(No Model.)

L. W. DAVIS.

TELEPHONE SWITCHBOARD.

No. 568,840. Patented Oct. 6, 1896.

Fig. 1.

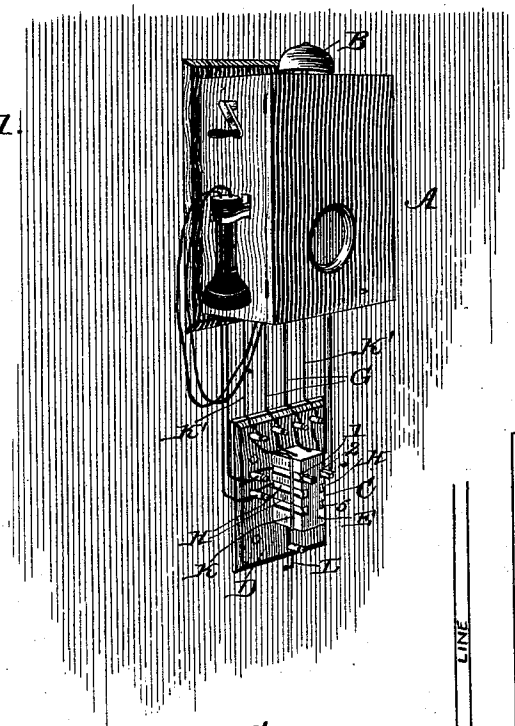


Fig. 2.

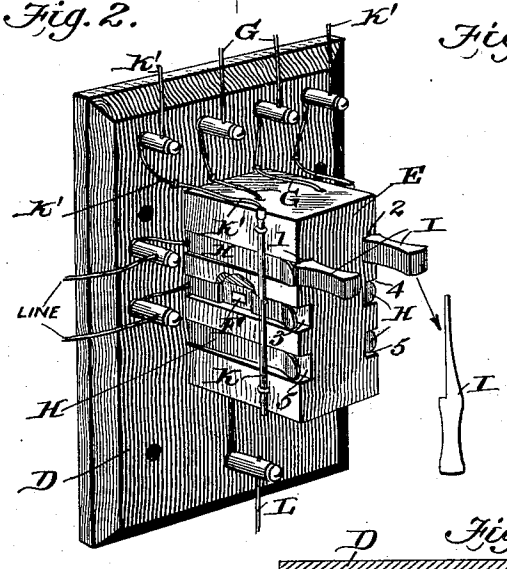


Fig. 3.

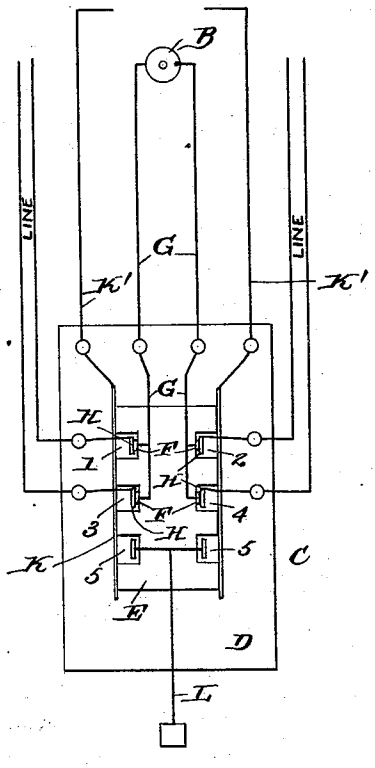
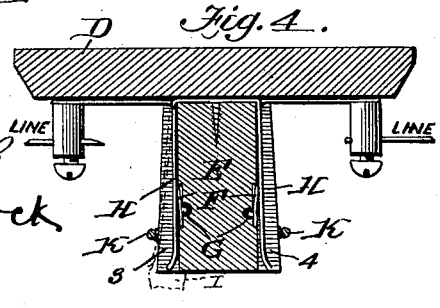


Fig. 4.



WITNESSES:

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LINVAL W. DAVIS, OF MINERAL, WEST VIRGINIA.

TELEPHONE-SWITCHBOARD.

SPECIFICATION forming part of Letters Patent No. 568,840, dated October 6, 1896.

Application filed December 5, 1895. Serial No. 571,122. (No model.)

To all whom it may concern:

Be it known that I, LINVAL W. DAVIS, of Mineral, in the State of West Virginia, have invented an Improved Telephone-Switchboard, of which the following is a specification.

This invention relates generally to telephone-switchboards, and particularly to an improved switchboard adapted for use in a central office.

