic bar.

Each circuit is connected to one terminal of the helix of the electro-magnet of its annunciator, and passes from thence to earth through the metallic parts of the annunciator, and the metallic rod is connected to one terminal of the helix of a telephone which has its other terminal connected to earth, so that when any annunciator operates the contact of its lever with the metallic bar immediately connects the telephone to the circuit.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

At a central office, the combination of a series of electro-magnetic annunciators, each placed in a line-circuit and acting, when operated, to let fall a metallic lever or circuit-closer, the metallic bar F, or suitable conductor, arranged so that said levers or circuit-closers, when let fall, come into contact therewith, and of a telephone having one terminal of its coil connected to said bar and the other to earth, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of the subscribing witnesses.

GEO. L. ANDERS.

Witnesses:
ALEX. L. HAYES,
ARTHUR E. ANDREW.