J. O. CADIEUX.

TELEPHONE.

APPLICATION FILED JULY 22, 1915.

1,181,947.

Patented May 2, 1916.

2 SHEETS—SHEET 1.

Fig 1

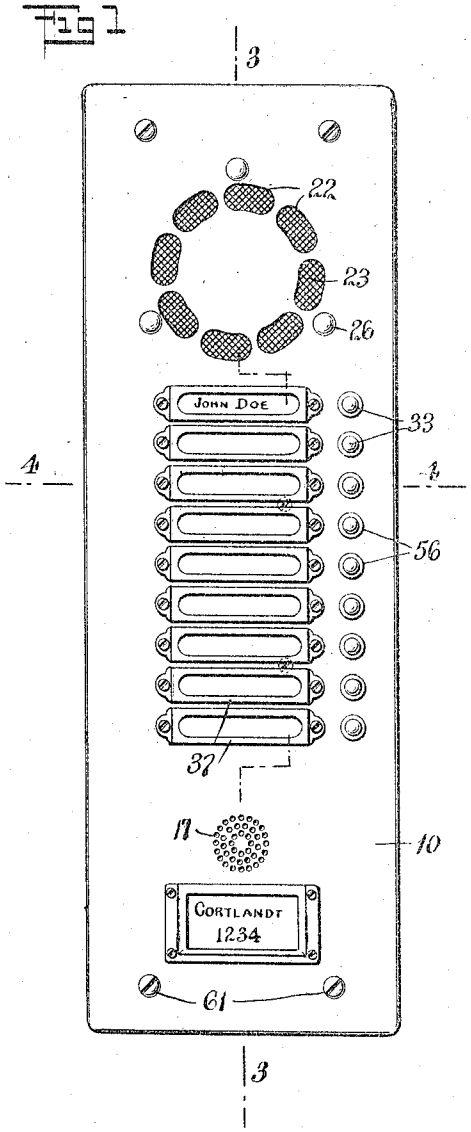
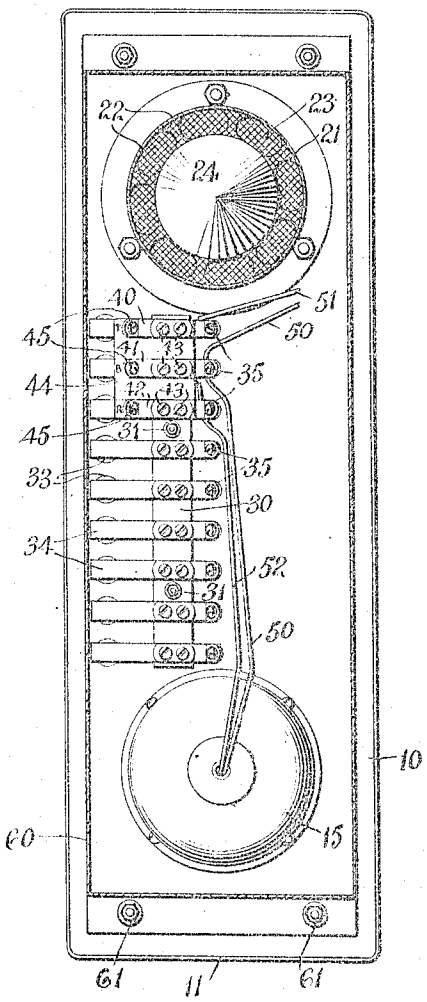


Fig 2



Witnesses

C. J. Hachenburg.

Philip S. McLean.

Inventor

J. O. Cadieux

By his Attorneys

Mitchell Mellen.

