

May 15, 1956

H. L. WEBB

2,745,911

AMBIENT SOUND EXCLUDING DICTATION MASK

Filed Dec. 5, 1952

2 Sheets-Sheet 1

FIG. 1

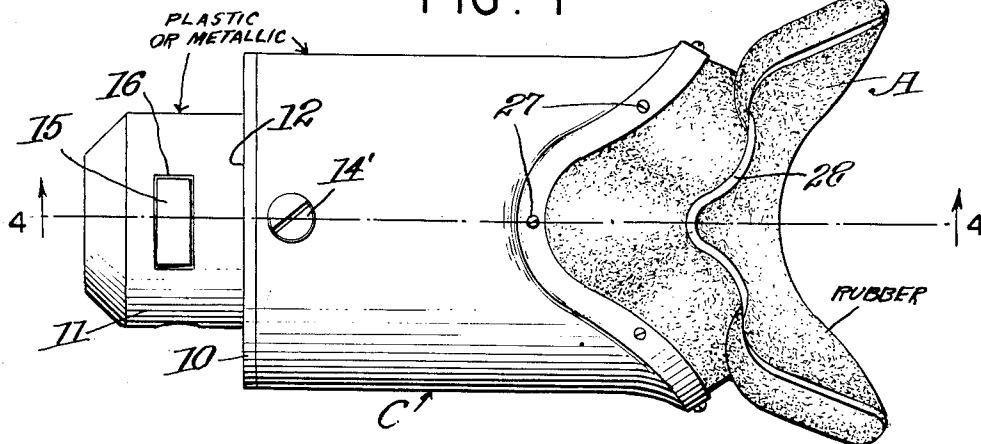


FIG. 2

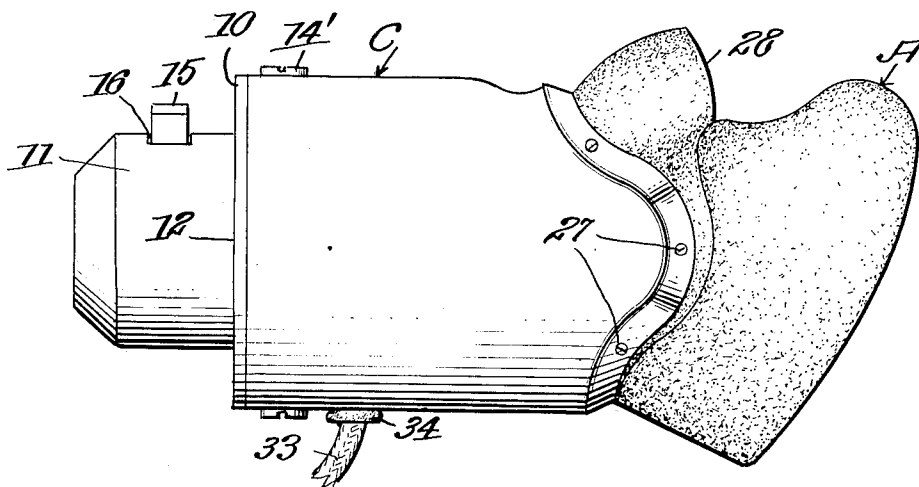
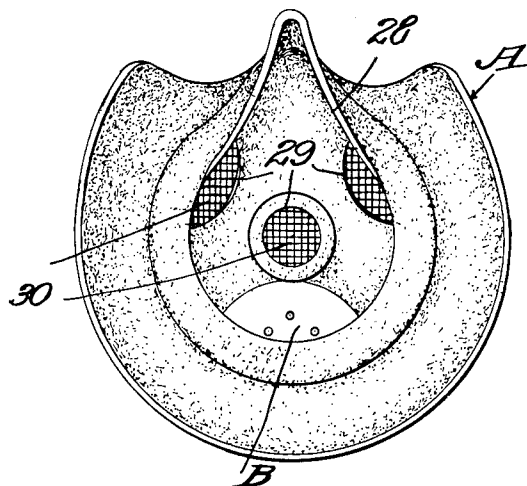