The object of the invention is to provide an exceedingly cheap and simple appliance, one which will render the work of the operator much easier and quicker, and one in which all the lines will always be in communication, either with each other or with the call-bell of the central office, so that it is impossible to cut out any instruments.

Another object is to provide a switch of such construction that one change in the switch will make two changes in the lines, thereby requiring one-half of the amount of work from the operator that is usually required after these operations.

With these and such other objects as may appear the invention consists of a peculiar construction of the various parts and in their novel combination and arrangement, all of which will be fully described, and then pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a view showing the instrument, call-bell, and switchboard of a central office. Fig. 2 is a detailed view of my improved switchboard. Fig. 3 is a diagrammatic view illustrating the arrangement in connection with the circuits. Fig. 4 is a transverse sectional view.

Referring to the drawings, A indicates the usual form of telephone instrument of a central office, B the call-bell, and C my improved switch device. This switch is preferably constructed of a board D, adapted to be secured to the wall or table, as desired, and mounted upon said board is a block E, having a series of recesses 1, 2, 3, 4, and 5 in the sides of said block, and secured in recesses 1, 2, 3, and 4 are contact-plates F, which are connected with the wires G, extending to the call-bell B of the central office.

In addition to the contact-plates F in the recesses 1, 2, 3, and 4 I also provide spring-plates in all of said grooves, and said plates being flared at their upper ends to permit a wooden or rubber plug I to be inserted between it and the contact-plate F.

The contact-bar K extends along the entire length of the block on each side near the top of the same, and extending from said bar are the wires K', connecting with the instrument of the central office.

Connected to the contact-plates H in the recesses 1, 2, 3, and 4 are the line-wires leading to independent instruments, and connected with the plates H in the recesses 5 is the ground-wire L.

Now it will be understood that each contact-plate F is connected with the call-bell and each contact-plate H with the distant instrument, and the contact-bars extending along the entire switch are connected with the central instrument. Now on operation when it is desired to place instruments 1 and 2 in communication one plug is inserted in recess No. 1, between plates F and H, and the other plug in recess 2. This places instruments 1 and 2 in communication through the central-office instrument, and places instruments 3 and 4 on the call-bell circuit through the central call-bell. Should it be desired to place 3 and 4 in communication, the plugs are removed from 1 and 2 and placed in 3 and 4, thus connecting 3 and 4 and placing 1 and 2 on the call-bell circuit. Should it be desired to call No. 1, one plug is placed in recess No. 1 and the other plug in recess No. 5 on the opposite side of the switch, thus placing 2, 3, and 4 on the call-bell circuit. It will thus be seen that by one change of the plug two changes are made in the lines, thereby reducing the labor of the operator exactly one-half.

While I have shown my switch as arranged only for four instruments in a central office and particularly adapted for use in connecting instruments arranged preferably upon the points of the compass, it is obvious that the principle of my invention can be extended and applied to larger switchboards, and, in fact, the number of instruments to which it can be applied can be extended indefinitely, and I have chosen to illustrate only four devices merely for the purpose of a clear illustration.

Inasmuch as signaling is all done through the central office it is obvious that the cen-

tral office and the various stations will be required to have different calls. Thus the central-office call will be one ring, that of one station will be two rings, of another station three rings, and so on.

In practice the station will call up the central office and direct them what station they desire to communicate with; but, if desired, a station can signal directly to the station it wishes to reach by sounding the signal through the call-bell at the central office, the central operator paying no attention in this instance to any signal except his own.

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

1. In a telephone-switch, a series of contact-plates, connected with a call-bell, a series of contact-plates each connected to a different line-wire, the central instrument and contact-rods, the ground connections and plugs, all arranged, substantially as shown and described.

2. In a telephone-switch the combination with central instrument and call-bell of a block having a series of recesses, contact-plates located in said recesses, one of said plates being connected with the call-bell, and the other of said plates being connected to a line-wire, the contact-rods, and the ground connections all arranged, substantially as shown and described.

3. In a telephone-switch the combination with the central instrument and call-bell of a block having a series of recesses such as 1, 2, 3 and 4, the contact-plates F located in said recesses, and connected with the call-bell, the contact-rods arranged upon the sides of the block, and connected with the central instrument, the contact-plates H, located in the recesses, and connected by line-wires with distant instruments, the ground contact-plates located in recesses 5 in the side of the block, and the plugs for making such connections, substantially as shown and described.

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

LINVAL W. DAVIS.

Witnesses:
GERARD J. STACK,
ANDERSON E. DAVIS.