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Pedersen et al.

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(54) **HEARING DEVICE COMPRISING A BEAMFORMER FILTERING UNIT FOR REDUCING FEEDBACK**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(Continued)

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(Continued)

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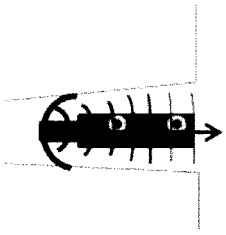
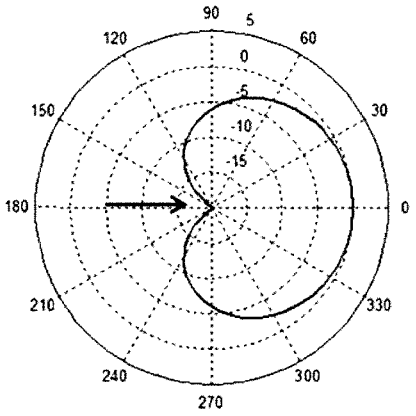
(57) **ABSTRACT**

A hearing device comprises an ITE-part adapted for being located at or in an ear canal of the user comprising a housing comprising a seal towards walls or the ear canal, the ITE part comprising at least two microphones located outside the seal and facing the environment, and at least one microphone located inside the seal and facing the ear drum. The hearing device may comprise a beamformer filter connected to said at least three microphones comprising a first beamformer for spatial filtering said sound in the environment based on input signals from said at least two microphones facing the environment, and a second beamformer for spatial filtering sound reflected from the ear drum based on said at least one electric input signal from said at least one microphone facing the ear drum and at least one of said input signals from said at least two microphones facing the environment.

18 Claims, 10 Drawing Sheets

Basic principle: Two microphones spaced 7-8 millimeters apart
- signal processing optimized for cancellation of in-ear feedback





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See application file for complete search history.

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