

(No Model.)

F. G. WARRELL.
TELEPHONE ANNUNCIATOR AND CALL BELL.

No. 524,009.

Patented Aug. 7, 1894.

Fig. 1.

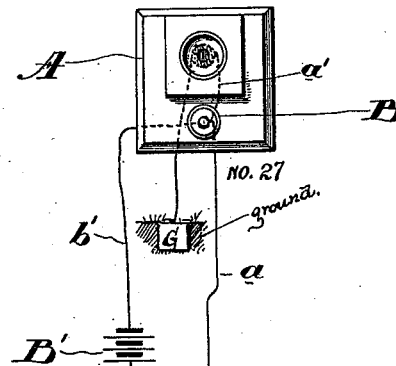


Fig. 2.

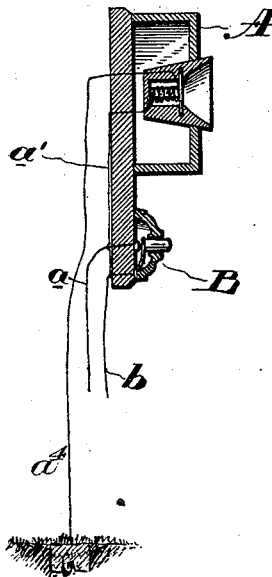
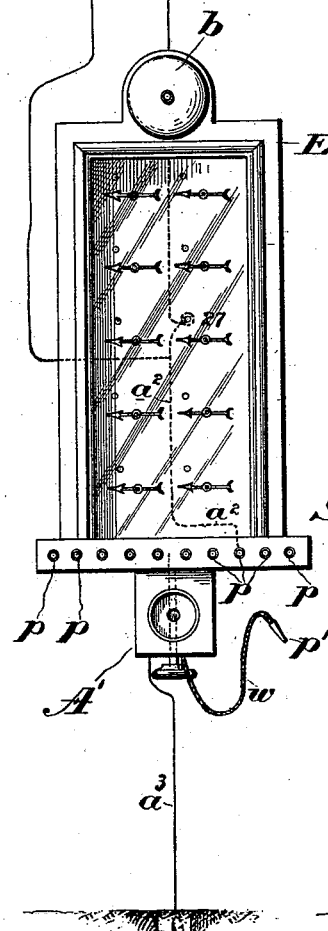
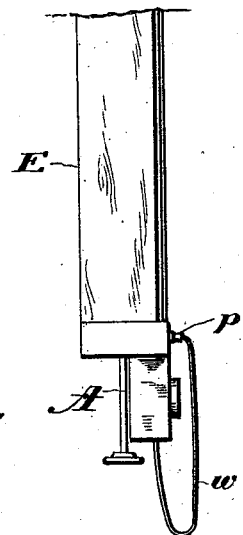


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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TELEPHONE ANNUNCIATOR AND CALL-BELL.

SPECIFICATION forming part of Letters Patent No. 524,009, dated August 7, 1894.

Application filed June 26, 1891. Serial No. 397,456. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK G. WARRELL, of the city of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Telephone Annunciators and Call-Bells; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

My invention has relation to telephone-annunciators and call-bells and consists in the combination and system hereinafter described.

15 The object of my invention is to provide a combined system of telephone and call-bell annunciators for hotel, house and other such like purposes of simple and inexpensive construction so that the call indicated by the annunciator may be connected by telephone communication by the mere adjustment of the proper switch at the switch board; and in which each of the respective terminals may be connected with the annunciator and central telephone on independent circuits.

25 The accompanying drawings illustrate my invention.

Similar letters and figures of reference refer to similar parts throughout.

30 Figure 1 illustrates my invention, showing, however, only one call-bell and telephone of the system connected with the annunciator. Fig. 2 is an enlarged sectional view of the telephone and push button on the line $x-x$ of Fig. 1. Fig. 3 is a side elevation of the annunciator, switch board and telephone attached thereto.

40 E represents an annunciator of ordinary construction connected by wires, a b' , connecting with the push buttons, B, at the terminals; a battery, B', is also provided at any desired point.

45 A represents a telephone, which in the form illustrated in the drawings serves as both receiver and transmitter as does also the telephone A', at the annunciator end of the line; independent receivers and transmitters can be applied when desired at either or both ends; the transmitter and receiver, A, is provided at each terminal with the push button,

B, and connected with the annunciator call-bell system of wiring, say with the wire, a , by the auxiliary wire, a' .

