Oct. 21, 1958 L. ORSO 2,857,013

DICTATION DEVICE

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Fig. 1

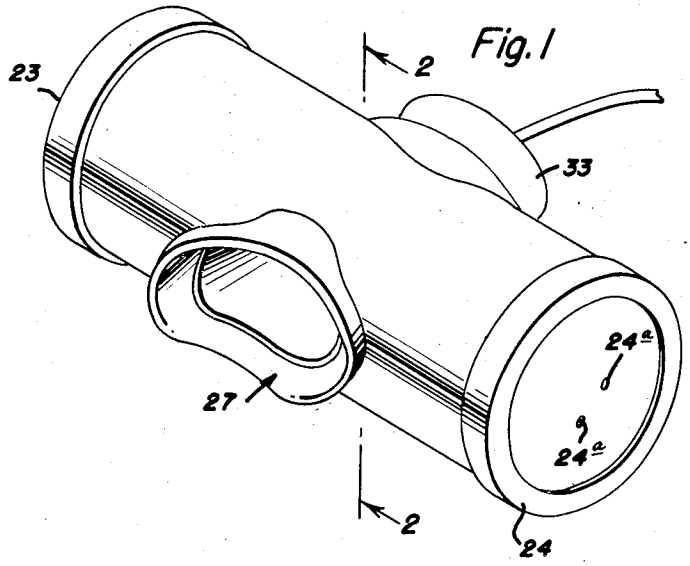


Fig. 2

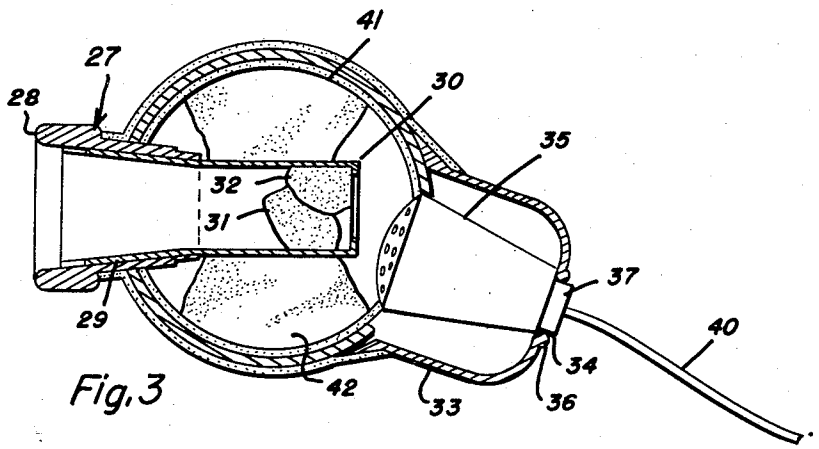
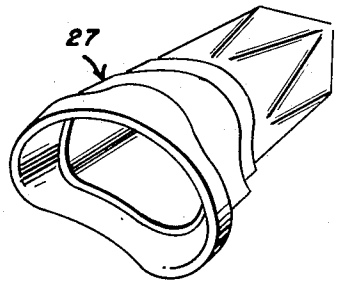


