

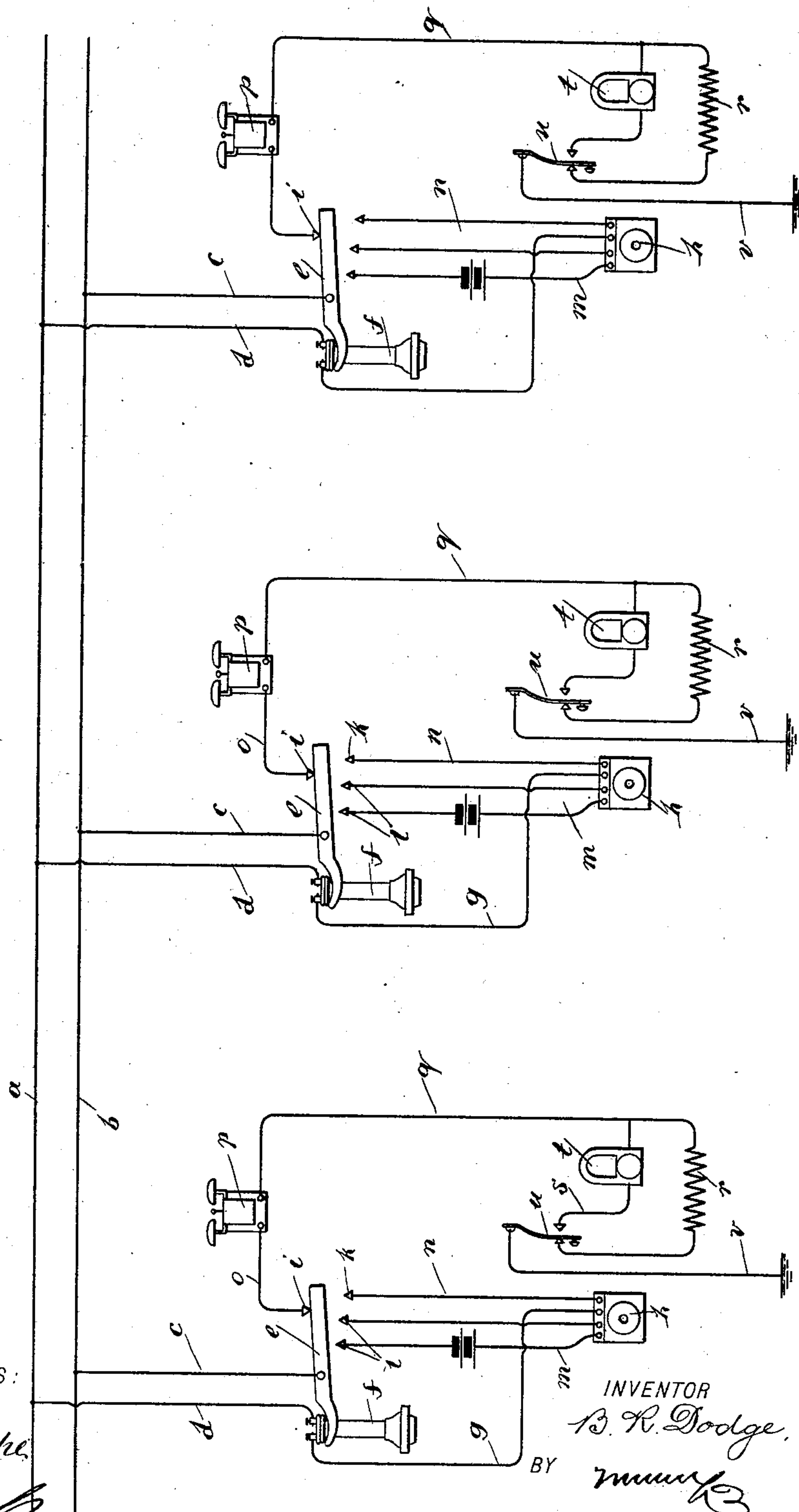
No. 606,803.

Patented July 5, 1898.

B. R. DODGE.
TELEPHONE SYSTEM.

(Application filed June 17, 1897.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

BURTON R. DODGE, OF POST MILL VILLAGE, VERMONT.

TELEPHONE SYSTEM.

SPECIFICATION forming part of Letters Patent No. 606,803, dated July 5, 1898.

