R. E. SOUTHWICK.

TELEPHONE ATTACHMENT.

APPLICATION FILED SEPT. 6, 1910.

1,002,936.

Patented Sept. 12, 1911.

2 SHEETS—SHEET 1.

Fig. 1

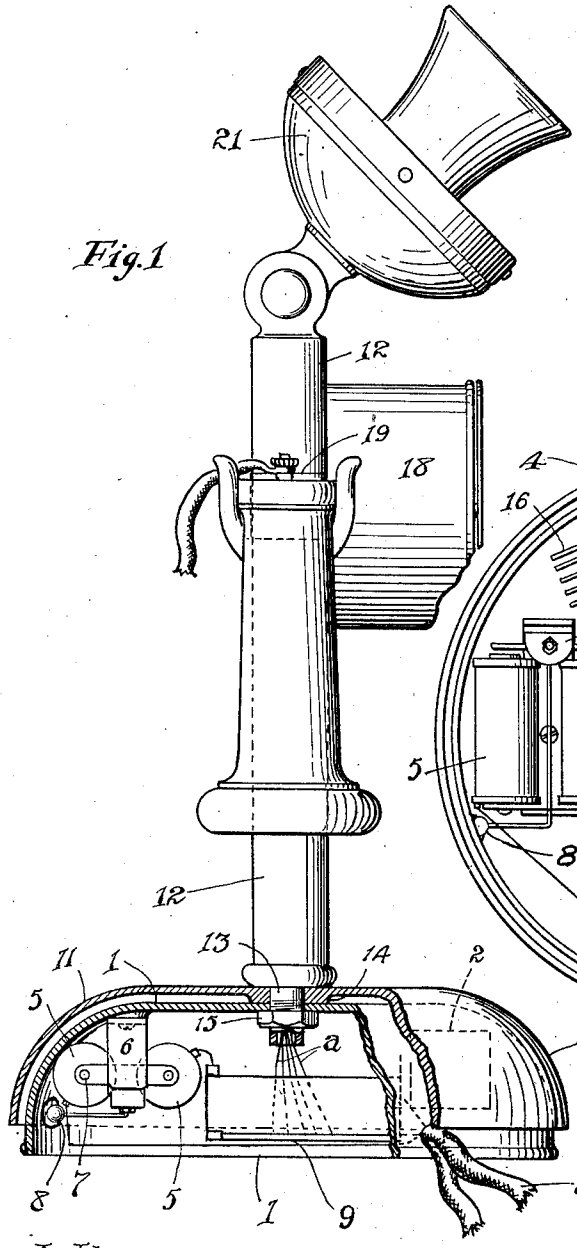
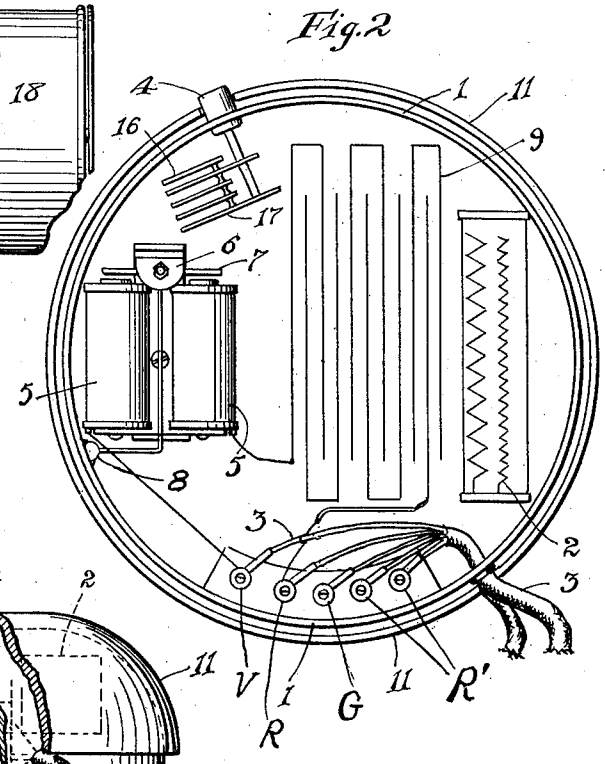


Fig. 2



Witnesses.