A switch board, S, is provided to the annunciator, E, having a switch, p , for each terminal or indicator of the annunciator, each switch being electrically connected, as by the wire, a^2 , with its main wire to its respective terminal, as with the main wire, a ; the receiver and transmitter A', is adjustably connected by a plug or switch with each switch of the board S.

Any form of switch or key and switch board device may be employed; in the drawings I have illustrated a simple form of flexible covered wire, w , connected at one end with the receiver and transmitter, A', and at the other end provided with a plug, p' , illustrated as disconnected in Fig. 1, but adapted to be engaged in the switch orifices, p , of the switch board, S, when it is desired to place the telephone in circuit, as shown in Fig. 3, or it may be connected by any switch device, as above stated. Each terminal desired to be connected is provided with a telephone, call-bell and wiring connections similar to the single connection as illustrated in the drawings.

Referring to the drawings, when the push button, B, is pressed the arrow on the annunciator will indicate say room, No. 27; the plug, p' , provided on the end of the flexible wire, w , will then be inserted in the orifice 27 of the switch board by the person in charge at the annunciator, and thus telephonic connection will be had directly between the telephone, A', through the medium of the wire, a , with the telephone, A; the bell circuit being broken at the push button, B; when it is desired to disconnect the telephone the switch plug, p' , is removed to a hook, or other temporary position, as shown in Fig. 1, ready to be inserted in any other switch of the switch-board which the annunciator may indicate. The telephone is preferably grounded by the wire, a^3 at one end and by the wire, a^4 at the other end.

It will be noted that in my invention each room or terminal is connected independently and directly with the central telephone and annunciator by a separate independent circuit.

cuit, allowing the annunciator to operate and indicate whenever the button is pressed at any terminal, notwithstanding another terminal may be in circuit, and will thus enable
5 the operator to immediately connect with that terminal when disengaged at the phone circuit on the other.

I have described the construction of annunciator and telephone as connected on the
10 same system of wiring, but separate systems of wiring for the telephone and call-bell annunciator may be employed, if desired, connected and constructed at the annunciator terminals as described. Buildings already
15 provided with annunciators and call-bell system of wiring can readily be fitted with my invention on the same system of annunciator wiring.

I do not limit myself to the particular construction described and shown, as my invention may be employed in numerous constructions. The electric generator or battery, B', connected with the call-bell system may be directly connected with the wire, a, if desired;
25 and the wire, b', also grounded, if preferred; numerous constructions of switches, as before stated, may be also employed.

I have described a battery provided to the call-bell, this is a preferable construction, but
30 I do not limit myself to the use of a battery; frictional and other annunciators may be employed in carrying out my invention.

I am aware that combined telephone and annunciator systems of communication have
35 heretofore been invented in which the respective telephone and call-bell terminals by a complicated system of circuit wiring and switches are operated on the same circuit and all rooms connected on one main circuit
40 with the central telephone and annunciator through branches leading from the main circuit. The combined system of telephone annunciators I do not claim broadly; my inven-

tion consists in the device and system herein particularly described and claimed. 45

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

1. The combination in an electric annunciator and telephone system of a central annunciator, E, provided with electrically operated indicating hands each hand connected with one of the terminals of the system, a central telephone receiver and transmitter, a
50 central switch board connecting said central telephone by means of a switch or plug with each of the respective telephone terminals, a telephone and push button provided at each terminal of the series, said push button adapted to make or break at will the telephone and signaling circuits, independent
55 circuits connecting each terminal with the annunciator and central telephone, a metallic signaling circuit being part of the talking circuit, ground connections provided at each telephone terminal substantially as described. 65

2. An annunciator, E, call bell, b, wiring connections, a, b', ground wires, a³, a⁴, battery, B', push button, B, telephones, A, connected directly at each terminal with the call-bell system of wiring, central telephone, A',
70 provided at the annunciator, switch, board, S, and switch connections connecting the central telephone, A', with the switch board, S, each telephone and push-button of the series of telephone terminals and push buttons being connected by circuits with the annunciator and central telephone independent of each of the other respective terminals substantially as described. 75 80

In witness whereof I have hereunto set my hand this 22d day of June, A. D. 1891.

FREDERICK G. WARRELL.

Witnesses:

G. A. BAUMANN,
HORACE PETTIT.