J. O. CADIEUX.

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Fig 3

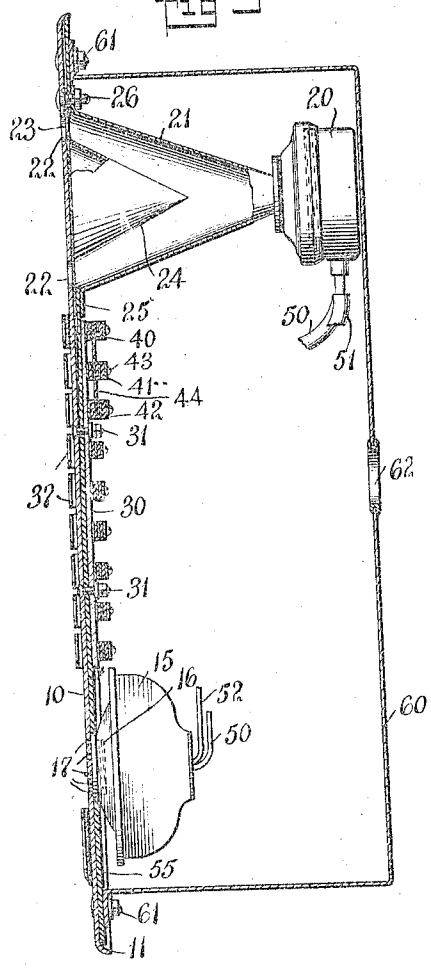


Fig 5

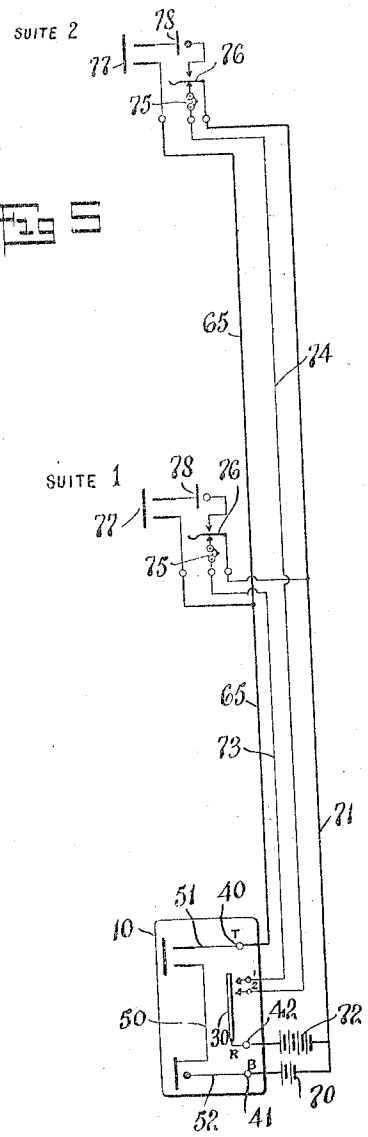
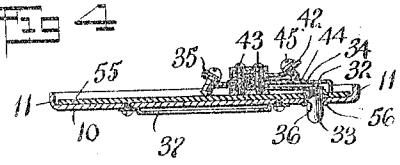


Fig 4



Witnesses

C. J. Hachenberg.

Philip S. McLean.

Inventor

J. O. Cadieux

By his Attorneys

Mitchell & Allegro.

UNITED STATES PATENT OFFICE.

JOSEPH O. CADIEUX, OF MERIDEN, CONNECTICUT, ASSIGNOR TO CONNECTICUT TELEPHONE & ELECTRIC COMPANY, OF MERIDEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

TELEPHONE.

1,181,947. Specification of Letters Patent. Patented May 2, 1916.

Application filed July 22, 1915. Serial No. 41,233.

To all whom it may concern:

Be it known that I, JOSEPH O. CADIEUX, a citizen of the United States of America, residing at Meriden, New Haven county, State of Connecticut, have invented a new and useful Telephone, of which the following is a specification.

This invention relates particularly to what are known as apartment house vestibule telephones.

Particular objects of the invention are to overcome and eliminate certain disadvantages heretofore present in devices of this character, and to provide a telephone set of extremely simple, inexpensive and practical construction.

One feature of the invention accordingly consists in mounting the transmitting and receiving elements on the back of a face plate and in communication with appropriately placed transmitting and receiving openings in such face plate. This does away with the usual projecting mouth piece, separate receiver and cord, the sensitive parts of the instrument are wholly protected by the face plate, and the face plate constitutes a flush face piece for both the transmitter and the receiver.

Another feature is the mounting of calling switches on the back of the face plate and providing them with operating buttons exposed at the front of the face plate for selectively calling the different apartments.