Geoffrey Gifford.

Walter M. Kenworth.

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2 SHEETS—SHEET 2.

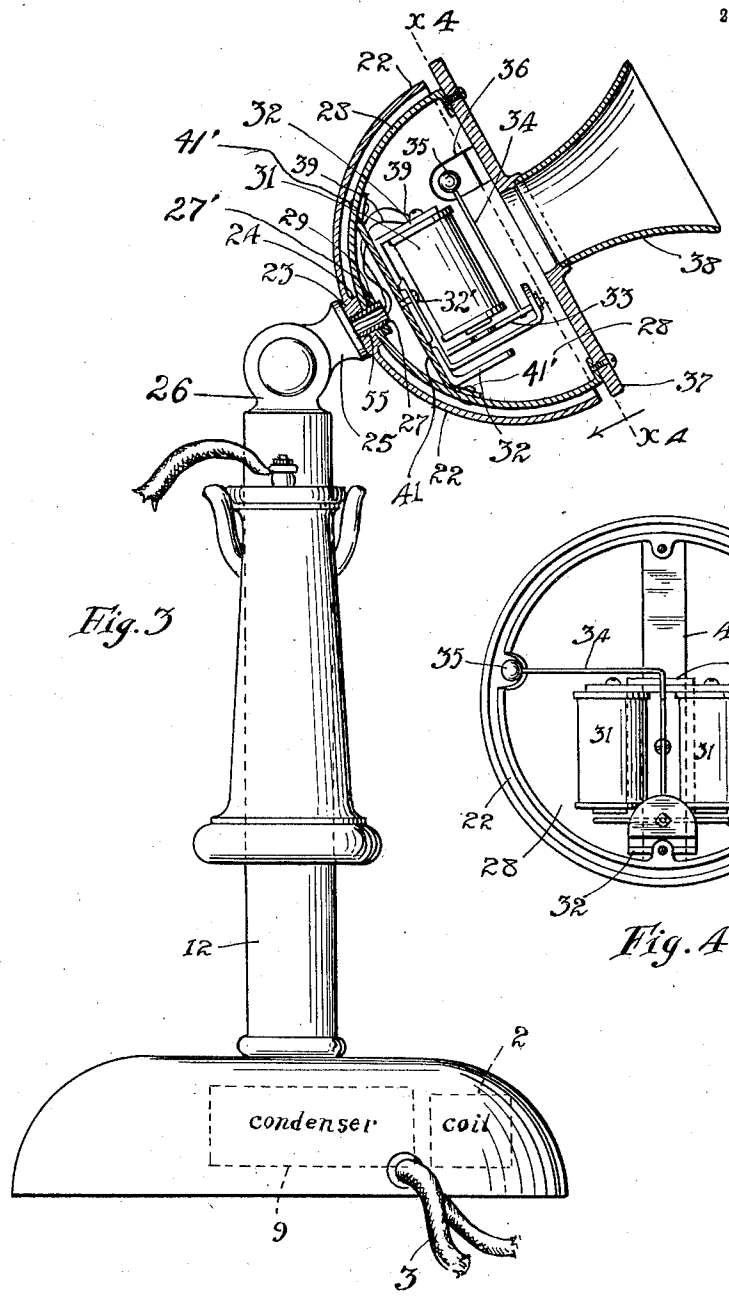

Fig. 3

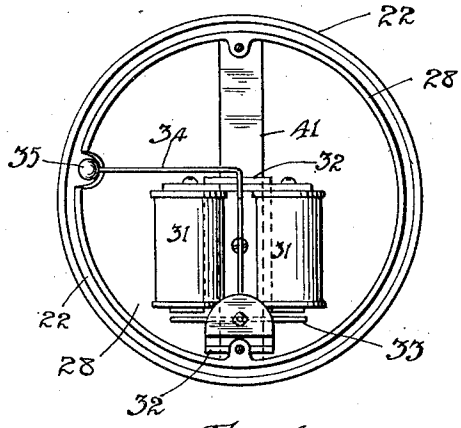

Fig. 4

Witnesses

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UNITED STATES PATENT OFFICE.