Fig. 3



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Fig. 4

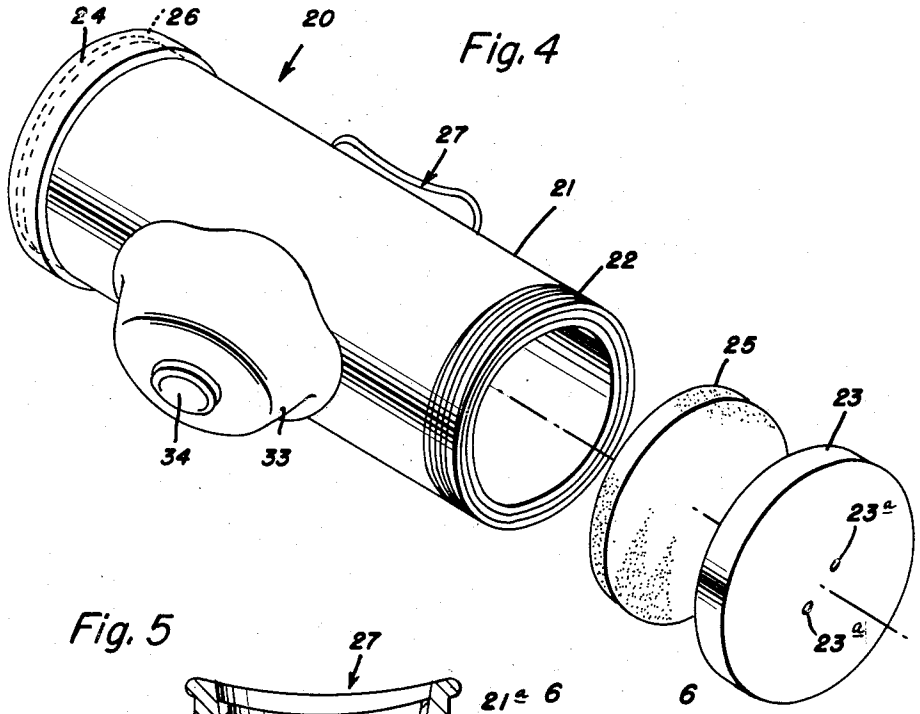


Fig. 5

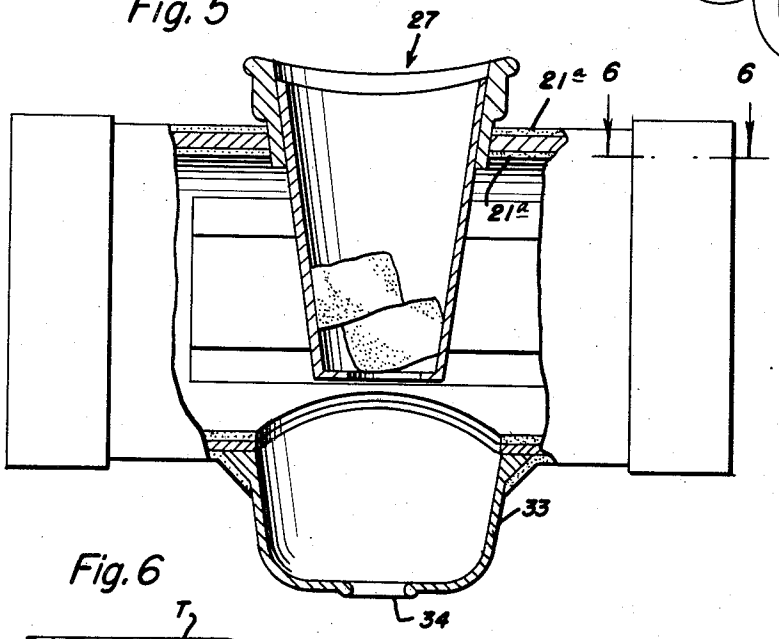
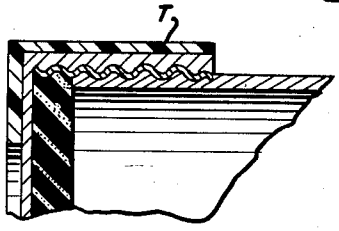


Fig. 6



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United States Patent Office

2,857,013

Patented Oct. 21, 1958

2,857,013

DICTATION DEVICE

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Application August 10, 1955, Serial No. 527,524

6 Claims. (Cl. 181—34)

The present invention generally relates to a device for use in court reporting, conventions, or other gatherings, where it is desired to record, report and transcribe speeches, discussions or the like. More particularly, this invention is concerned with a device adapted to receive spoken words or other sounds from the mouth of the user in such a manner that the said words or sounds may be directly and faithfully recorded on a recording machine without creating a disturbing sound interference with other vocal activity, and exclude all sounds except the voice of the user.

One of the objects of the present invention is to provide a dictation device so constructed and designed that the user maintains normal nasal breathing which is unhampered by a mask, or the like.

A further object is to provide a dictation device having means for adjustably controlling ambient sound to produce high fidelity recording.

The applicant recognizes the fact that he is not the first to ever invent a dictation mask or like device. The applicant is aware of such patents as the Webb Patents No. 2,526,177, No. 2,572,547 and No. 2,625,615. Applicant's dictation device has many advantages over the devices shown and described in the said Webb patents. In applicant's device, when it is in use, the user can breathe normally and applicant's device is so constructed and designed that back pressure is not built up to affect the quality of the sound being recorded.

Other and further objects of the present invention will be apparent from the following description thereof and from the claims appended thereto.

In the drawing wherein like numerals refer to like or corresponding parts throughout the several views:

Figure 1 is a perspective view of the dictating device embodying the features of the present invention;

Figure 2 is a sectional view taken along the line 2—2 of Figure 1 in the direction of the arrows;

Figure 3 is a perspective view of the mouthpiece member of the dictating device embodying the features of the present invention;

Figure 4 is a perspective view with some parts in disassembled relation;

Figure 5 is a top plan view of the device partly in section, and

Figure 6 is a sectional view taken along the line 6—6 of Figure 5 in the direction of the arrows.

