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## Over-the-Counter (OTC) Hearing Aid Advancements

Tech ID: 33741 / UC Case 2024-971-0

### BRIEF DESCRIPTION

This technology introduces innovative methods to significantly improve the performance and accessibility of OTC hearing aids for individuals with mild-to-moderate hearing loss.

### FULL DESCRIPTION

The technology encompasses the application of advanced hearing aid front-end processing, such as directional microphones and multi-channel noise reduction algorithms, to enhance OTC hearing aids. It also includes a novel fitting method that simplifies the adjustment process for users, ensuring that sounds are audible and comfortable. Furthermore, the integration of smartphones and True-Wireless-Stereo (TWS) devices, alongside artificial intelligence (AI), offers opportunities to further revolutionize hearing aid functionality and user experience.

### SUGGESTED USES

- » Hearing aids for adults with perceived mild-to-moderate hearing loss.
- » Smartphone and True-Wireless-Stereo (TWS) earbud applications designed to function as personal hearing amplification devices.
- » Artificial intelligence (AI)-powered devices and applications to enhance speech recognition and noise cancellation in hearing aids.
- » Healthcare solutions aimed at preventing or delaying cognitive decline and dementia through early hearing loss intervention.

### ADVANTAGES

- » Improved speech intelligibility and sound quality for users with mild-to-moderate hearing loss.
- » Simplified fitting process which allows users to adjust hearing aids without professional audiograms.
- » Utilization of existing consumer electronics to enhance accessibility and affordability of hearing aids.
- » Incorporation of AI to solve complex auditory challenges.

### PATENT STATUS

Patent Pending

### RELATED MATERIALS

### CONTACT

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### OTHER INFORMATION

### CATEGORIZED AS

- » **Medical**
- » **Devices**

### RELATED CASES

2024-971-0

» Chung, K., Zeng, F.-G. (2024). Over-the-counter hearing aids: implementations and opportunities. *Frontiers in Audiology and Otology*, 2.

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