Other features of the invention will appear as the specification proceeds.

The accompanying drawings illustrate the invention embodied in a practical form, but it will be understood that various changes and modifications may be made without departing from the true scope and spirit of the invention.

Figure 1 is a front or face view of a telephone set embodying the invention. Fig. 2 is a rear view of the same, the protective casing and the megaphone of the receiver being shown in section. Fig. 3 is a vertical sectional view of the instrument taken substantially on the plane of the line 3—3 of Fig. 1. Fig. 4 is a cross sectional view of the same, taken substantially on the plane of the line 4—4 of Fig. 1. Fig. 5 is a diagrammatic representation of the instrument and a typical wiring plan for the same.

The face plate which constitutes the main body and support for the various instrumentalities is designated 10. This may be and preferably is a plain flush piece of sheet metal which may be strengthened and made ornamental by having its edges flanged rearwardly as indicated at 11.

The transmitting element is designated 15. This may be, as indicated, a transmitter of ordinary construction and is shown secured on the back of the face plate, in the present instance by screwing the mouth of the transmitter over a screw threaded rearwardly projecting bushing 16 on the back of the face plate. The face plate is provided in line with the mouth of the transmitter with a transmitting opening or openings 17. This transmitting opening may be, as shown in the form of a series of relatively small perforations distributed over the area of the transmitter mouth piece. This allows passage of the sound waves and screens the mouth piece from mechanical injury.

The receiver 20 may be of any preferred construction, and the same is preferably provided with a megaphone throat piece 21 for directing the sound waves out through the receiving opening in the face plate. This receiving opening may be, as indicated, in the form of a series of annularly disposed openings 22 in the face plate which may be protected by screening 23. The mouth of the receiver throat piece surrounds the area within which the receiver openings are located, and a conical deflector 24 may be centrally located within the megaphone to direct the sound waves out through the annular receiving opening. This deflector may be supported by securing it on the back of the screen 23. The receiver may be conveniently secured in place on the back of the face plate by providing the throat piece at the mouth thereof with an outstanding flange 25 with which screws 26 or other securing means may be engaged.

The calling switches are most clearly shown in Fig. 2. These consist, in the form shown, of a bus bar 30 secured on the back of the face plate by screws 31 and provided with laterally extending spring fingers 32 which can be pressed by buttons 33 into engagement with contacts 34 mounted on the bus bar, but insulated therefrom. These insulated contacts are provided with binding screws 35 to which the calling wires of the

different apartments are attached. The calling buttons project out through openings 36 in the face plate. Name pockets 37 may be provided on the front of the face plate alongside the different buttons.

The line terminals 40, 41 and 42 for the instrument may be conveniently supported on the bus bar 30, such terminals being illustrated as short metal plates, secured to the bus bar by screws 43, the terminals 40 and 41 being suitably insulated from the bus bar and the third terminal 42 being as indicated in Fig. 4 electrically connected to the bus bar by its securing screws 43. A sheet of insulation 44 may be placed between the terminals and the calling switches beneath the same to prevent the binding screws 45 of the terminals from accidentally making contact with any of the calling switches.

The wiring on the back of the face plate is illustrated in Figs. 2 and 3, where 50 indicates the connection from the transmitter to one terminal of the receiver, 51 indicates another connection from the other terminal of the receiver to the line terminal 40, and 52 indicates a connection from the other terminal of the transmitter to the line terminal 41.

The parts are all properly insulated, and as an additional safeguard, a sheet of insulation 55 preferably extends the full length on the back of the face plate. This forms an insulating base for all the parts on the back of the face plate, and it may be conveniently secured in place by means of eyelets 56 inserted through the push button openings and serving as guides for the push buttons.

To protect the parts from dust, etc., a box or casing 60 is preferably provided inclosing all the parts on the back of the face plate and conveniently secured in place by screws 61 engaged with the face plate. This casing may be provided with a suitable opening or openings 62 for the various exterior circuit wires.

