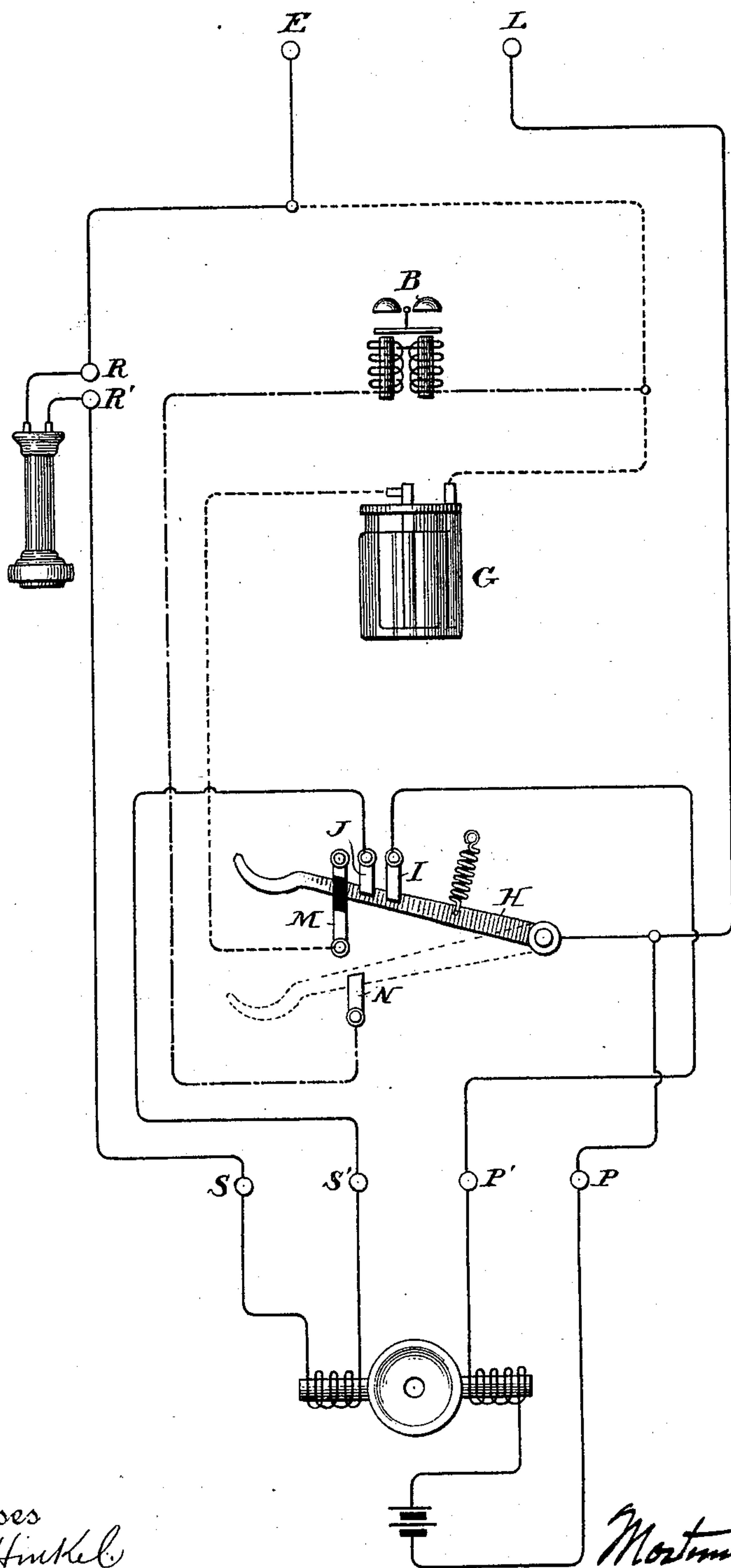


(No Model.)

M. DU PEROW.
ELECTRIC SIGNALING APPARATUS.

No. 587,433.

Patented Aug. 3, 1897.



Witnesses

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UNITED STATES PATENT OFFICE.

MORTIMER DU PEROW, OF WASHINGTON, DISTRICT OF COLUMBIA.