ROY E. SOUTHWICK, OF LOS ANGELES, CALIFORNIA.

TELEPHONE ATTACHMENT.

1,002,936. Specification of Letters Patent. **Patented Sept. 12, 1911.**

Application filed September 6, 1910. Serial No. 580,749.

To all whom it may concern:

Be it known that I, ROY E. SOUTHWICK, a citizen of the United States, residing at the city of Los Angeles, State of California, have invented a new and useful Telephone Attachment, of which the following is a specification.

Among the objects of this invention are to combine with the portable desk telephone and place therein the appliances heretofore separately contained in the ringer box, and to do this without making the desk telephone any more cumbersome than heretofore.

Another object of this invention is to so simplify the construction of the telephone as to greatly reduce the cost of manufacture and yet secure an effective service.

One feature of the invention consists in adding to the casings heretofore used to contain the working parts of the telephone false covers and utilizing the same for the bells. To accomplish this result I arrange the ringer in such a way that it will operate on the false cover, the valve-ringing apparatus being placed within the main cover. This construction is not only of practical mechanical value but is also ornamental in appearance.

A further object is to provide a construction that will make it possible to install or move a telephone without mutilating the wall, wood-work, or desk.

Referring to the accompanying drawings, which illustrate the invention, Figure 1 is a view, partly in section, of an automatic desk telephone showing the invention applied thereto. Fig. 2 is a bottom plan view of the base shown in Fig. 1. Fig. 3 is a side elevation of a manual desk telephone, the transmitter being shown in section to illustrate the inventon. Fig. 4 is a section on line X^4 of Fig. 3.

Referring in detail to the drawings and for the present more partcularly to Figs. 1 and 2, the base proper consists of a shell 1 within which is mounted the usual induction coil 2, post wiring 3 and push-button 4. In addition to these well known parts I insert within the shell 1 a bell ringer composed of two coils 5, permanent magnet 6, armature 7 and knocker 8. I also insert a condenser 9 when the wiring requires the same. The knocker 8 strikes against a bell 11 consisting of a false cover for the base. In order to separate said bell from the base sufficiently to give it the proper resonance, I provide the standard 12 with a downwardly extending reduced tubular stem 13 which projects through and fits an aperture in the central portion of the bell 11 and also extends through a boss 14 in the top of the bell next the base. A nut 15 is screwed onto the lower end of said stem 13 to secure the base 1 and also cover 11 in place as shown. The false cover is desirably convexed so as to extend parallel to the top of the base and terminates at its lower edge a litle distance short of the bottom of the base so as to preserve the resonance of the bell by keeping it out of contact with the support on which the base may rest. The push-button 4 is desirably placed just below the lower edge of the false cover 11 so as to avoid the necessity of cutting a hole through the false cover.

In Fig. 2 are shown receiver binding posts R′, ground post G, rotary post R and vertical post V.

Wiring *a* is led from the interior of casing 1 up through the tubular extension 13 as shown.

It will be seen that the extension wires which ordinarily lead to the ringer box are, in this invention, omitted from those which lead out through the cord 3, because the bell-ringer is placed inside a casing connected to the standard 12 both in the form shown in Figs. 1 and 2 and in the form shown in Figs. 3 and 4. The circuit goes from one of the terminals of the three-conductor cord 3 (Figs. 1 and 3) to one side of the condenser 9, through the condenser out to one terminal of one ringer coil 5 and through the other ringer coil which is connected to another terminal of the three-conductor cord.

The push-button wiring is not shown because, separately considered, it forms no part of the invention and may be any one of a number of well known circuits which the designer may select. The same remarks apply to the wiring of the induction coil 2.

16 and 17 designate the usual push-button springs.

A modern calling device 18 is shown attached to the standard 12 by means of a clamp 19. A common form of transmitter 21 is pivoted to the top of standard 12.

