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CONDENSER MICROPHONES
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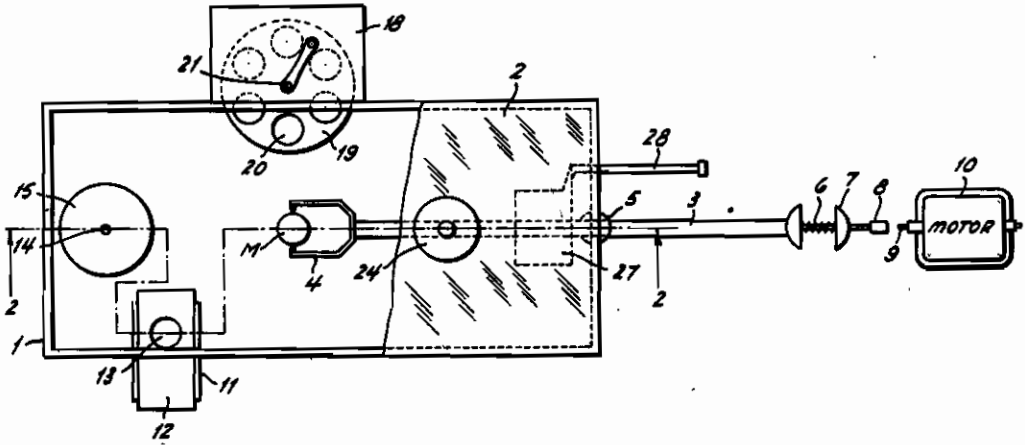


Fig. 1

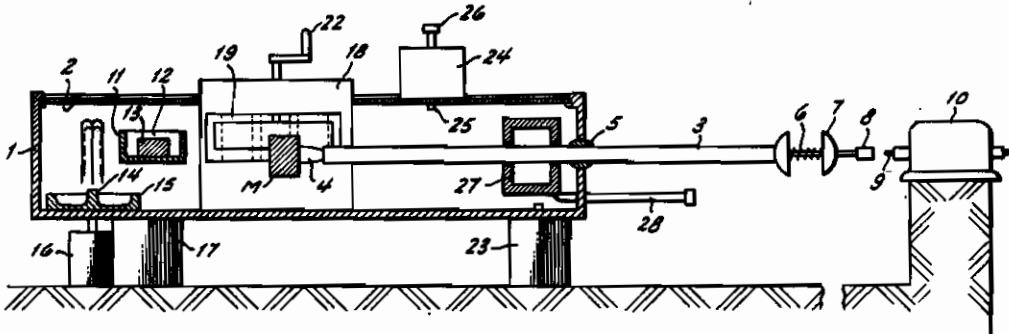


Fig. 2

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CONDENSER MICROPHONES

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The present invention is concerned with a method for assembling and mounting condenser-type microphones and the like.

In assembling condenser or electrostatic microphones special care must be taken so that no dust will be able to enter into the microphone. The distance separating the electrodes or plates amounts to only a few microns (thousandths of one millimeter); hence, any particles of dust that may get between the plates or electrodes are liable to cause serious troubles.

It has been suggested in the art to assemble condenser microphones only in regions or places practically free from dust and to do such work only in tiled workshops, or else to take care so that the dust content of work shops is reduced to the lowest possible degree.

Now, this invention discloses another working method and procedure, namely, to effect the assembly and mounting inside a closed box or container into which purified air is introduced under pressure with the result that the pressure prevailing within the box is always above the atmospheric pressure. Further objects of the invention consist in means adapted to cleaning and mounting or assembling inside this box.

The appended drawing illustrates an exemplified embodiment of the invention. Fig. 1 is a top view of the mounting box or enclosure according to the invention, with the cover thereof being removed, while Fig. 2 is a side view in section.

