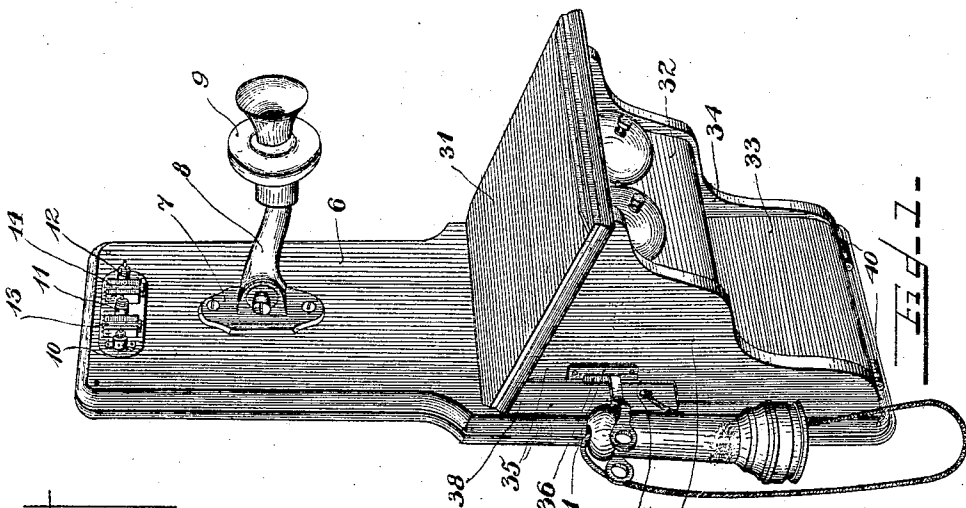
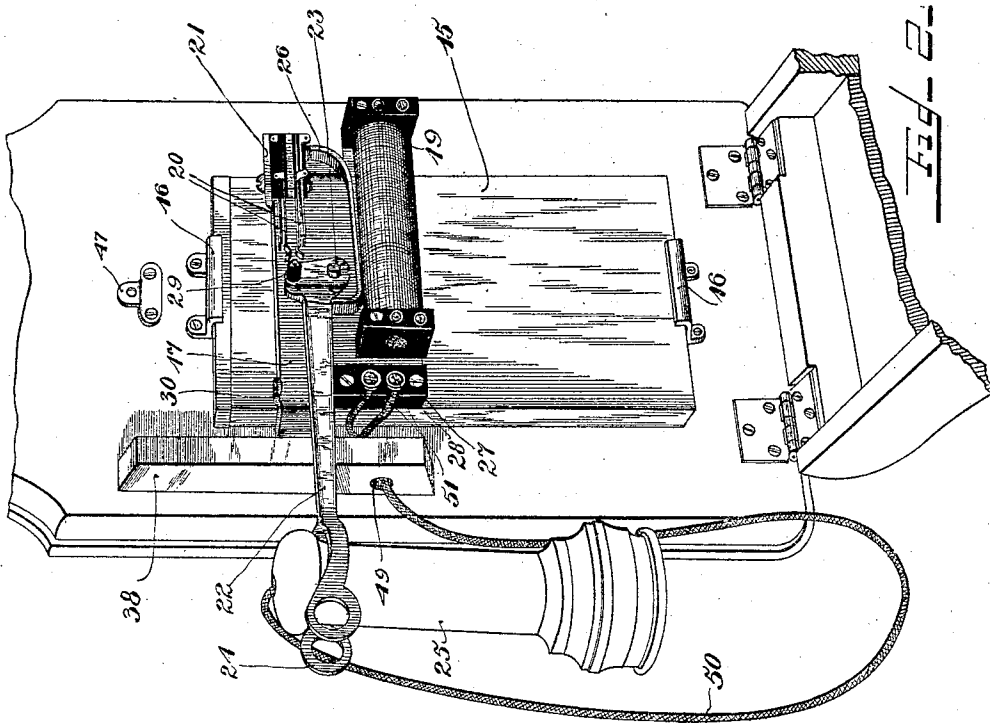


No. 856,260.

