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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,

Petitioner,

v.

GUI GLOBAL PRODUCTS, LTD.,

Patent Owner.

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Case IPR2021-00473

Patent 10,589,320

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PATENT OWNER'S ORAL HEARING DEMONSTRATIVES



*APPLE, INC.,  
Petitioner*

v.

*GUI GLOBAL PRODUCTS, LTD.,  
Patent Owner*

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IPR2021-00471, -00472, -00473

Demonstratives of Patent Owner GUI Global Products, Ltd.

Hearing Date: May 19, 2022

**Lee's inductive charging, especially the "dual" coil inductive charging, is not a suitable alternative to Gundlach's conductive**



Petitioner uses hindsight to combine Lee's Fig. 12 dual purpose transducer coil embodiment to create a reason for Gundlach's clamshell case (which protects Gundlach's design). The result is a combination that is highly undesirable and violates Gundlach's design goals, requiring larger size and weight, and with its increased cost and complexity.

The testimony of Gwee's expert, Dr. Toliyat, whose vast expertise in the area of wireless charging technology, contravenes, debunks and outweighs any alleged motions to combine proffered by Lee.

Petitioner's new theories, each made for the first time in its Reply, as well as new evidence presented in its Reply, in an effort to rebut Dr. Toliyat's reasoned analysis. These new theories and evidence are prejudicial in a Reply, and they should be disregarded.

## Gundlach requires a highly compact form factor for storing and charging the headset and case/cradle using

[0002] The present invention relates to a device that when in a first configuration, such as when expanded, becomes a wireless mono or stereo headset and when in a second configuration, such as when collapsed, stores and charges in a host device such as a laptop computer or cell phone.

[0006] Most portable and handheld computers have expansion slots built-in such as the ExpressCard™ or PC Card slots. The slots may conform to form and protocol standards that may allow third party vendors to create interchangeable accessory devices. Expansion cards may allow the user to increase a device's memory or add different types of communication interfaces. Due to the rise in popularity of the USB interface and the subsequent migration of the accessory market to that interface, most PC card slots sit empty in laptops. Many slots have power that can be used to charge battery operated devices as well as high speed communications buses to interchange data.

[0007] An aspect of the present disclosure relates to a wireless device. The wireless device may include a housing, a microphone, a transceiver, and a speaker which directs sound through an earpiece movably affixed to said housing, wherein at least a portion of the earpiece may be configured to fit within a user's ear. In addition, the wireless device may have a physical envelope which may be defined by a length, width and thickness and the earpiece, in an expanded configuration, may be capable of expanding the physical envelope in at least one direction. In another aspect of the present disclosure, the wireless device may also assume a form factor of a card capable of being inserted into a host device.

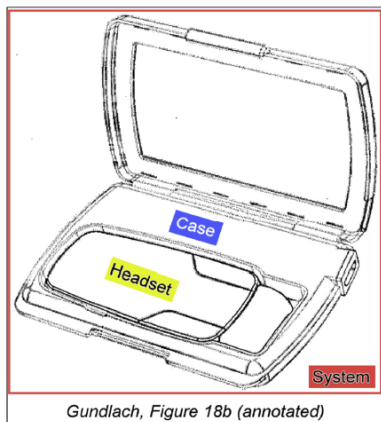
[0056] In an exemplary embodiment the device may include an articulating ear piece that when expanded may fit over the ear. When collapsed the earpiece may be situated in a plane with the housing of the headset creating a profile with a thickness of, e.g., about 5 mm or less. The relative shape may allow the headset to be stored and charged in a portable cradle or with a mini USB charger. The portable cradle may be a holder, clip, case or card that may fit into a standard expansion slot conforming to any expansion slot standard including, for example, PCMCIA, ExpressCard, and ExpressCard34, etc. Additionally a unique slot or opening may be designed into a laptop or cell phone or any other communication device that may utilize a speaker and microphone in a phone to accommodate such as a wireless headset.

[0057] Expanding on the above, the overall size and form factor of the headset may be designed to accommodate or fit into the form factor of a standard expansion slot. For example, the device itself may be 24 mm×60 mm×5 mm when folded for storage purposes. A 34 mm×75 mm×5 mm headset may be provided which may accommodate and fit within the size of a standard Expresscard 34 card. Such device may fit into the 34 mm Expresscard slot for storage and charging inside a portable computer. Once again, it should be appreciated that different form factors are also contemplated and may include the ExpressCard 54 or PCMCIA form factors as a form factor that may be later specifically developed for such a wireless device. Furthermore, the device itself may be relatively light in weight. An exemplary device may weigh less than 20 grams and in certain embodiments, less than 10 grams.

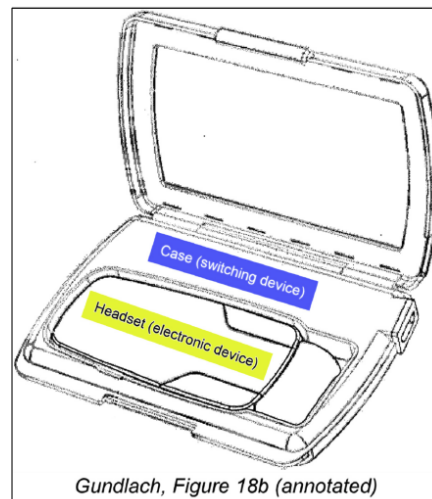
## The Petition advanced a specific configuration for an alleged Gundlach system, including the geometry of the devices depicted in the asserted “system”

For example, the Petition states and depicts the following:

In the embodiment of Figures 18a-18b (below), Gundlach’s *system* includes a wireless headset stored in a clamshell charging case. (APPLE-1005, [0080].) This pair of devices that operate together to implement predetermined functionality—e.g., charging and storing—is consistent with a POSITA’s understanding of a *system*. (APPLE-1003, ¶47 (citing APPLE-1025; APPLE-1026).)



Gundlach-Lee satisfies [1a]. Gundlach, for example, provides a portable charging case (*portable switching device*) coupled to a wireless headset (*portable electronic device*). (APPLE-1003, ¶48.)



Pet., 7.

The wireless headset depicted, described and relied upon in the Petition is the same as the headset depicted in Gundlach. *E.g.*, Ex. 1005, Figs. 1, 2a-f, 3a-b, 4a-b, 5a-b, 6a-d, 7a-b, 8a-b, 9a-b, 10a-b, 11a-b, 12a-b, 13a-b, 14a-b, 15a-b, 16a-b, 17b-c, and 18a-b; Pet., passim.

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