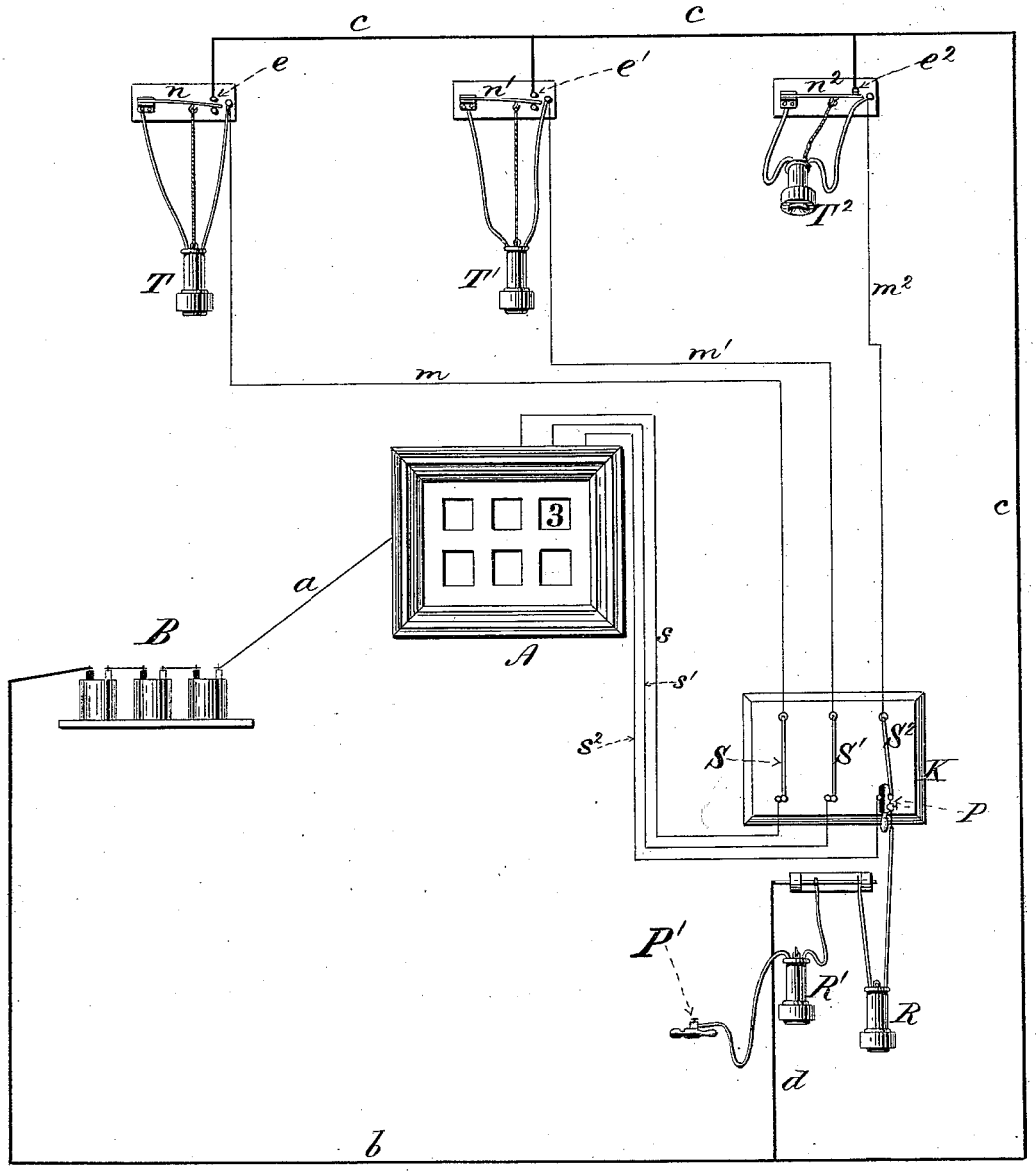
C. A. CHEEVER.

Switch for Telephones.

No. 208,463. Patented Oct. 1, 1878.

Figure 1.



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UNITED STATES PATENT OFFICE.

CHARLES A. CHEEVER, OF NEW YORK, N. Y.

IMPROVEMENT IN SWITCH FOR TELEPHONES.

Specification forming part of Letters Patent No. **208,463**, dated October 1, 1878; application filed August 23, 1878.

To all whom it may concern:

Be it known that I, CHARLES A. CHEEVER, of the city and county of New York, State of New York, have invented a new and useful Improvement in Telephone Signaling Apparatus, of which the following is a full, true, and exact description, reference being had to the accompanying drawing.