PATENTED JUNE 11, 1907.

W. KAISLING.
TELEPHONE APPARATUS.
APPLICATION FILED APR. 9, 1903.

2 SHEETS—SHEET 1.



WITNESSES

Charles J. Schmitt,
Lynn A. Williams

BY

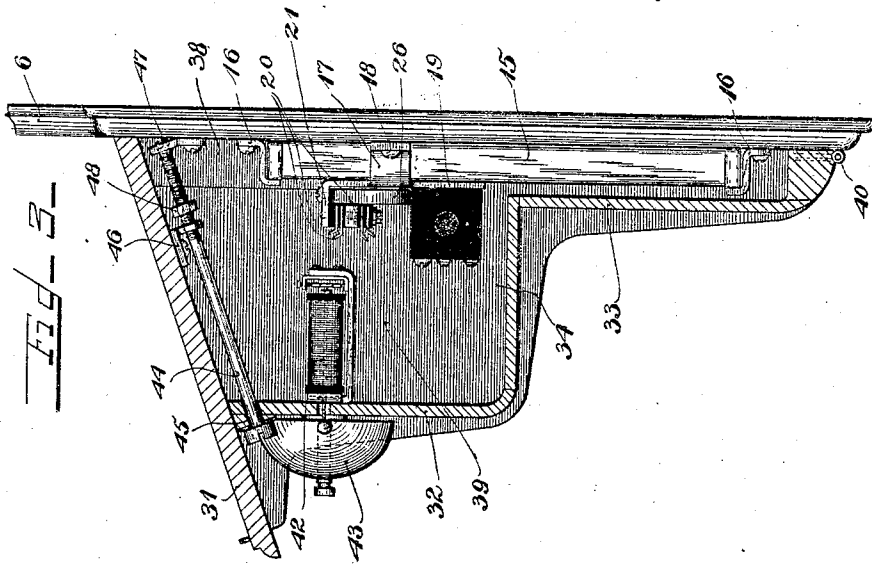
INVENTOR
William Kaisling
Charles A. Brown
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TELEPHONE APPARATUS.
APPLICATION FILED APR. 8, 1903.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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TELEPHONE APPARATUS.

No. 856,260.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed April 9, 1903. Serial No. 151,718.

To all whom it may concern:

Be it known that I, WILLIAM KAISLING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Telephone Apparatus; of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings; forming a part of this specification.

My invention relates to telephone apparatus and particularly to what is commonly known as a subscriber's wall set. Such a set usually comprises a transmitter, a receiver, suitable switching mechanism, a signal bell and a suitable board or casing upon which these parts are mounted. There is frequently provided in addition an induction coil and a condenser, and sometimes a signaling generator. A box-like inclosing case is usually provided to cover and protect part of the instruments mounted on the common backboard of a subscriber's set.

It has heretofore been the practice to manufacture each of the devices hereinbefore enumerated separately, these devices being then assembled and mounted upon the backboard and the inclosing casing. There are necessarily provided a number of electrical conductors or wires connecting various parts of the apparatus mounted upon the common backboard. There has heretofore been considerable difficulty experienced in easily and satisfactorily connecting these conductors with the various parts of the apparatus. One of the principal reasons for this difficulty being the fact that some of the devices have been mounted upon the backboard, while others have been mounted upon the inside of the inclosing casing.

As will be readily appreciated by those skilled in the art, it is much more difficult to secure various parts to the interior of the box-like receptacle than it would be to secure them to a plain backboard. There is also considerable difficulty in properly adjusting parts which are inclosed by the casing, and there is also considerable difficulty in running the conductors from a backboard to instruments mounted upon the inner side of such a casing.

The principal objects of my invention are to provide a subscriber's wall set in which the parts may be easily assembled and secured in position upon the backboard in such

a manner as to be readily accessible for repairs or adjustments, and to provide a subscriber's wall set which may be cheaply manufactured, which shall be durable and efficient in service and which shall be neat and pleasing in appearance.

