C. E. WILSON.

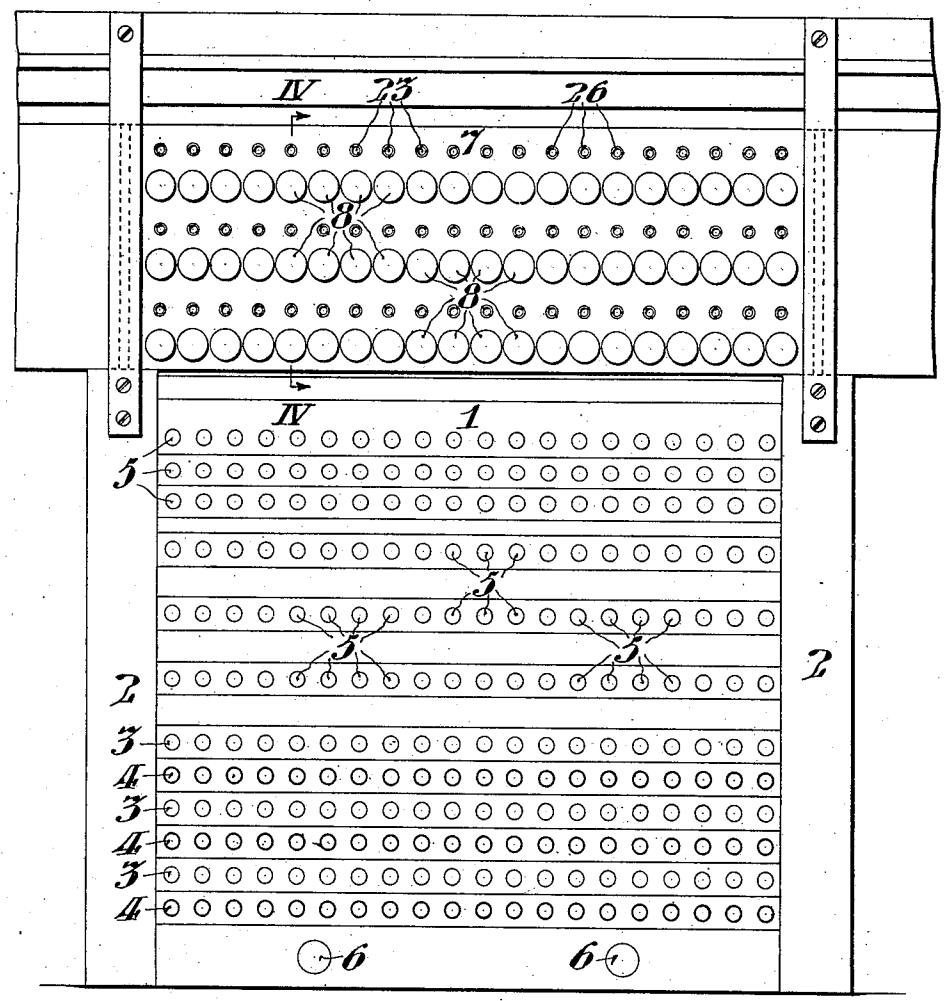
TELEPHONE SWITCHBOARD.

APPLICATION FILED SEPT. 10, 1904.

899,278. Patented Sept. 22, 1908.

2 SHEETS—SHEET 1.

FIG. I.



WITNESSES:

Clifton C. Hallowell

John C. Bergner.

INVENTOR:

CHARLES E. WILSON,

by Paige, Paul & Bailey

Attys

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2 SHEETS—SHEET 2.

FIG. II.

