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TELEPHONE CONVERSATION RECORDING
DEVICE

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1 Claim. (Cl. 179-6)

My invention relates to voice recording mechanisms.

One of the objects of my invention is to provide an arrangement for phonographically recording and reproducing telephone messages, employing a dictating machine and an electrically actuated telephone instrument and means for operatively uniting them for the purpose, without interfering with the normal operation or use of either instrument as a separate unit.

Another object of my invention is to provide such an apparatus in which there is no connection between the telephone and the electrical pick-up coil except that they be placed adjacent each other and in which there is no connection between the dictating machine and the amplifier except their being placed adjacent each other. In other words, with my invention there is no change whatever made in either the dictating machine or in the telephone mechanism.

Another object of my invention is to provide means for adjusting the rigidity of the fluid column actuating the diaphragm in the dictating machine so as to avoid distortion.

Another object of my invention is to provide a receiving means for the dictating machine speaker mouthpiece which will permit quick detachability.

I have found in the operation of my machine that I will often be using the dictating machine in connection with office work when the telephone will ring and a call will come in which I wish to record. By means of the arrangement shown herein it is a simple matter to place the dictating machine mouthpiece in the rack and record the whole conversation on the record.

Another use for this device is when I am away from my office and desire to dictate a letter or a telegram, or a message to someone in the office, or instructions. I telephone my office, ask for my secretary, ask her to hook up the Dictavox machine and to listen in to the dictation. I then dictate letters, telegrams, memoranda, instructions or even contracts, while I am away from the office, using the telephone as a means of making recordings on my office dictaphone.

While I have enumerated above certain objects of my invention, there are others not mentioned which become obvious from the following description taken in connection with the drawing.

In the drawing:

Fig. 1 represents a general perspective view of my device including a telephone instrument and the dictating machine; and

Fig. 2 is a view partly in section and partly diagrammatic illustrating the essential features of my invention.

In the drawing, numeral 10 designates the usual dictating machine mounted on the stand 11 and having a soft recording cylinder 12 engaged by a needle in the recorder 13, which needle is actuated by the usual diaphragm 14. The latter is caused to vibrate by means of a pulsating fluid column in the tube 15 and mouthpiece 16. When using the machine as a dictating machine the mouth of the person dictating is placed over the opening of the mouthpiece 16 and the record 12 is made. In the box 17 is a suitable motor and drive to rotate the cylinder 12 and to move the reproducer 18 over the record 12. This type of mechanism is a standard article of commerce.

To the right in Fig. 1 is shown the usual telephone base 20 and hand set 21. The construction of these instruments is well-known to those skilled in this art and no further description is believed necessary.

We come now to a description of the unit or device of my invention which is adapted to operatively unite the dictating machine to the telephone instrument in a manner which will not interfere with the normal use or operation of either instrument as a separate unit but which will, when desired, cause to be recorded on the record 12 of the dictating machine the two-way conversation passing through the telephone instrument.

My device comprises an induction coil 30 preferably made the size and shape of the bottom of the telephone unit 20 so that the latter can sit thereon in a predetermined relationship to the coil 30. The current pulsations picked up by the induction coil are then conducted to amplifier 31 where these pulsations are increased in power and passed out through voice coil wires 32 to a loud speaker unit 33. Any other location for the induction coil may be used, for example adjacent the call box of the telephone.

The amplifier 31 may be of any of the well-known types adapted to produce sufficient amplification to actuate the loud speaker 33. The loud speaker illustrated is of the cone type but any other type may be substituted without departing from the scope of my invention. The one illustrated comprises the speaker cone 34 having the voice coil 35 set in a field of a permanent magnet 36. The cone is supported at its outer edge by a web 37. As the cone is moved in and out of the magnetic field, vibrations are

set up. This movement is permitted by means of the annular flange 38 held in the web 37.

The amplifier and loud speaker are usually housed in the same box 31. The loud speaker cone 34 is placed adjacent an opening in the box 31 into which opening may be fitted a sliding member 40. While I have shown and will describe a particular form of member 40, any other form may be substituted which will accomplish the objects and purpose of this invention as now described.

The sliding member 40 provides the mounting means to support the mouthpiece while the telephone conversations are being recorded on the dictating machine. It also provides means for adjusting the air gap 42 which surrounds the open face of the speaker cone 34. To prevent distortion it is preferable that this air gap 42 extend substantially the full distance around the speaker cone, or, if interrupted, that the interruptions be fairly symmetrical. By making the member 40 slidable in the opening in case 31, or adjustable by means of the thread 43 as shown in Fig. 2, it is possible to regulate the size of air gap 42, and in this way adjust the two instruments so that the proper intensity of movement is imparted to the fluid column in speaking tube 15 and mouthpiece 16. In place of the threads 43 member 40 may make a sliding fit with the opening in housing 31.

To permit quick detachability of the mouthpiece 16, any one of a number of arrangements may be provided. As shown in Fig. 2, there is attached to the lower face of member 40 a projecting member 44 adapted to support the lower edge of mouthpiece 16 and to the upper face of member 40 is secured a hook member 45 adapted to engage the rim of mouthpiece 16. It is preferable to provide a resilient facing 46 to be engaged by mouthpiece 16 to avoid vibration and to seal off the connection between the edge of mouthpiece 16 and the collar member 40 so that any air gap will be the controllable one at 42.

As shown in Fig. 1, the most convenient location for the amplifier and loud speaker 33 is in the base 11 of the dictating machine. Thus located, it is a simple matter to bend the tube 15 down so that the mouthpiece 16 falls naturally into the holding members 44 and 45.

In operation the amplifier unit is usually left turned on all day so that when a telephone call comes in which the recipient desires to record, it is a simple matter to place the mouthpiece of the dictating machine in the holders 44 and 45. When the call is completed, the mouthpiece is easily removable and use of the dictating machine can be continued without any adjustment or change whatever.

Not only is my device very simple in its construction, but it is very inexpensive to manufacture as well as to install.

It is not my intention that the specific form of the elements used in describing this invention are absolutely essential to its practice and I desire the benefit of the full range of equivalents in keeping with the claim appended hereto.

What I claim is:

In a device adapted to operatively unit a conventional type of dictating machine to a telephone instrument while permitting normal operation or use of either instrument as a separate unit, the combination of a dictating machine, having a speaking tube, an electrical telephone instrument, a field pick-up located adjacent the latter, an amplifier connected to the output side of the pick-up, a loud speaker connected to said amplifier, a tube end coupling mounted for adjustment to and from the loud speaker for detachably coupling the open end of the speaking tube of said dictating machine adjacent said loud speaker, said coupling including a predetermined air gap surrounding said loud speaker, and means for adjusting the width of the air gap between said coupling and loud speaker.

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