On its top the box 1 has a glass cover plate 2. Through a lateral wall of the box is introduced the handle or stem 3 of tongs or pliers 4, there being an articulation or swivel joint 5 whereby the tongs 4 may be moved in any desired direction. In other words, the said joint permits motion in the direction of the rod 3 as well as movement in any lateral angular sense. Opening and closing of the jaws of the tongs is effected by the aid of the handle 7 being subject to the pressure of a spring. If by pressure exerted upon the grip or handle 7, the spring 6 is compressed, this causes opening of the tongs 4. End 8 of rod 3 is fitted with a member adapted to co-operate with the clutch 9 of motor 10.

In the longitudinal side or wall of the box is a lock through which the parts forming the microphone may be brought into the interior of the box. The said lock comprises a U-shaped holder member 11, one-half of which projects into the box, while the other half extrudes from the box. Shiftable in the said holder 11 is a drawer 12 which shuts the opening provided for it in the lateral wall of the box 1. Provided in

the said drawer 12 is a receiver or receptacle 13 for a microphone part. In the box, itself, is a nozzle 14 which has a guard rim 15. The said nozzle 14 is connected with a pump 16 mounted below the box, while a storage tank 17 is connected, on the one hand, with the pump 16, and, on the other hand, with an outlet inside the guard rim 15. Laterally in reference to the box is a drying chamber 18 in which is a platform 19 with several receptacles 20 adapted to accommodate microphone parts. The platform 19 is revolvable about a pivot or axis 21 by the aid of a crank 22. Heating of the chamber 18 is effected by hot water, heating being preferably by electricity.

Super-atmospheric pressure is produced inside the box 1 by the aid of a blower 23; the air handled by this blower 23 being always carefully purified.

On top of the box is a container 24 for varnish fitted with a dripper nozzle 25, a handle 26 being provided to open and close the said nozzle.

Now, the operation of this apparatus is as follows:

The drawer 12 is withdrawn from the box 1 to an extent so that a microphone part may be placed into its receptacle 13. While this is being done, the drawer 12 shuts the opening provided for it in the box 1. The drawer 12 thereupon is pushed into the box 1 to a depth so that the receptacle 13 comes to lie entirely inside the box. By compression of the spring 8 by the agency of the handle 7 of the tongs 4 are opened. By the aid of the latter, the microphone part placed in the receptacle 13 of the drawer 12 is taken out. By shifting the handle or rod 3, the microphone part (designated by M in the drawing) is placed over the nozzle 14, while the rod is being turned, until the microphone part M has been thoroughly rinsed all around by the liquid or fluid issuing from the nozzle, preferably quick-drying fluid such as carbon tetrachloride. Thereupon, the tongs with the part M are withdrawn, the clutch members 8 and 9 are engaged, and the motor 10 is cut in circuit. As a result the microphone part M is rapidly rotated and the rinsing or cleansing fluid is thrown off by centrifugal action and rapidly volatilized. A cylinder 27 is provided to gather the spattered liquid. The said cylinder has a rod 28 whereby the cylinder may be shifted. As soon as part M is dry it is placed underneath the nozzle 25 and a drop of lacquer is allowed to fall upon the under face and the top face of the diaphragm. Next rod 3 is again engaged with the motor 10 and by rotat-

ing part M inside the protective cylinder 27 the lacquer is caused to spread all over the diaphragm, while the surplus is allowed to spatter. Next part M is laid into receptacle 20 of the platform or circular disc 19 and brought into the drying chamber 18 by rotating the crank 22. While the bottom or back part of the microphone is being dried in the drying chamber 18, the top plate of the microphone is brought through the lock and drawer 12 into the box 1 in a way as hereinbefore described, gripped by tongs 4, cleansed by the nozzle, centrifuged inside the protective cylinder or casing 27 and thereupon placed also into receptacle 20 of the platform 19 and then brought into the drying chamber 18.

After both parts have been dried, the bottom or back part is laid into the receptacle 13 of drawer 12, the top is fitted upon the bottom or back part so that both members are fitted in a fairly hermetic way upon each other and are then withdrawn by way of the lock and drawer 12 from the box 1. Final assembly of the microphone parts may then be completed outside the box.

Instead of a single lock arrangement 11—12, another such lock could be provided, say, in the neighborhood of the drying chamber 18, together with other tongs so that the dried back and top members are placed down upon the drawer of this lock and thereby removed from the box.

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