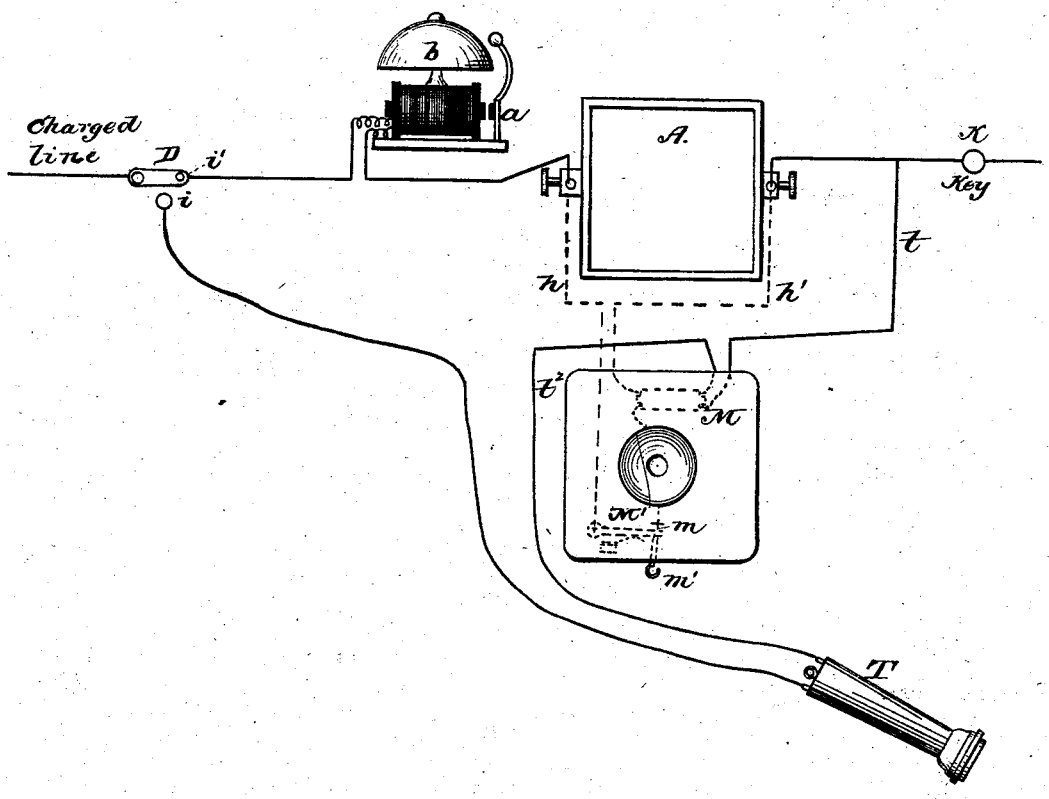
(No Model.)

C. E. BUELL.

MEANS FOR UTILIZING SECONDARY BATTERIES ON TELEPHONE CIRCUITS.

No. 259,809. Patented June 20, 1882.



WITNESSES
F. H. Knight
Fred'k Lehmuch.

INVENTOR
Charles E. Buell,
by Melville Church
His Attorney.

UNITED STATES PATENT OFFICE.

CHARLES E. BUELL, OF NEW HAVEN, CONNECTICUT.

MEANS FOR UTILIZING SECONDARY BATTERIES ON TELEPHONE-CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 259,809, dated June 20, 1882.

Application filed April 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BUELL, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in the Application of Secondary Batteries to Telephone-Circuits; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which the figure illustrates telephonic station apparatus arranged in accordance with my invention.

My invention consists in a telephone-station apparatus provided with a transmitter having its secondary circuit arranged for connection with a main line, a secondary electric pile or battery arranged in connection with a main line in a manner to become charged by an electric current flowing over said main line, and means for directing the current of said secondary electric pile or battery over the primary circuit of the transmitter.

The letter A indicates a secondary electric pile or battery, which may be of any well-known or suitable construction, and having its opposite poles connected with the main line, as shown in full lines in the drawing, and also with the primary coil of the induction-coil or inductorium of the transmitter M by means of wires *h h'*. (Shown by dotted lines.)

A metallic spring-arm, M', (shown in dotted lines as arranged within the transmitter-case,) is interposed in the primary circuit of the induction-coil, and will, when left free, close said circuit by making contact with a metallic stop, *m*, connected with a wire leading from one of the contact devices which is controlled by the transmitter-diaphragm; but when the telephone T is hung upon the hook *m'* which projects through the bottom of the casing from said spring-arm, the weight of the telephone will depress the arm and thus break the circuit.

The secondary coil of the transmitter connects with the main line on one side of the secondary pile A by means of a wire, *t*, and is connected with one terminal of the coil of the receiver T by a wire, t^3, while a wire, *t'*, leads from the other terminal of the receiver-coil to a contact-plate or switch-point, *i*.

The switch D is connected to the incoming line-terminal, and may be placed in contact with either the plate or point *i* or a similar plate or point, *i'*, and when in contact with the latter completes the main-line circuit through a call-bell, *a b*, and the secondary pile A, as shown. Thus it will be seen that when the main-line circuit is so completed and the primary circuit of the transmitter is broken by the telephone holding the spring-arm M' depressed, the main-line battery-current will have no other path through the station than through the secondary pile A and the bell-magnet. This being its normal course, said current acts constantly, when the station-telephones are not in use at a particular station, to charge the secondary pile at the station. When, however, the telephone T is removed from its hook and the arm M' rises, closing the primary circuit, and the switch D is swung into contact with point *i*, the charge of the secondary pile A flows from one pole to the other over the wires *h h'* and the primary circuit, and the main-line circuit is closed over the station-telephone-circuit, as before described. When the transmitter-diaphragm is now actuated by sound-vibrations, in the usual manner in oral communication, the variations caused thereby in the primary circuit produce the induced electrical waves which traverse the line and act upon a receiver at a connected station.

A push-button, K, or other contrivance, is provided for breaking the circuit for calling a remote station.

In another application, filed by me June 6, 1881, I have substantially claimed a line-wire provided at one end with a line-battery or electric-current generator, in combination with a secondary cell arranged upon said line, and adapted to store up electricity upon the passage of the main-line current through it, a local circuit in circuit with said cell, and a transmitter in said local circuit. This matter so claimed in my other application I therefore make no claim to here.

What I do claim is—

A telephone-station apparatus provided with a transmitter and having its secondary circuit arranged for connection with the main line, a secondary electric pile or battery arranged for connection with a main line in a manner to be charged by an electric current flowing over said main line, and means for directing the current of said secondary electric pile or battery over the primary circuit of the transmitter.

CHARLES E. BUELL.

Witnesses:

FRED F. CHURCH,

W. E. CHAFFEE.