Further objects of my invention are to provide an improved means for mounting and fastening the inclosing casing to the backboard of such a set, and to provide a telephone set in which the form of escutcheon plate heretofore employed may be abolished.

The features of my invention may be clearly pointed out by reference to the accompanying drawings in which—

Figure 1 is a perspective view of a subscriber's wall set constructed in accordance with my invention; Fig. 2 is a perspective view of the parts of the wall set usually hidden by the inclosing casing; Fig. 3 is a central cross-sectional view of the inclosing casing showing the devices inclosed thereby.

I have illustrated a backboard 6, to which is secured the base plate 7 of the transmitter arm 8 supporting the transmitter 9. The usual binding posts 10, 11 and 12, and the lightning arresters 13 and 14 are fastened to the front side of the backboard as shown. A condenser 15 is supported in position on the front side of the backboard by the clips 16, 16. Extending across the front of the condenser 15 is a metal bridge 17 which is secured to the backboard by screws 18. As best illustrated in Fig. 3, this bridge includes a front plate which extends downward, and to which the induction coil 19 is secured, and upward to provide a mounting for the hook switch and includes the contact springs 20 secured to the projecting ledge 21 of the bridge 17 and suitably insulated therefrom as shown.

Upon the bridge 17 is pivotally mounted a switch hook 22 adapted to rotate about the pin 23. The outer forked end 24 of the switch hook is adapted to accommodate the receiver 25, the weight of the receiver serving to depress the switch hook against the upward pressure of the spring 26, causing the switch hook to rest upon the block 27 of insulating material which is rigidly secured to the bridge 17 by the screws 28. The removal of the receiver 25 from the forked end of the switch hook permits the spring 26 to raise the switch hook lever from the block 27 whereupon the roller 29, preferably of hard rubber, is forced between the inner pair of contact

springs 20 to wedge the same apart, thereby performing the necessary switching operation as is well understood by those skilled in the art. The upward movement of the switch-hook lever is limited by the stop 30, which may desirably be formed or stamped from the same sheet of metal which forms the bridge 17.

The box-like case adapted to inclose the condenser, the induction coil and the hook switch mechanism, comprises a top board 31, front boards 32 and 33, and side walls 34 and 35, the side wall 35 being provided with an opening 36 to accommodate the hook switch lever and the desired movement thereof. The side wall 35 is desirably divided on a line 37 passing through the opening 36, this division line serving to divide the wall 35 into two parts, the part 38 being rigidly secured to the backboard 6, while the front portion 39 of the wall 35 is adapted to swing with the remainder of the case upon the hinges 40, 40 by which the inclosing casing is secured to the backboard 6. The portion 38 of the side wall forms one side of the opening 36, serving thereby to guide and steady the lever of the switch hook 22. An escutcheon plate 41 may be provided, if desired, to protect the other three sides of the opening 36. Upon the inner side of the front board 32 is mounted the frame and vibrating mechanism 42 of a ringer whose bells 43, 43 are mounted upon the front side of this board. The electrical connections between the ringer and the instruments mounted on the backboard may, if desired, include the hinges 40, 40.

One of the particular features of my invention is an improved means for securing and retaining the inclosing casing in position upon the front board. It comprises a retaining bolt or screw 44, passing, as shown, through an opening 45 in the front board 32, and loosely through an L-shaped metal support 46 secured to the top board 31. This bolt 44 has screw threaded engagement with a nut portion 47 which is fastened by screws to the backboard 6. Means are provided, such as a nut 48, to prevent the bolt 44 from dropping from the inclosing casing upon being disengaged, as by a screw-driver, from the nut 47 to permit the inclosing case to be swung downward as partially indicated in Fig. 2, to permit access to the mechanisms mounted within. A hole 49 is bored through the side wall portion 38 through which the conductor cord 50 from the receiver may be passed to the binding screws 51, 51 upon the block 27, the receiver cord being preferably knotted on the inside of the wall portion 38 to prevent any undue strain upon the binding screws 51 due to the weight of the receiver in case the latter should be allowed to fall or drop.

