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Jenkins

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(54) **CUSTOM MICROPHONES CIRCUIT, OR LISTENING CIRCUIT**

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A61F 11/14	(2006.01)
G10K 11/178	(2006.01)
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CPC ***A61F 11/14*** (2013.01); ***G10K 11/178*** (2013.01); *A61F 2011/145* (2013.01); *G10K 2210/1081* (2013.01); *G10K 2210/3014* (2013.01); *G10K 2210/3039* (2013.01)

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See application file for complete search history.

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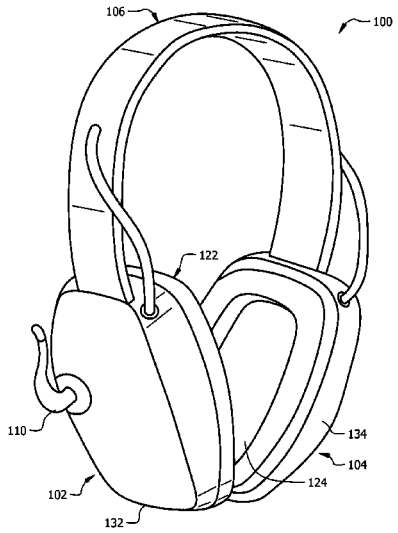
(57) **ABSTRACT**

Embodiments of the disclosure include hearing protection earmuffs, which generally might have two earcups providing passive noise reduction (e.g. an effective NRR to protect a user from a damaging external noise environment). Disclosed embodiments include systems and methods for transmitting external sounds to a speaker within the earcup, blocking transmission of sounds that are higher than a hearing protection threshold, amplifying sounds that are below the hearing protection threshold, and reducing or filtering undesirable background sounds by determining the frequency of the transmitted sounds.

20 Claims, 3 Drawing Sheets