July 17, 1951 R. L. STONE ET AL 2,561,320

COMBINED MICROPHONE AND SWITCH

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Fig. 1

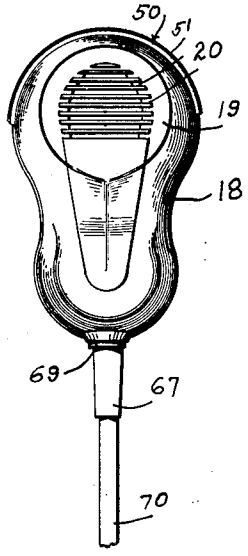


Fig. 2

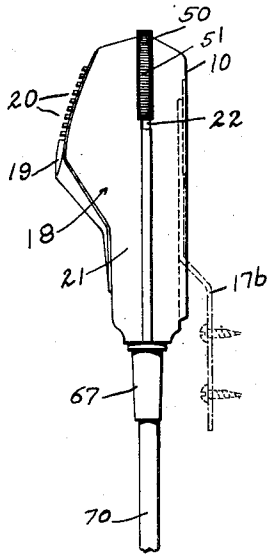


Fig. 3

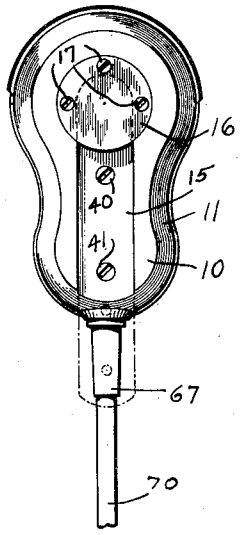
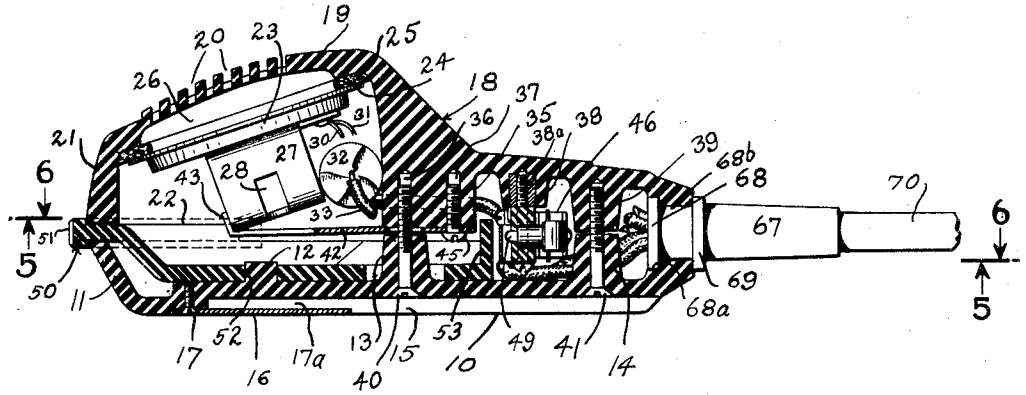


Fig. 4



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Fig. 5

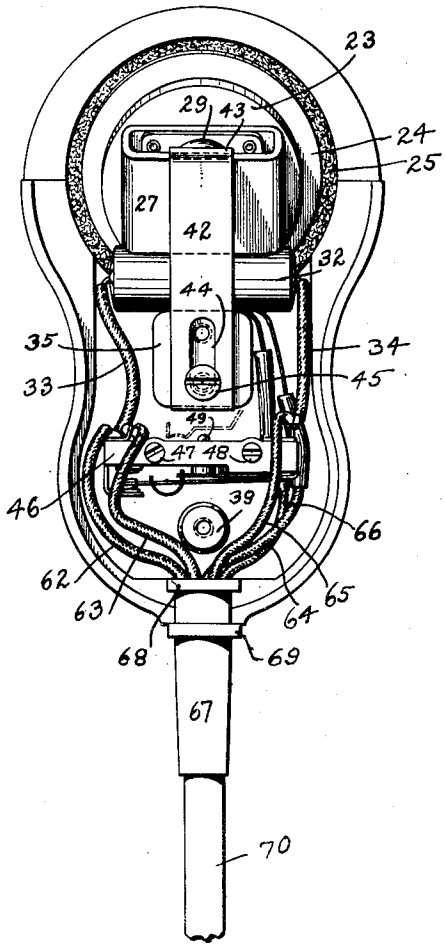
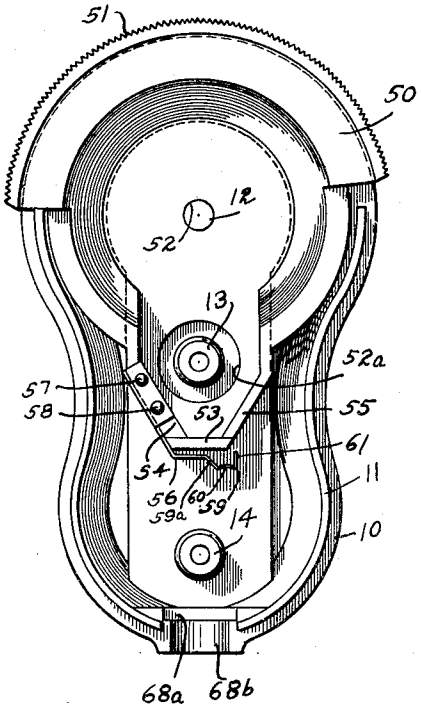