FIG. 3



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FIG. 4

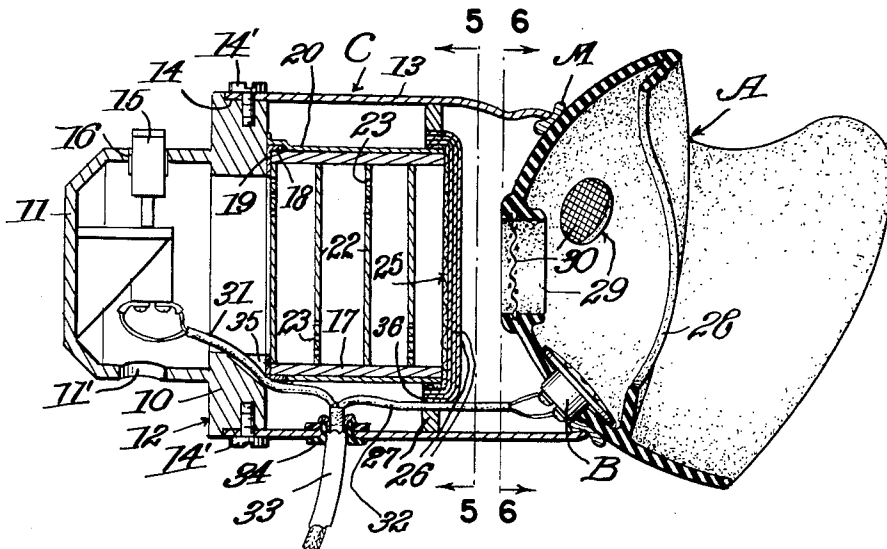


FIG. 5

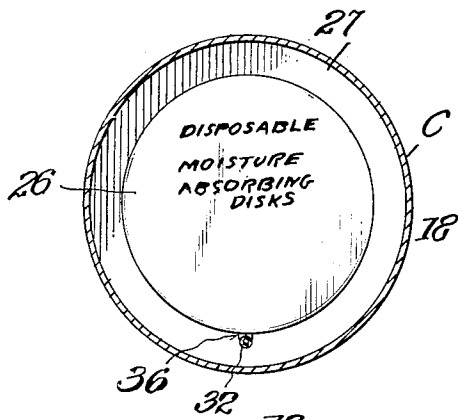


FIG. 6

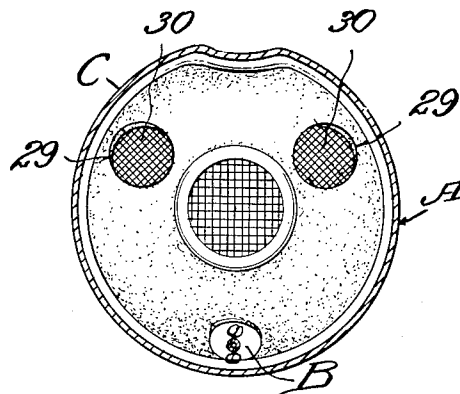
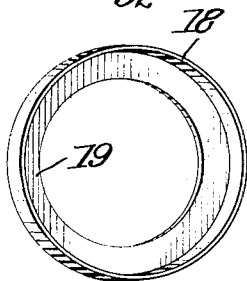


FIG. 7



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AMBIENT SOUND EXCLUDING DICTATION MASK

Horace L. Webb, Washington, D. C.

Application December 5, 1952, Serial No. 324,306

9 Claims. (Cl. 179—188)

This invention relates to a mask as used in recording machine dictation of the general character of such patents as those issued to me, No. 2,526,177 on October 17, 1950, and No. 2,572,547 on October 23, 1951.

A prime object is to provide a structure which will have improved moisture absorbing ability and features, to generally promote sanitation, minimize deterioration of the parts of the structure, and danger of short circuiting by moisture.

Another object is to provide a novel structure having disposable moisture absorbing means which is foldable into operative position and so retained through relative sliding of cylindrical walls during assembly of the apparatus.

Further, it is aimed to produce a novel construction wherein the different parts are better secured together in unitary fashion against danger of accidental opening or displacement and the possibility of sound escaping through any loose fitting parts, and particularly so that the casing parts may be constructed of modern plastic as well as metal, and all parts are sufficiently removable or displaceable so as to be accessible for disposal, cleaning, inspection, repair and substitution.

Various additional objects and advantages will be pointed out and otherwise become apparent as the description proceeds in connection with the accompanying drawings.

In said drawings:

Fig. 1 is a top or plan view of the improved talking mask device;

Fig. 2 is a side elevation thereof;

Fig. 3 is a front end elevation of said mask device;

Fig. 4 is a central longitudinal vertical sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a cross-sectional view taken on the line 5—5 of Fig. 4;

Fig. 6 is a cross-sectional view taken on the line 6—6 of Fig. 4; and

Fig. 7 is a perspective view of the edge folding and retaining ring for the disposable moisture absorbing means employed.