In installing the instrument the terminal 40 (marked T) is connected with a line wire 65 extending to the telephone sets of the different apartments, as indicated in Fig. 5. The terminal 41 (marked B) is connected with a talking battery 70 and by a line 71 with the other terminals of the different apartment telephone sets. The terminal 42 (marked R) is connected with a ringing battery 72, which in turn is connected with the line wire 71. The bell of the telephone set in apartment number 1 is connected by conductor 73 with the terminal of the number 1 calling switch on the back of the face plate and the call bell of the telephone set in apartment number 2 is similarly connected by conductor 74 with the number 2 calling switch on the back of the face plate.

In operation, it will be evident that upon the pressure of the number 1 button, ringing current will be sent from battery 72 through the bus bar, the number 1 calling switch, conductor 73, the bell 75 and receiver switch 76 of the number 1 apartment set and back through conductor 71 to the other side of the battery. When the receiver is lifted off the hook at the number 1 apartment, the talking circuit will be completed and conversation can then be carried on between the vestibule telephone set and the number 1 apartment set. In this case the circuit will be from talking battery 70 through the transmitter and receiver of the vestibule set and by way of conductor 65 to the receiver 77 and transmitter 78 of the number 1 apartment, and by way of the common return 71 back to the other side of the battery. The circuits for the number 2 apartment and as many other apartments as there may be, will be similar to those described, as will be readily understood.

From the foregoing, it will be seen that the telephone set constructed in accordance with my invention, is extremely simple and practical, and being devoid of projecting and exposed or separate parts, is extremely well suited to use in apartment house vestibules, where great loss has heretofore been occasioned by the breakage and theft of the exposed portions of the usual telephone set.

What I claim is:

1. A flush telephone set comprising a face plate provided with transmitting and receiving openings, a non-protruding transmitter secured to the back of said face plate in communication with the transmitting opening therein, a bus bar mounted on the back of said face plate, a plurality of calling buttons mounted on the face plate electrically connected with said bus bar and operable at the front of the face plate and a non-protruding receiver secured to the back of the face plate and provided with a throat piece communicating with the receiving opening in the face plate whereby said parts are protected by the face plate and said face plate forms a flush face piece for the transmitter and receiver devoid of projecting telephone parts.

2. A flush telephone set comprising a face plate provided with a transmitting opening surrounded by a rearwardly projecting bushing, a transmitter engaged with and supported on said bushing, a receiver provided with a megaphone throat piece and means detachably securing said throat piece to the back of the face plate, said face plate having a receiving opening therein in line with said throat piece.

3. A flush telephone set comprising a face plate provided with a transmitting opening and with a substantially annular receiving opening, a receiver provided with a megaphone throat piece surrounding and inclos-

ing said annular receiving opening, a conical deflector within the throat piece with its base inside the inner periphery of the annular receiving opening, and a transmitter at the back of the face plate in communication with the aforesaid transmitting opening.

4. A flush telephone set comprising a face plate provided with a transmitting opening and with a substantially annular receiving opening, a receiver provided with a megaphone throat piece surrounding and inclosing said annular receiving opening and a conical deflector within the throat piece with its base inside the inner periphery of the annular receiving opening.

5. A flush telephone set comprising a face plate provided with a transmitting opening a receiving opening and push button openings, a transmitter supported on the back of said face plate with its mouth in communication with the transmitting opening, a receiver supported on the back of the face plate provided with a throat piece in communication with the receiving opening and calling switches supported on the back of the face plate provided with operating buttons projecting forwardly through the push button openings in the face plate.

6. A flush telephone set comprising a face plate provided with a transmitting opening, a receiving opening and a series of push button openings, a transmitter secured to the back of said face plate with the mouth thereof in communication with the transmitting opening, a receiver secured to the back of the face plate provided with a throat piece in communication with the receiving opening, electrical connections on the back of said face plate between the transmitter and receiver, a bus bar secured to the back of the face plate provided with laterally projecting contact fingers disposed in line with the push button openings, line terminals supported on the bus bar in the plane of the contact fingers but insulated therefrom, and push buttons seated in the push button openings in the face plate and engaging the laterally projecting contact fingers for forcing said fingers into engagement with the line terminals.

JOSEPH O. CADIEUX.