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O. SOLDAN

MICROPHONE

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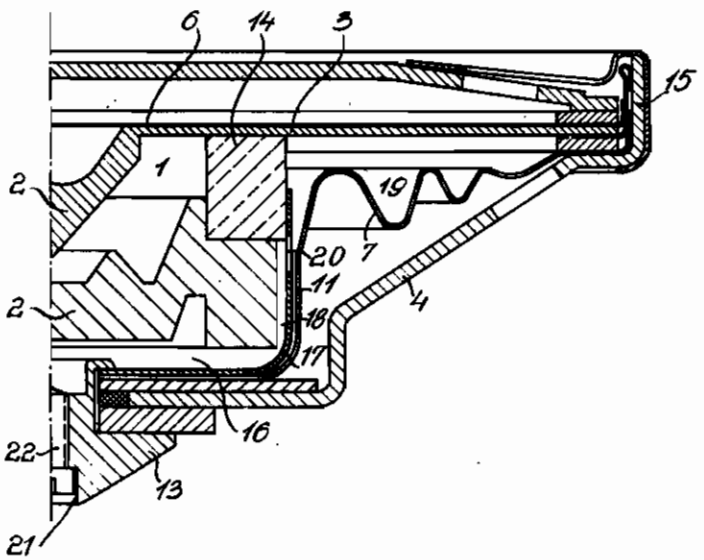

Inventor

Otto Soldan

By Frederick E. Baer

Attorney

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ALIEN PROPERTY CUSTODIAN

MICROPHONE

Otto Soldan, Falkensee, Osthaveland, Germany;
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This invention relates to a microphone having a pressure compensation chamber which eliminates the changes in tension caused in the interior of the case by the influence of the ambient temperature. To this end, the operating diaphragm and the carbon chamber of such microphones are arranged in a closed chamber of the case, the chamber being defined by a sealing diaphragm from the operating side and by a flexible water-tight protective wall from the opposite side.

It has been found that this chamber must be tested for air-tightness, which entails connecting a testing device to the chamber. This is accomplished according to the invention by providing the chamber of the case enclosed by the sealing diaphragm and the water-tight protective wall with an opening so as to enable a testing of the chamber for the air-tightness, said opening being accessible from outside and capable of being closed.

Since the arrangement of this opening in the protective wall of the chamber itself is disadvantageous, as its flexibility would thereby be impaired, and since such an arrangement also involves a particular opening in the case, the opening capable of being closed is arranged according to the invention in the contact member mounted at the rear side of the case, which member projects into a space arranged behind the fixed electrode and closed by the protective wall, said space being in communication with the pressure compensation chamber, the portion of the cup-shaped member for the fixed electrode extending in this path of communication being provided for this purpose with one or more openings.

In the accompanying drawing is shown an embodiment of the invention in diagrammatic form in which the single figure shows a sectional view of one half of the sealed microphone case according to the invention. In the microphone case 4 is arranged the carbon chamber 1 which is defined by the fixed electrode 2 and the felt ring 14. The chamber is closed by the operating diaphragm 3 provided with the movable electrode 2'. To seal these parts, a diaphragm 6 is employed consisting of a water-tight foil and arranged at the operating side. In this case the diaphragm 6 rests directly on the operating diaphragm 3 and is preferably glued to the flexible water-tight protective wall 7 forming the lower wall of the chamber 19 as well as to the inner wall of the edge 15 of the case 4, bent at right angles in order to attain a completely air-tight seal of this portion of the case chamber. Since the protective wall 7 with its portion 11 extends at the rear side of the case 4 up to the opening for the contact nipple 13, the hollow space 16 behind the fixed electrode 2 is also protected against moisture by the intermediate wall 11. The cup-shaped member 17 of the fixed electrode 2 is not in direct engagement with the latter, but only with the felt ring 14 so that a path of communication 18 from the space 16 behind the electrode 2 to the pressure compensation chamber 19 proper is thereby provided, which path enables through the openings 20 arranged in the electrode cup-shaped member 17 a free access of air from the one space to the other. The hollow space 16 is closed in the central portion of the rear wall of the case by the contact nipple 13. This contact member is provided with a bore 21 which is closed by a screw 22 and enables after the loosening of the screw the fastening of a control gauge, for instance, of a manometer or the like for testing the pressure compensation chamber for air-tightness.

In this manner, it is possible to test such pressure compensation chambers for air-tightness without impairing the construction of such a microscope.

OTTO SOLDAN.