The wires necessary to connect the various devices mounted upon the backboard may be

run in suitable grooves or kerfs cut in the rear surface of the backboard, these grooves not being shown, as they are already familiar to those skilled in the art. Likewise the method of connecting the various devices need not be particularly described herein, as it is of no particular importance so far as the present invention is concerned.

It will, of course, be readily understood by those skilled in the art that all the conducting wires may be run between relatively stationary parts, the majority of the devices being permanently and securely mounted upon the backboard of the telephone set.

I have herein shown and particularly described a single preferred embodiment of my invention adapted for use in conjunction with central energy telephone systems, but it will be at once apparent to those skilled in the art that my invention may be adapted to telephone sets for use in conjunction with local battery systems.

Many modifications of the preferred embodiment of my invention particularly described herein will occur to those skilled in the art, and I do not, therefore, wish to limit myself to the precise disclosure herein set forth, the features and scope of my invention being indicated in the following claims.

What I claim as new and desire to secure by Letters Patent is:

1. In a subscriber's telephone set, the combination with a backboard, of a hook switch mounted thereon, an inclosing case for said switch hook having an opening in one of the side walls thereof to accommodate the projecting switch hook, the case being divided on a line through said opening, the front part of said case being hinged at its lower end to said backboard, a screw threaded bolt extending through said case from front to rear and engaging a nut portion secured to said backboard to retain said case in position, and means for supporting said bolt in position to aline with said nut upon closing said case into position.

2. In a subscriber's telephone set, the combination with a backboard, of a hook switch mounted thereon, an inclosing casing for said hook switch having an opening in one of the side walls thereof to accommodate the projecting switch hook, the case being divided on the line of said opening, one portion of said case having hinged connection with said backboard and bodily removable therefrom, the other portion of said case being rigidly secured to said backboard and forming a side of the opening in the said wall to accommodate said switch hook, a screw threaded bolt extending through said case from front to rear and engaging a nut portion secured to said backboard to retain said case in position, and means for supporting said bolt in position to aline with said nut portion upon closing said case in position.

3. In a subscriber's telephone set, the combination with a backboard, of an inclosing case having hinged connection with said backboard, a screw threaded bolt extending
5 through said case from front to rear and engaging a nut portion secured to said backboard to retain said case in position, and means for supporting said bolt in position to
10 aline with said nut portion upon closing said case into position.

4. In a subscriber's telephone set, the combination with a backboard, of a condenser mounted thereon, a bridge secured to said
15 backboard and spanning said condenser, a hook switch mounted on said bridge, an induction coil mounted on said bridge, an inclosing case for said condenser, bridge, hook
20 switch and induction coil having an opening in one of the side walls thereof to accommodate the projecting switch hook, the case being divided on the line of said opening, the
25 front portion of said case being hinged at its lower end to said backboard and bodily removable therefrom, the other portion of said
case being rigidly secured to said backboard, a screw threaded bolt extending through said
30 case from front to rear and engaging a nut portion secured to said backboard to retain said case in position, and means for supporting said bolt in position to aline with said

nut portion upon closing said case into position.

5. In a subscriber's telephone set, the combination with a backboard, of a condenser
35 mounted thereon, a bridge secured to said backboard spanning said condenser, switch springs secured to a projection from said bridge, a switch hook pivoted to said bridge
40 for controlling said switch springs, an induction coil secured to said bridge, a terminal block secured to said bridge, and a stop extending from said bridge, the travel of the
switch hook being limited by said stop and said terminal block.

6. In a subscriber's telephone set, the combination with a backboard, of a metallic
45 mounting plate secured thereto, switch springs secured to a projection integral with said plate, an induction coil secured to said plate, a terminal block secured to said plate,
50 and a stop integral with said plate and extending therefrom above said terminal block, the travel of said switch hook being limited by said stop and said terminal block.

In witness whereof, I hereunto subscribe
55 my name this 6th day of April A. D., 1903.

WILLIAM KAISLING.

Witnesses:

LYNN A. WILLIAMS,
HARVEY L. HANSON