Referring now to the drawing, the numeral **20** generally embraces the dictating device of the present invention which in its preferred embodiment comprises a cylindrical sound receiving body of self-supporting material **21** having an opening or passageway extending therethrough. The body **21** is externally threaded at both ends thereof, as at **22**. Threaded end portions **22** of the cylindrical sound receiving body **21** are adapted to threadedly receive internally threaded caps **23** and **24**, with cap **23** being provided with perforations **23***a* and cap **24** being provided with perforations or openings, **24***a*.

As shown in Figure 4, a cap-like disc **25** of moisture and sound absorbent material is adapted to fit within the cap **23**. Likewise, a similar cap-like disc **26**, which is shown in phantom lines in Figure 4, is adapted to fit within cap **24**. It is to be understood that the structure of one end of the dictating device is similar to the structure of the other end of said device, and cap **23** is duplicated in cap **24**, and the cap-like absorbent material **25** is duplicated by disc **26** which fits within cap **24**.

Intermediate the ends of the wall of the cylindrical sound receiving body are provided two substantially oppositely disposed openings. One of said openings is adapted to removably receive a mouthpiece member which is generally indicated by the numeral **27**. The mouthpiece member **27** comprises a mouth engaging portion **28** made of plastic or Bakelite which is secured to a word and sound channeling member **29** which extends within the body **21**. The mouthpiece member **27** may be made of one piece of material or as shown, comprising two sections which are secured together in any suitable fashion. It is preferred that the mouthpiece member be made of self-supporting material which is adapted to be easily cleaned as it is removed from the body **21** for purposes of sanitation.

An opening or passageway extends through the mouthpiece member **27** so that the inner end portion **30** thereof is adjacent the other of said openings in the wall of the cylindrical body portion. It is preferred that one or more pieces of sound absorbent and moisture absorbent material **31** and **32** be disposed within the opening which extends through the mouthpiece member **27**, preferably at the inner end portion thereof, so as to absorb moisture from the breath and to control the sound that emanates from the user of the device.

One of the two openings in the wall of the cylindrical body **21** is adapted to receive a flexible collar **33** which has an opening **34** at one end thereof through which may be passed an electrical microphone **35**. At the opening **34** the flexible collar **33** is provided with a beaded portion **36** to make a snug engagement with the portion **37** of the microphone **35** so that the microphone **35** is positioned in such a manner that sounds passing through the mouthpiece member **27** can be electrically picked up and through wire **40** suitably conducted to a recording device of any commercial nature.

Within the body portion **21** there is disposed a sound and moisture absorbent material **41** and additional sound and moisture absorbent material **42** so positioned within said body **21** that moisture and unwanted sound effects are absorbed to provide a faithful reproduction.

In the preferred form of the present dictating device, the cylindrical body portion is approximately 7.5" long and approximately 3 1/16" inside diameter and approximately 3 1/8" to 3 3/16" outside diameter. It is to be understood that these dimensions may be varied somewhat without altering the quality of the recording obtained. However, it is desired that there be sufficient volume or space within the cylindrical device to permit the sounds from the voice of the user to become properly oriented before being picked up by the microphone for recording.

The cylindrical body **21** may be made of any self-supporting material but is preferably a cylindrical tube of spiral wound cardboard, wallboard, kraft paper, plastic, or some such type of convolute material which provides rigidity and long handling without alteration of shape and which is non-breakable under all normal conditions of use.

As shown in Figure 5 of the drawing, the body **21** is preferably moisture proofed on the inside and outside with paraffine, varnish or a similar substance **21***a*.

Likewise, as shown in Figure 6 of the drawing, the caps **23** and **24** which are preferably metal covers, or the like, are provided with a rubber or plastic tape T, which

is only necessary in the event the metal covers vibrate to create undesired sounds within the cylindrical body 21.

In use the reporter who is using the dictating device of the present invention presses the mouthpiece 27 tightly around the mouth so that speech is directed through the opening of the said mouthpiece 27 to the interior of the hollow cylindrical sound receiving body 21. These sounds are picked up by the microphone 35 for a recorder which may be any type of recorder known today.

During the course of the use of this device a reporter is free to breathe normally through his nose and any air blown into the device is equalized by being dissipated through the small openings or perforations in end caps 23 and 24 to eliminate excessive compression of air and sound while avoiding a carbon dioxide built up within the body portion 21. In other words, the reporter can exhale through the device because of the small holes which appear in the caps 23 and 24 without removing the mouthpiece member 27 from around his mouth so that the reporter can continually dictate with great ease and comfort under normal breathing conditions.