The object of my invention is to arrange a series of telephones, in combination with an annunciator or equivalent signaling apparatus, in such a way that the operation of the telephone will automatically signal to a receiving-operator the fact of the operation of each telephone of a series, while at the same time the apparatus is conveniently arranged for the reception of such messages as may be transmitted by means of the telephone.

My apparatus is suitably designed to be used in hotels in which electrical annunciators are already in use, and to which this arrangement could be applied at a trifling expense.

My apparatus is so constructed that the raising of the telephone will automatically signal to the receiving-clerk the number of the telephone which is moved, and the receiving-clerk, having before him a number of switches numbered to correspond to the different rooms wherein the transmitting-telephones are located, can readily put himself in communication with the desired room or rooms by means of the operation or movement of the proper switch.

My invention will be readily understood from the drawing, in which T T^1 T^2 represent a series of suspended telephones. K represents a switch-board, through which the return-wires from the telephones pass. A represents the ordinary hotel-annunciator. B represents the battery, and R R′ represent a series of receiving-telephones.

The result which I desire to accomplish is that the raising of the telephone T^2 shall automatically signal to the clerk the number of the room in which it is raised, and that then the clerk, by operating the proper switch, can immediately put himself into communication with the transmitting-telephone, at the same time cutting out the battery B from that portion of the line and leaving the remainder of the apparatus operative and ready to receive signals.

The apparatus is operated on what is known as the "open-circuit" principle—that is to say, the battery is only occasionally operated, whereby the battery is the longer preserved. The circuit of the battery in the ordinary condition of the line would be as follows: From the battery B through the wire *a* to the annunciator A, through the wires *s* s^1 s^2, through the switch-board K, through the wires *m* m^1 m^2, through the telephones T T^1 T^2, and ending in the spring-switches *n* n^1 n^2, which, when the weight of the telephones is on them, are lowered and pressed against the lower stops, and thereby break the battery-circuit, since the lower stops are dead-points. Following the circuit of the battery in the other direction, it passes through the wire *b*, through the wire *c*, and ends at the back points *e* e^1 e^2, which are ordinarily separated from the spring-switches *n* n^1 n^2. The switch-board K, as herein shown, consists of a series of spring-switches of the kind ordinarily known as "plug-switches;" but the plugs are peculiar in having one side dead or insulated, as will clearly be seen from the drawing.

Supposing the plugs to be removed from the switches and the telephone T^2 raised, as shown in the drawing, then it is obvious that the battery-circuit will be completed through the wire *b* *c* e^2, spring-switch n^2, telephone T^2, wire m^2, spring-switch S^2, wire s^2, annunciator A, wire *a*, and battery B. In this way the window of the annunciator corresponding to the room T^2 will be dropped, disclosing its number, as is shown in the drawing. Then the clerk, knowing that the switch S^2 corresponds with the room 3, inserts therein the plug P, as is shown in the drawing, and thereby the circuit is completed through the telephone R, wire *d*, and wire *c*, as previously. If, during the reception of the message from the telephone T^2, another telephone be operated, the same result would ensue, and a sufficient number of telephones, R R′, should be provided to receive the greatest number of messages which would be likely to be trans-

mitted at the same time. These telephones have the common return-wire *d*, as is clearly shown.

By means of this contrivance it will be only necessary for the guest to raise the telephone and speak his message, when the clerk, having been prepared by the raising of the telephone for the reception of the message, will be ready to receive the communication from the guest, and this is done automatically by the guest without necessitating the turning of any switch or the operation of any contrivance.

It is likewise plain that my invention need not be confined to a hotel, but would be equally applicable to any series of converging lines.

I do not claim the spring-switches *n* in combination with the telephone T alone, but only in combination with the switch-board and annunciator, as hereinafter claimed.

I do not claim the automatic switch *n*, the same being the invention of H. L. Roosevelt, for which he has made application for Letters Patent; neither do I claim the method of connecting said switches described in said application.

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

1. In combination with a transmitting-telephone, a receiving-telephone, a battery, and a signaling apparatus, a plug-switch having one side of the plug insulated, substantially as and for the purposes described.

2. The combination of the transmitting-telephones T, switch-board K, annunciator A, battery B, and receiving-telephones R, whereby a less number of receiving-telephones is used to receive messages from a greater number of transmitting-telephones, substantially as described.

3. The combination of a series of telephones connected with the switch-board K, which is provided with the spring-switches S, and receiving-telephones R and plugs P, when connected with the annunciator A, battery B, and return-wires, substantially as described, whereby the insertion of the plug P cuts out the annunciator and battery from the line through which the signal is to be received, but leaves the other lines intact, substantially as described.

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