Referring to Figs. 3 and 4, which illustrate the invention as applied to the transmitter, a false back or rear cover 22 is provided with an external central boss 23 and internal central boss 24, said bosses there-

fore being opposite to each other, one on the convex and the other on the concave side of the back or rear cover 22. A bore extends through the back and both of said bosses as shown. The transmitter is secured to the standard 12 by means of the male neck 25 and the female neck 26, said male neck being provided with a reduced tubular portion 27 which is screwed into the bore in the false cover which forms the bell as shown. The real back 28 of the transmitter has a threaded central aperture 29 which is screwed onto the inwardly projecting portion of the tubular extension 27, and safely held in place by a nut 27′. The ringer is provided with coils 31 mounted on a permanent magnet 32 in the form of a yoke which embraces the coil, said permanent magnet being secured by a screw 32′ to a cross-piece 41 which may have ends inclined to fit the transmitter casing and be fastened thereto by screws 41′. To the armature 33 is secured the bent knocker-spring 34 carrying the knocker-knob 35 for striking the false back which forms the resonant cover 22. The real back 28 has an aperture 36 to allow the knob to strike the bell 22. 37 designates the usual transmitter face and 38 the usual mouth-piece. The wiring 39 is led through the tubular extension 27. The well known working parts of the transmitter are omitted. The wiring circuits are the same as in any portable desk telephone.

It will be seen that in both forms of the invention the standard is provided with a reduced tubular extension (13 or 27) directly or mediately connected thereto, through which wiring is led to form a circuit. In the claims, the male and female necks shown at the top of the standard in Fig. 3 are regarded as included in the term "standard."

By providing the standard with a reduced extension (13 in Fig. 1 and 27 in Fig. 3) and using a nut screwed onto said extension to clamp the bell between the base (or transmitter) and the standard, a simple and secure means is provided to fasten the parts together. The boss 14 (or 24) spaces the bell away from the base (or transmitter) so that its resonance is preserved while ample space is also provided under the real cover for the bell-ringing mechanism and other parts. In other words, the bell-ringer and other mechanism within the base are provided with a roomy housing which extends up nearly to the central portion of the concave side of the bell.

The casing of the bell-ringer is made to conform more closely to the interior or concave side of the bell by reason of the fact that, in both forms of the invention, the knocker operates toward and from, and in a direction approximately vertical to, the plane of the aperture in the casing through which it extends, thus making it possible for the apertured portion of the casing to extend up close to the concave side of the bell.

I claim:

1. In a telephone set, a standard, a tube projecting from said standard, a false cover having an aperture through which said tube extends, said false cover forming a bell, a real cover screwing onto said tube in advance of said false cover, and a bell ringer within said real cover, said real cover being provided with an aperture, and said bell ringer having a knocker extending through said aperture and adapted for vibration against said bell in a direction approximately vertical to the plane in which said aperture extends, the apertured portion of said real cover extending in proximity to and substantially parallel with the portion of the bell engaged by said knocker.

2. In a telephone set, a standard, a reduced extension projecting from said standard, a concave bell having a central aperture through which said extension projects and into which it fits, a casing having a dome-shaped top through which the end portion of said extension projects, a bell ringing device within said casing, and a nut screwing onto said extension to hold said standard, bell and casing together, said bell having a boss on its concave side in contact with the top of said casing around said extension to space apart said bell and casing.

3. In a telephone set, a standard, an extension projecting from said standard, a concave bell having an aperture through which said extension projects, a casing having a convex portion through which the end portion of said extension projects, a bell ringing device within said casing, a nut screwing onto said extension to hold said standard, bell and casing together, and spacing means to maintain a slight separation between said convex portion of said casing and the concave side of said bell.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses at Los Angeles, in the county of Los Angeles and State of California, this 30th day of August 1910.

ROY E. SOUTHWICK.

Witnesses:
ALBERT H. MERRILL,
WILL. S. HALL.

Correction in Letters Patent No. 1,002,936.

It is hereby certified that in Letters Patent No. 1,002,936, granted September 12, 1911, upon the application of Roy E. Southwick, of Los Angeles, California, for an improvement in "Telephone Attachments," an error appears in the printed specification requiring correction as follows: Page 1, line 25, for the compound word "valve-ringing" read *bell-ringing;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 10th day of October, A. D., 1911.

[SEAL.]

E. B. MOORE,

Commissioner of Patents.