The portion 29 of the mouthpiece member 27 is in the nature of a "high frequency channelizer" and with the acoustic material 31 and 32 disposed in the interior thereof, it serves the following advantageous purposes:

(1) It directs the sound of the voice upon the face of the microphone before it is dispersed throughout the interior of the device, with the user's breath escaping through the exhalation vent holes in caps 23 and 24.

(2) It controls to a large degree the amount of sound of the reporter's voice which escapes and enables the reporter to a large extent to control the audibility of his voice to other people.

(3) It holds an acoustic material which dampens or quiets the sound of the reporter's voice.

(4) The acoustic material which it holds also serves to collect all moisture condensation, thus protecting the microphone unit from damage resulting from this type of condensation.

(5) By varying the quantity of acoustic material, it enables the reporter to have a great deal of freedom in emphasizing the "low frequencies" or "high frequencies" which is extremely important in obtaining a recording of sufficient fidelity to be easily transcribable when making the verbatim transcript.

(6) It provides a high degree of sanitary control since the entire voice unit can be removed and washed with soap and hot water, or other cleansing substance.

The acoustical control material used in the body may be a fine tissue paper, but preferably a type of standard manufactured sponge, similar to "O-Cello," is employed.

This acoustical control material within the body serves various functions on the interior of the cylinder:

(1) It deadens the sound of the reporter's voice, so as not to disturb persons sitting in the area.

(2) It excludes external sounds except the reporter's voice, thus enabling the reporter to make an undistorted recording.

(3) It is porous, and thus enables the exhalations of the reporter's breath to escape through the vent holes at either end and avoid the build-up of carbon dioxide in excessive quantities.

(4) It captures any stray condensation of moisture not already captured by the sponge material in the "high frequency channelizer."

(5) It lessens the weight of the cylinder needed by providing variable acoustic control, depending upon quantity of sponge material used in the interior.

One of the main purposes of the present invention is to provide a device for dictation comprising, a substantially hollow sound receiving body of self-supporting material, with said body being provided with two openings and being otherwise closed except for the small openings in the caps 23 and 24. In addition, there is provided a mouthpiece member having a passageway which is disposed in one of said openings, having one portion thereof being exteriorly positioned while another portion thereof extends within the said hollow body. There is also provided a flexible collar, cup or other element of rubber or the like which is adapted to snugly and removably receive an electrical microphone which is attached to a wire, which in turn is connected to an electrical recording device. The said flexible cup or collar is permanently disposed in the other of said openings in the sound receiving body. One of the main features of the present dictating device is the construction thereof so that the major axis of the body extends in a direction which is substantially at right angles to that portion of said mouthpiece member which is positioned within the said hollow body. The importance of this particular structure lies in the fact that sound as it emanates from the user's voice is permitted some sidewise dissipation as it passes from the channel member 29 so as to provide a quality of sound which is more readily picked up by the microphone for recording purposes. It is believed that the high fidelity which can be obtained by the dictation device of the present invention is due to the elimination of back pressure being built up within said device, and a greater control of the moisture and sounds to be recorded through the proper disposition of the sound and moisture absorbent material.

More specifically, the present invention embraces a device for dictation comprising a cylindrical sound receiving body of self-supporting material and having an opening extending therethrough, said body being externally threaded at both end portions thereof, a perforated internally threaded cap adapted to threadedly engage one end portion of said cylindrical sound receiving body, a cap shaped sound and moisture absorbent material positioned within said cap, and substantially covering the inner area of the top of said cap, a second perforated internally threaded cap adapted to threadedly engage the other end portion of said cylindrical sound receiving body, a cap-shaped sound and moisture absorbent material positioned within the second cap and substantially covering the inner area of the top of said cap, the wall of said cylindrical sound receiving body being provided with two oppositely disposed openings substantially mid-way the length thereof, a mouthpiece member having an opening therethrough and adapted to snugly and removably fit in one of said wall openings to position the mouth engaging end of said mouthpiece member exteriorly of said cylindrical wall, said mouthpiece member having two open end portions, one open end portion disposed outwardly of the body and the other open end portion thereof disposed within said cylindrical body adjacent the other of said wall openings, a sound and moisture absorbent material disposed within the opening extending through said mouthpiece member, a flexible collar member disposed in the other of said wall openings, said flexible collar being adapted to snugly and removably receive an electrical microphone, moisture and sound absorbent material being disposed within said body, and said caps being axially movable to adjust the length of said sound receiving body to improve the quality of the sound being recorded.