Referring specifically to the drawings wherein like reference characters designate like or corresponding parts throughout the different views, the invention generally consists of a face-fitting mask-like diaphragm or element A carrying a microphone B and a casing C to be manually supported and which excludes ambient sound and carries a conventional switch to control operation of the recording machine with which the device is employed.

Said casing C may be of any suitable size, proportions and material, such as modern plastic, metal like aluminum or magnesium, rubber or cellulose in view of their light weight. Between the ends of said casing is a relatively strong ring 10 from which a knob or dome 11 of less diameter than the ring, to provide a shoulder 12, projects rearwardly, usually integrally. A cylindrical outer main wall 13 extends forwardly at the periphery of said ring, being seated if desired on a shoulder 14 of

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the ring. Said casing may be molded or cast in one piece or made up of a number of parts rigidly or removably secured together as at the shoulder 14 and for instance by screws 14'. Knob 11 is manually grasped using shoulder 12 if desired as an abutment for the hand to hold the structure in operative position against the face and it mounts therein a conventional control switch 15 for the associated sound recording machine, such switch being accessible for operation by a finger of the hand which grasps the knob and preferably being of the push type and projecting partly to the exterior through an opening 16 in the knob. Said knob 11 is closed except for a vent or breather opening 11'.

Said casing provides a chamber which accommodates disposable moisture absorbing means as well as sound-baffling structure. Concentric within and spaced from main wall 13 is an inner tubular baffle carrier wall 17 of the same material as the casing or of pasteboard or of practically any material which is either permanently or detachably secured to ring 10 as by partly slidably telescoping into a flange 18 of a ring 19 for instance of the same material as wall 17 and glued or otherwise fastened to ring 10.

The annular space or chamber between walls 13 and 17 is for sound insulation and may be merely dead air, although it may be filled with removable sound insulation like foam rubber, cellulose fabric or the equivalent, and the outer surface of wall 17 has a moleskin or equivalent lining 20 glued or otherwise secured thereto and to flange 18 to serve both as sound insulation and to render wall 17 non-shattering under impacts such as when the mask is accidentally dropped, pushed against a desk, wall, or the like.

Suitably secured within wall 17 and preferably glued or secured thereto, are a suitable number of spaced sound baffles 22, made for instance of pasteboard or the same material as casing C. Said baffles 22 are perforated alternately at the top and bottom as at 23.

The inner end of carrier wall 17 terminates short of mask-like element A and across that end is removably positioned suitable disposable sound and moisture absorbing material preferably consisting of a plurality of superposed sheets or disks 25 and 26 of greater diameter than the diameter of cylindrical wall 17 so that the peripheral edges thereof may be folded over and against said wall 17 and lining 20 as shown in Fig. 4.

Main wall 13 has a means to so fold and maintain said disks 25 and 26 in the said position of Fig. 4, and it consists of a ring 27 of the same material as wall 13 peripherally glued or otherwise fastened at its periphery to the inner surface of wall 13. Thus in assembly with said disks 25 and 26 disposed over the end of wall 17, wall 13 may be telescoped over wall 17 and pushed to the left into the position of Fig. 4, and in so doing carry ring 27 against the peripheral portion of disks 25 and 26, thereby folding and depressing such portions as shown in Fig. 5 and frictionally and removably retaining them in operative position.

Disk 25 may be of porous or woven water repellant or water resisting material, such as perforated metal or the like, while disks 26 may be made of absorbent cellulose, paper, "Kleenex," cotton, textile fabric, or the like.

Reverting to mask or diaphragm A, it is of face-fitting shape and generally like that disclosed in my co-pending application Serial No. 25,008, filed May 4, 1948, and the free end of wall 13 is shaped to intimately fit the same and preferably with the interposition of a mastic or adhesive sealing compound M like "Mortite" to provide a tighter fit but still enable detachment from wall 13. Said mask may be of soft rubber or pliable plastic and have a relatively thin flange 28 extending around and inwardly from its periphery arranged to surround and fit

the face of the dictator about the mouth and nose. Openings 29 permit sound travel and breathing and across such openings metallic or plastic gauze 30 is disposed to confine the sound insulation 26.

Suitable electric conductors 31 and 32 are operatively connected to switch 15 and microphone B, respectively, passing through openings or notches 35 and 36 in rings 10 and 27 in a manner most facilitating assembly and disassembly and then through a sheath 33 to the recording machine. Said sheath 33 is anchored to wall 13 by a grommet 34 to thus reduce pull on the conductors relative to wall 13. Said openings or notches 35 and 36 are preferably cut outwardly from the central openings of rings 10 and 26, respectively.