Application filed June 17, 1897. Serial No. 641,140. (No model.)

To all whom it may concern:

Be it known that I, BURTON R. DODGE, of Post Mill Village, in the county of Orange and State of Vermont, have invented a new and Improved Telephone System, of which the following is a full, clear, and exact description.

This invention is a party-line telephone system by which any one of the several subscribers may sound a signal for a certain one of the remaining subscribers and having signaled such certain subscriber may hold communication without the intervention of a central office.

This specification is the disclosure of one form of my invention, while the claims define the actual scope of the invention.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure represents a diagrammatic view of the invention.

The telephone has a metallic circuit composed of two main leads *a* and *b*. Each station of the system is connected with the leads *a* and *b* by legs *c* and *d*, which run, respectively, from the leads. At each station there is a telephone-switch *e*, electrically connected with the legs *c* and designed to normally carry the receiver *f*, with which the leg *d* is electrically connected. A conductor *g* leads to the transmitter *h*. The telephone-switch *e* swings between a contact *i* on one hand and three contacts *k* and *l* on the other hand. When the receiver *f* is disconnected from the switch *e*, the switch drops to connect the contacts *l* and thus close the circuit *m* of the transmitter *h*. The connection of the switch *e* with the contact *k* brings the legs *c* in connection with a conductor *n*, which leads to the transmitter *h*. This closes the talking-circuit of the station and messages may be transmitted over the leads *a* and *b*.

The contact *i* through the medium of a conductor *o* leads to a signal-bell *p*. This signal-bell is also in connection with a conductor *q*, in which is inserted a resistance *r*, and from which runs a leg *s*, in which is inserted a generator *t*. A hand-switch *u* lies between two contact-points respectively at the end of the leg *s* and conductor *q*. From the switch *u* runs a ground-tap *v*. It will thus be seen that the resistance *r* is arranged in

parallel with the generator *t* and in series with the signal-bell *p*. The normal position of the parts is that shown in the drawing. When the parts are so disposed, the talking-circuit of each station is open and the signaling-circuit is closed, so that the bell *p* will be sounded upon the transmission of an electrical impulse over the lead *b*. Normally the switch *u* contacts with the conductor *q*. When a person desires to signal a subscriber, the switch *u* is moved to contact with the leg *s* and the generator *t* operated, whereupon the signal-bells *p* in all of the stations are sounded. The subscriber for whom the particular signal was intended upon lifting the receiver *f* from the switch *e* closes the talking-circuit at his station, and the same will be the result of the lifting of the receiver of the signaling-station. The subscribers may now hold communication with each other. Immediately upon reversing the receivers the talking-circuits are thrown open and the signaling-circuits are again closed.

The resistance *r*, which is introduced in the conductor *q* and normally forms part of the signaling circuit at each station, serves principally to prevent the entry of ground-currents into the signaling-circuit, and thus saves the line from being a noisy one. The currents on entering the tap *v* will be received in and dissipated by the resistance *r*. The resistance also serves to prevent the low-resistance signal-bell magnet from taking too much of the signal-current and to keep the pressure up on longer lines. This latter purpose is effected by the action of the resistance in damming up or storing the current of electricity. A still further function of the resistance is to form a barrier in the signaling-circuit which prevents the leakage of the talking-currents and compels the talking-currents to go to the receiving instrument.

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

1. A party-line telephone system having two metallic main leads and a plurality of stations, each station having a talking-circuit, a signaling-circuit and a telephone-switch alternately closing the circuits, the signaling-circuit comprising a signal-bell, a generator and a resistance, the resistance being in par-

allel with the generator and in series with the bell, and the signaling-circuit also comprising a switch for normally holding the resistance in the closed circuit and capable of
5 throwing the bell in such circuit to the exclusion of the resistance.

2. A party-line telephone system having two main metallic leads and a plurality of stations, each station comprising a talking-circuit, a signaling-circuit, and a telephone-
10 switch alternately closing the circuits, the signaling-circuit having a ground-tap and the

signaling-circuit also having a signaling-bell, a generator and a resistance, the resistance being in parallel with the generator and in series with the bell, and the talking-circuit
15 also having a switch for normally holding the resistance in the closed circuit and capable of throwing the bell into such circuit to the exclusion of the resistance.

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Witnesses:

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