Various modifications of the present invention will be apparent to those skilled in the art without departing from the spirit thereof, and it is therefore desired to be limited only by the scope of the appended claims.

What is claimed is:

1. A device for dictation comprising, a cylindrical sound receiving body of self-supporting material and having an opening extending therethrough, said body being externally threaded at both end portions thereof, a perforated internally threaded cap adapted to threadedly engage one end portion of said cylindrical sound receiving body, a cap-shaped sound and moisture absorbent material positioned within said cap and substantially cover-

ing the inner area of the top of said cap, a second perforated internally threaded cap adapted to threadedly engage the other end portion of said cylindrical sound receiving body, a cap-shaped sound and moisture absorbent material positioned within the second cap and substantially covering the inner area of the top of said cap, the wall of said cylindrical sound receiving body being provided with two oppositely disposed openings substantially mid-way the length thereof, a mouthpiece member having an opening therethrough and adapted to snugly and removably fit in one of said wall openings to position the mouth engaging end of said mouthpiece member exteriorly of said cylindrical body, said mouthpiece member having its opposite end disposed within said cylindrical body adjacent the other of said wall openings, a sound and moisture absorbent material disposed within the opening extending through said mouthpiece member, a flexible collar member disposed in the other of said wall openings, said flexible collar being adapted to snugly and removably receive an electrical microphone, moisture and sound absorbent material being disposed within said body, and said caps being axially movable to adjust the length of said sound receiving body to improve the quality of the sound being recorded.

2. A device for dictation comprising, a sound receiving body of self-supporting material having an opening extending therethrough and having two end portions, a perforated cap adapted to engage one of said end portions of said sound receiving body, a second perforated cap adapted to engage the other of said end portions of said sound receiving body, said sound receiving body being provided with two oppositely disposed openings substantially mid-way the length thereof, a mouthpiece member having an opening therethrough and adapted to snugly and removably fit in one of said openings to position the mouth engaging end of said mouthpiece member exteriorly of said sound receiving body, said mouthpiece member having its opposite end disposed within said sound receiving body adjacent the other of said openings, a flexible collar member disposed in the other of said openings, said flexible collar being adapted to snugly and removably receive an electrical microphone, and sound absorbent material being disposed within said body.

3. A device for dictation comprising, a cylindrical sound receiving body of self-supporting material and having an opening extending therethrough, a perforated cap adapted to engage one end portion of said cylindrical sound receiving body, a sound and moisture absorbent material positioned within said cap, a second perforated cap adapted to engage the other end portion of said cylindrical sound receiving body, a sound and moisture absorbent material positioned within said second cap,

the wall of said cylindrical sound receiving body being provided with two oppositely disposed openings substantially mid-way the length thereof, a mouthpiece member having an opening therethrough and adapted to snugly and removably fit in one of said wall openings to position the mouth engaging end of said mouthpiece member exteriorly of said cylindrical wall, said mouthpiece member having its opposite end disposed within said cylindrical body adjacent the other of said wall openings, a sound and moisture absorbent material disposed within the opening extending through said mouthpiece member, a flexible collar member disposed in the other of said wall openings, said flexible collar being adapted to snugly and removably receive an electrical microphone, and moisture and sound absorbent material being disposed within said body.

4. A device for dictation comprising, a substantially hollow sound receiving body of self-supporting material and having a major axis, said body being provided with two openings, a mouthpiece member having a sound passageway therethrough disposed in one of said openings and having a portion thereof extending within said hollow body, a flexible element adapted snugly to receive an electrical microphone and being disposed in the other of said openings, and said body having its major axis extending in a direction which is substantially at right angles to that portion of said mouthpiece member positioned within said hollow body.

5. A device for dictation comprising a hollow cylindrical sound receiving member of self-supporting material having at least one open end, said member being provided with two substantially oppositely positioned openings in the wall of the cylindrical member, a mouthpiece member disposed in one of said openings, said other opening being provided with a flexible collar adapted to removably receive an electrical microphone, and a perforated cap adjustably mounted on said hollow member for closing the open end of the member and for controlling the volume of the space within the hollow member and for permitting the escape of the exhalations of the breath of the user of the device.

6. A device as claimed in claim 5 further comprising a disc of moisture and sound absorbent material positioned within said cap.

References Cited in the file of this patent

UNITED STATES PATENTS

1,399,083	Scher	Dec. 6, 1921
2,485,278	Gilman et al.	Oct. 18, 1949
2,572,547	Webb	Oct. 23, 1951
2,625,615	Webb	Jan. 13, 1953