In operation, knob 11 is held in either hand with switch 15 uppermost so that the latter will naturally be positioned for operation of a finger or fingers of that hand without sacrifice of its grip on the casing. This results in holding the device accurately in position to be readily applied to the face with flange 28 contacting the face, the mask generally extending under and about the chin and sides of the face and with the mouth and nose disposed within the said flange 28. The casing is thus practically sealed against the face and the operator can then talk or dictate with transmission of sound by the microphone B to the talking machine with which the device is used and with the latter operating under control of switch 15. Such talking or dictation will be silent with respect to all surrounding persons, flow of sufficient air and sound being augmented by openings 11' and 30.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim:

1. A dictation mask structure comprising a ring, spaced apart inner and outer tubular walls one within the other extending from one side thereof, a mask element mounted at the end of said outer wall opposite to the ring, a microphone on the mask, said mask element being open to the interior of the inner wall for passage of sound through the latter, sound baffling means disposed across the bore space of the inner tubular wall in the path of said sound, a switch to control a recording machine, and a grasping means for the structure extending from said ring carrying said switch.

2. A dictation mask structure comprising spaced apart inner and outer tubular walls one within the other, a mask element disposed across said walls at one end and supported by one of them, a microphone on said mask at the other end of the latter tubular wall, said mask element being open to the interior of the inner wall for passage of sound through the latter, moisture-absorbing means disposed across the bore space of the inner tubular wall, in the path of said sound, a switch to control a recording machine, and a grasping means for the structure carrying said switch extended from said walls at the end of the structure opposite to said mask element.

3. A dictation mask structure according to claim 2 wherein the other of said walls has means releasably retaining the moisture-absorbing means in operative position.

4. A dictation mask structure according to claim 2 wherein said moisture absorbing means is marginally flexible for folding and the other of said walls has means slidable during assembly of the mask structure over said moisture-absorbing means adjacent the margin of the latter to fold and retain the latter.

5. A dictation mask structure comprising spaced apart

inner and outer tubular walls one within the other, a mask element disposed across said walls at one end and supported by one of them, a microphone on said mask at the other end of the latter tubular wall, said mask element being open to the interior of the inner wall for passage of sound through the latter, moisture-absorbing means disposed across said bore space of the inner tubular wall, in the path of said sound, a switch to control a recording machine, and a grasping means for the structure carrying said switch extended from said walls at the end of the structure opposite to said mask element, said inner wall and sound-baffling means being unitarily displaceable relatively to the casing.

6. A dictation mask structure comprising spaced apart inner and outer cylindrical walls one within the other, a mask element disposed across said walls at one end and supported by one of them, a microphone on said mask, said mask element being open to the interior of the inner wall for passage of sound through the latter, flexible moisture-absorbing and sound baffling means disposed across the bore space of the inner tubular wall in the path of said sound, a switch to control a recording machine, a grasping means for the structure carrying said switch extended from said walls at the end of the structure opposite to said mask element, and a folding and retaining ring for said moisture-absorbing and sound baffling means engageable with said disk means through relative sliding of said walls during the assembly thereof.

7. A dictation mask structure comprising spaced apart inner and outer cylindrical walls one within the other, a mask element disposed across said walls at one end and supported by one of them, a microphone on said mask, said mask element being open to the interior of the inner wall for passage of sound through the latter, flexible moisture-absorbing and sound baffling means disposed across the bore space of the inner tubular wall in the path of said sound, a switch to control a recording machine, a grasping means for the structure carrying said switch extended from said walls at the end of the structure opposite to said mask element, and means on one of said walls engaging and retaining the moisture absorbing and sound baffling means in operative relation to the other wall.

8. A dictation mask structure comprising a ring, spaced apart inner and outer walls one within the other extending from one side thereof, a mask element mounted at the ends of said walls opposite to the ring, a microphone on the mask, said mask element being open to the interior of the inner wall for passage of sound through the latter, moisture-absorbing and sound baffling means disposed across the bore space of the inner tubular wall, a switch to control a recording machine, a grasping means for the structure extending from said ring carrying said switch, said outer wall having a step joint with the periphery of said ring enabling detachment of the ring therefrom and said inner wall being detachable relatively to the outer wall unitarily of the ring.

9. A dictation mask structure according to claim 2 wherein said inner wall has a non-shattering lining, and water-repellant material between said mask element and moisture absorbing material.

References Cited in the file of this patent

UNITED STATES PATENTS

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2,485,278	Gilman et al.	Oct. 18, 1949
2,572,547	Webb	Oct. 23, 1951