Fig. 6



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Patented July 17, 1951 2,561,320

UNITED STATES PATENT OFFICE

2,561,320

COMBINED MICROPHONE AND SWITCH

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Application November 15, 1946, Serial No. 710,028

1 Claim. (Cl. 179—158)

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This invention relates to dictating apparatus, and more particularly to a combined microphone and switch holder which may selectively be used on the desk for conference dictation or be carried in the hand of the dictator for close talking.

One object of the present invention is to provide a device of the above nature in which the microphone unit may be replaced if desired by a combination microphone and loudspeaker unit.

A further object is to provide a device of the above nature having a semi-circular switch actuator extending over the entire top of the casing and which is adapted to be actuated either by the thumb or forefinger or both, of the user's hand.

A further object is to provide a microphone and switch holder of the above nature having a plate mounted flush in an elongated groove in the base of the casing to provide a slot by means of which the user may attach the device on a hook mounted on the dictating machine or other support, whenever desired.

A further object is to provide a device of the above nature in which the casing is provided with a flat bottom surface for resting on the desk when not carried in the user's hand.

A further object is to provide a device of the above nature which will be simple in construction, light in weight and hence non-fatiguing, inexpensive to manufacture, having high impact strength, easy to install and manipulate, compact, attractive in appearance, shaped to fit the user's hand, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawings one form in which the invention may conveniently be embodied in practice.

In the drawings,

Fig. 1 represents the top plan view of the hand microphone and switch unit embodying the present invention.

Figs. 2 and 3 are side and bottom plan views of the same, showing the attaching plate in dot and dash lines.

Fig. 4 is a longitudinal sectional view of the same on a larger scale.

Fig. 5 is a bottom plan view of the hand microphone and switch unit with the base cover removed to illustrate the interior construction.

Fig. 6 is a top plan view of the base cover showing the semi-circular actuator ring mounted in operating position therein.

Referring now to the drawings in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a bottom base of insulating material having an upwardly inclined diverging skirt 11. The base is made substantially oval-shaped with circular end sections and a reduced intermediate section to facilitate carrying in the user's hand.

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The base 10 is provided along its longitudinal center line with a short upstanding pivot lug 12, and a pair of higher circular screw bosses 13, 14, as most clearly shown in Figs. 4 and 6 of the drawing. On the outside of the cover base 10, provision is made of a longitudinal groove 15, within which is secured, by means of three screws 17, a circular hanger disk 16, preferably constructed of metal and located flush with the flat bottom of the base 10.

As will be clear from the drawings, a slot 17a is left between the hanger disk 16 and the top of the groove 15 for detachably fitting over a Z-shaped hanger plate 17b adapted to be permanently secured to the dictating machine cabinet, a desk, or other support, not shown. The combined microphone and switch holder is provided with an upper casing 18 also of insulating material, which casing is dished and constructed of the same oval shape as the base 10.

The casing 18 is provided with an inclined forward face 19 having a plurality of transverse louvres 20 extending through the wall thereof to permit the sound of the dictation to be received by a microphone unit 23, and the sound from the loudspeaker, when used during playback, to pass outside of the casing 18.

The casing 18 is also provided with a diverging skirt 21 having a semi-circular recess 22 at its forward edge for receiving a slidable rotatable semi-circular actuating member 50, to be hereinafter described.