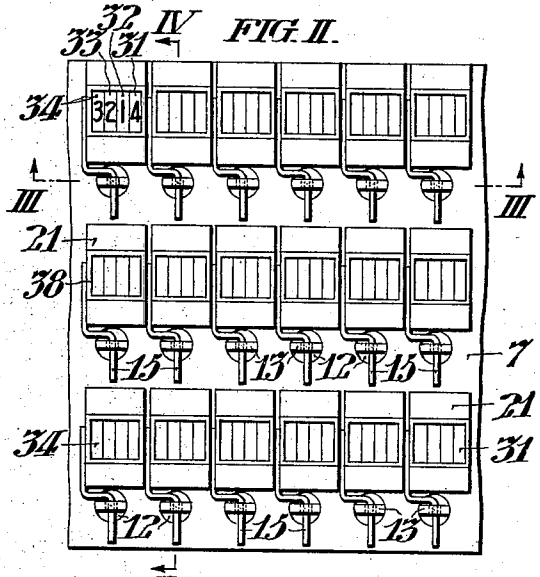


FIG. III.

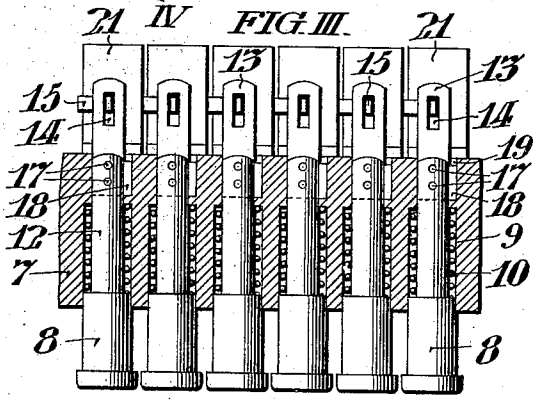
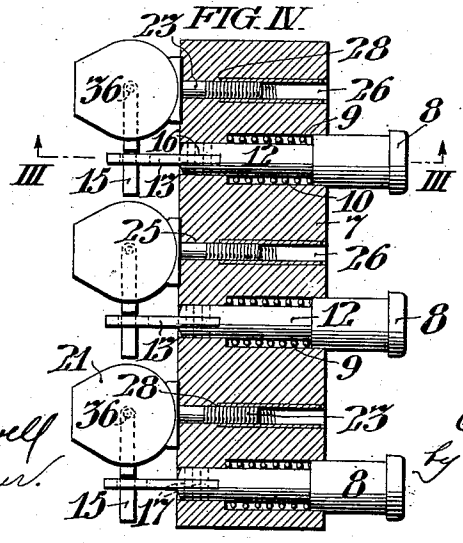


FIG. IV.



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UNITED STATES PATENT OFFICE.

CHARLES E. WILSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO KEYSTONE TELEPHONE COMPANY OF PHILADELPHIA, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TELEPHONE-SWITCHBOARD.

No. 899,278. Specification of Letters Patent. Patented Sept. 22, 1908.

Application filed September 10, 1904. Serial No. 223,949.

To all whom it may concern:

Be it known that I, CHARLES E. WILSON, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Telephone-Switchboards, whereof the following is a specification, reference being had to the accompanying drawings.

My improvements relate particularly to call registering devices and a peculiar construction and relation of the same with respect to the other elements of the switch board.

It is the object of my invention to facilitate the manual operation of the call registering devices, and to this end I provide a switch board with a plurality of such devices respectively corresponding with the answering jacks upon the board, and arrange said registering devices in the same relative positions as the answering jacks with which they correspond.

As hereinafter described, said registering devices are disposed in a group at the top of a board, which is provided at its lower portion with a group of answering jacks, and which is provided intermediate of said two groups with a plurality of ordinary calling or "multiple" jacks. By this arrangement, the registering devices are entirely removed from the parts of the board which are obstructed by the cords; a correspondence is nevertheless maintained which allows the operator to rapidly and accurately register the call after it has been completed and with the least danger of a mistake in the registration.

My invention comprehends the various novel features of construction and arrangement hereinafter more definitely specified.

