June 16, 1931. A. VON SUCHORZYNSKI 1,810,307

DIAPHRAGM FOR SOUND REPRODUCTION

Filed March 31, 1927

Fig. 1.

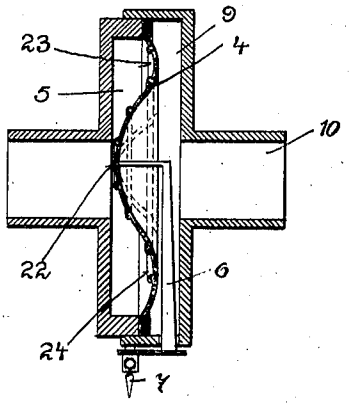
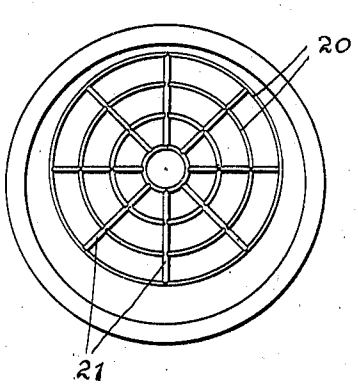


Fig. 2.



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by [illegible]
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UNITED STATES PATENT OFFICE

ANTON VON SUCHORZYNSKI, OF BRESLAU-BISCHOFSWALDE, GERMANY

DIAPHRAGM FOR SOUND REPRODUCTION

Application filed March 31, 1927, Serial No. 179,997, and in Germany August 28, 1926.

The invention consists in a cup-shaped diaphragm the surface of which is subdivided by intersecting circular and radial ribs into small sections, characterized in that the vertex of the cup-shaped diaphragm is eccentric to the diaphragm edge so that the whole diaphragm surface is subdivided into convex and concave shaped segments of different sizes.

Reference will be made in the accompanying drawings:—

Figure 1 shows a vertical cross section through the diaphragm,

Figure 2 shows the diaphragm in plan view seen from the right side of Fig. 1.

The diaphragm has circular ribs 20 and radial ribs 21. According to the invention the circular ribs 20 are eccentrically arranged to the centre of the diaphragm so that the several oscillation surfaces formed by the radial-ribs are of different sizes. The rim 23 of the diaphragm is concave and the central portion of the same is convex, the concave portion 23 of the diaphragm having a shorter radius than the concave portion 24 of the same so that the several oscillation-surfaces or sections, formed by the intersecting ribs, are not only of different sizes but also of different curvatures. The diaphragm is of a shape similar to that of the tympan of the human ear and, owing to this shape, the natural tone of the diaphragm is damped almost completely so that the diaphragm cannot oscillate unduly even when oscillations are induced which are close to the natural oscillations of the diaphragm.

I claim:—

A cup-shaped diaphragm for sound receiving or sound reproducing device, comprising in combination a cup shaped diaphragm, intersecting circular and radial ribs on the cup-shaped surface of said diaphragm subdividing said surface into small sections the vertex of the cup-shaped diaphragm being eccentric to the diaphragm edge, said intersecting circular and radial ribs subdividing the whole diaphragm surface into convex and concave shaped segments of different sizes.

In testimony whereof I affix my signature.

ANTON VON SUCHORZYNSKI.