Provision is made in the interior of the casing 18 of a circular microphone unit 23 having a circular flange 24 upon which is cemented a felt ring 25 to form a cushion for said unit 23 when seated in the top of said cashing—an acoustic chamber 26 being formed between said microphone unit 23 and the louvres 20.

The microphone unit 23 has a depending rectangular yoke 27 which is provided with side apertures 28 and embraces a depending coil-enclosing cylinder 29.

The microphone unit 23 is adapted to be connected to a switch unit, herein shown as a microswitch 46, by means of a pair of lead wires 30, 31, which are connected in parallel to a capacitator 32 to prevent sparking during the operation of the microphone, or loudspeaker. The

wires 30, 31 are connected to the switch 46 by means of lead wires 33, 34.

The casing 18 is also provided with a depending intermediate integral square boss 35 having a pair of longitudinally aligned tapped holes 36, 37 for a purpose to be hereinafter described. The casing 18 also has a pair of integral transversely arranged screw bosses 38 having tapped metallic bushings 38a embedded therein during the manufacture thereof. A depending boss 39 is also provided adjacent the rear end of the casing 18 for cooperating with the upstanding screw boss 14 in the base 10.

The bottom base 10 is detachably secured to the casing 18 by means of a pair of flat head screws 40, 41 passing through the aligned bosses 13, 35 and 14, 39, respectively.

The microphone unit 23 is adapted to be held firmly against the edge of the inclined face 19 of the casing 18 by means of a rectangular metallic clamp strip 42 having an upstanding front end 43 which embraces the yoke 27 of the microphone unit 23. The strip 42 is provided with a longitudinal interior clearance slot 44 embracing the screw 40 and a screw 45 which is employed to attach the microphone clamp strip 42 to the square boss 35, as shown.

A pair of attaching screws 47, 48 are also employed for connecting the microswitch 46 (which is of rectangular construction) to the bushings 38a of the bosses 38.

The microswitch 46 is provided with a movable switch button 49 which is adapted to be depressed in response to the swinging motion of the actuating segment 50.

The ring segment 50 has a knurled semi-circular end 51 projecting outwardly between the forward ends of the base 10 and the casing 18, and said segment 50 is provided with a central pivot aperture 52 fitted upon the pivot lug 12 of the base 10. The actuator 50 has a large circular aperture 52a surrounding the screw boss 13 on the base cover 10. The segment 50 is also provided with a raised inner leg 53, connected to a pair of converging arms 54, 55, as shown in Fig. 6.

In order to actuate the switch button 49, provision is made of a metallic spring strip 56 having an upper ear 56a secured to the arm 54 by means of a pair of drive screws 57, 58. The strip 56 has a rear spring section 59 provided with an inclined cam face 59a, an offset concave section 60, and an inturned end 61.

The rectangular microswitch 46 is mounted crosswise in the casing 18 and is provided with lead wires 62, 63, 64, 65, 66, for connecting it to the microphone unit 23 and other parts of the dictating apparatus, in a manner not necessary to be herein shown.

In order to provide a mounting for a lead-in cable 70, provision is made of a flexible rubber grommet 67 having an integral square flange 68 fitting into a square socket 68a formed by the

opposite sides of the casing 18 and the cover 10, respectively, and an integral circular exterior flange 69.

The intermediate section of the grommet 67 between the flanges 68, 69 is fitted into a pair of complementary semi-circular sockets 68b formed in the base 10 and casing 18, respectively.

The present invention is especially adapted for use in connection with an electronic recording and playback dictation machine of the type disclosed in my Reissue Patent No. 22,606, dated February 20, 1945, entitled "Control Circuit for Sound Recording Apparatus."

Operation

In operation, when the actuator segment 50 is moved clockwise, as viewed in Figs. 1 and 6, the offset cup 60 will move laterally so as to snap over and depress the microphone switch button 49. To release the switch button 49, the actuator segment 50 will be swung in the reverse direction.

It will be understood that during use, the device may selectively be held in the operator's hand, allowed to lie flat on the table, or be suspended on the hanger 17b.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is to be shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosures, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claim.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

In a combined microphone and switch holder, a perforated hollow upper casing, a hollow base attached to said casing, a microphone unit located within one end of said casing, a transverse rectangular control switch in circuit with said microphone unit located within the other end of said holder, and a resilient strip clamped between said casing and said base and engaging said microphone unit for yieldably pressing said unit against said casing.

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