In the accompanying drawings; Figure I, is a front elevation of a portion of a switch board, constituting what is known as an operator's "position" embodying my invention. Fig. II, is a rear elevation of a portion of the group of registering devices which is located upon the opposite side of the panel shown in Fig. I. Fig. III, is a horizontal sectional view, taken on the line III, III, in Figs. II and IV. Fig. IV, is a vertical sectional view taken on the line IV, IV, in Figs. I and II.

Referring to Fig. I, the switch board comprises the panel 1, having the vertical stiles 2, defining an operator's position and including between them, the group of answering jacks 3, arranged in horizontal lines adjoining corresponding lines of annunciators 4, the ordinary calling or multiple jacks 5, being disposed above said answering jacks, and, the pilot signals 6, beneath the group of answering jacks. Said panel 1, is surmounted by the panel 7, which supports the group of registering push buttons 8, corresponding in number and relative location with the group of answering jacks 3, at the bottom of the board. Each of said push buttons 8, is mounted in a socket 9, in the panel 7, and provided with a spring 10, which normally thrusts the button outwardly as indicated in Figs. III and IV, and, each button is provided with a cylindrical shank 12, and flattened tang 13, having a slot 14, to receive the lever 15, of its respective registering device.

Each tang 13, is mounted in the slot 16, in its shank 12, in which it is secured by the rivets 17, and, a laterally projecting portion of said tang, forms a rib 18, which engages a corresponding recess 19, in the back of the panel 7; thus preventing rotation of the button 8, and limiting the forward movement of said button under pressure of the spring 10. Each of said registering devices comprises a casing 21, provided with a screw threaded bolt 23, which is seated in a socket 25, in the panel 7, and maintained in rigid relation therewith by a tubular nut 26, which is entered in said panel from the front side thereof in engagement with said screw threaded shank and in contact with a shoulder 28, in said socket 25. Each of said casings 21, incloses a series of four disks 31, 32, 33, and 34 respectively marked with the numerals 1 to 9 and zero upon its periphery and respectively representing units, tens, hundreds and thousands. It is to be understood that said lever 15, is secured to the shaft 36, which extends through said numbered disks in concentric relation therewith and is provided with a suitable pawling mechanism within said casing 21, so that oscillatory movement of said lever 15, effects the unit progression of said disks to manifest a corresponding increase in the whole number displayed through the opening 38, in said casing 21, as indicated in Fig. II. It is to be understood that all of the registering disks are numbered although but one set is thus shown in Fig. II.

The mechanism above described is used as follows:—A call being manifested by one of the annunciators 4; the operator plugs the

corresponding answering jack 3; receives the subscriber's request for connection; plugs the desired multiple jack 5, and calls the station represented thereby. If a suitable reply is received from the station called, the connection is completed and the operator thereupon pushes the registering button 8, corresponding with the answering jack initially employed in making the connection, and thus registers a call to the account of the subscriber represented by said answering jack.

Although I have illustrated the registering devices as each comprising an ordinary arrangement of numbered disks; it is to be understood that my invention is not limited to the employment of such devices, but comprehends the employment of registering devices of any suitable construction having their operating means in the same relation to each other as the answering jacks in the corresponding group; such co-relation of the groups of answering jacks and registering devices being the essential factor in facilitating the manipulation of said devices.

My invention is distinguished from all prior arrangements in which registering devices are located upon that part of the board where their operation is more or less constantly obstructed by the interlacing of the cords.

I claim:—

In a telephone switch board, the combination with a group of answering-jacks arranged in vertical and horizontal rows; a group of multiple-jacks above the answering jacks and correspondingly located; and a separate group of independent manually operated call registering devices arranged in similarly grouped rows above the multiple jacks, said individual registering devices being arranged in the same relative position in their group as are the corresponding answering-jacks and multiple-jacks in their group.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this ninth day of September, 1904.

CHARLES E. WILSON.

Witnesses:
JAMES H. BELL,
ARTHUR E. PAIGE.