ELECTRIC SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 587,433, dated August 3, 1897.

Application filed July 10, 1895. Renewed May 17, 1897. Serial No. 637,005. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER DU PEROW, a citizen of Canada, residing at Washington, in the District of Columbia, have invented
5 certain new and useful Improvements in Electric Signaling Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

My invention relates to signals used in connection with the telephone service; and it consists in the use of two partial signaling-circuits at any station in addition to the telephone speaking-circuit, (including the primary and secondary transmitter-circuits
20 when employed,) one for receiving a signal and having in it a signaling device and the other for transmitting a signal and having in it a source of electricity, said three circuits being independent of each other and being
25 closed at one end into earth or an equivalent return line-wire, their other ends being so arranged as to be closed when required by a single switch connected with the main line-wire, and, preferably, the signal-receiving circuit being normally closed by the switch
30 when the telephone is not in use, and the signal-transmitting circuit being normally open and automatically closed by the switch in moving to and fro for the purpose of closing
35 or opening the normally open telephone-circuit.

In the drawing the switch is shown as an ordinary telephone-supporting hook, the contacts are located substantially one above the
40 other, the signal is a bell, there are the usual receiver and transmitter with its so-called "local" battery, and the source of electricity for the signal-transmitting circuit is a second battery; and these forms of devices in their
45 relationship as shown I at present prefer in operating my invention; but neither one of them in the form or the relationship shown is necessary to its operativeness, and, for example, the signal might be an annunciator,
50 the signal-transmitting current be supplied

by a motor-generator or by the local battery, the contacts be differently placed, and the switch be otherwise located and actuated.

In the drawing the speaking-circuit through the line and earth wires, including the primary
55 and secondary circuits, is indicated by the solid lines. The dotted lines indicate the signal-transmitting circuit, and the dot-and-dash lines indicate the signal-receiving circuit.
60

L is the main-line-wire terminal and E the earth or return wire terminal at any station. When the receiver is removed therefrom, switch-hook H closes the primary circuit
65 through contact I, terminal P, the local battery and primary coil of the transmitter, and terminal P'. Simultaneously switch-hook H closes the secondary circuit through contact J, terminal S', the secondary coil of the transmitter, terminal S, terminal R', the receiver,
70 terminal R, terminal E, the earth, the other instrument, the main line-wire, and terminal L.

N is the signal-receiving contact, and M the signal-transmitting contact. M is so located
75 that the switch-hook contacts with it in moving up or down, the persistency of the resulting signal being proportioned to the persistency of the contact. Owing to the form of contact M in the drawing it exhibits an insulated section where the switch-hook rests
80 when the speaking-circuit is in use. Switch-hook H rests on contact N normally—that is, when the receiver is hanging on the switch-hook.
85

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

1. The normally open partial speaking-circuit having in it a telephone, or the primary
90 and secondary coils thereof, and the independent normally open partial signal-transmitting circuit having in it a source of electricity only, in combination with the independent partial signal-receiving circuit having
95 in it a signal and being normally closed by a switch adapted when moved in one direction to successively open the signal-receiving circuit, close and then open the signal-transmitting circuit, and finally close the
100

speaking-circuit, and when moved back again to reverse these operations, substantially as described.

2. Two telephone-stations joined by a suitable electric circuit, one conductor thereof at each station having three branches, with their respective terminals, said branches having in them respectively a speaking device, a signal-transmitting device, and a signal-receiving device, and the other conductor at each station being connected to a movable switch adapted in moving within its prescribed limits to automatically contact with each of said terminals in succession, substantially as described.

3. At a telephone-station, the normally open speaking-circuit having in it a telephone and

a source of electricity, and the independent normally open signal-transmitting circuit having in it a source of electricity only, in combination with a circuit-changing switch connected to line and adapted when moved in one direction to successively close and then open the signal-transmitting circuit and close the speaking-circuit and when moved back again to successively open the speaking-circuit and close and then open the signal-transmitting circuit, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MORTIMER DU PEROW.

Witnesses:

BEATRICE A. CROGHAN,
NATHAN H. ROBBINS.