## UNITED STATES PATENT AND TRADEMARK OFFICE

## **BEFORE THE PATENT TRIAL AND APPEAL BOARD**

APPLE INC., Petitioner,

v.

KOSS CORPORATION, Patent Owner.

CASE: IPR2021-00381 U.S. PATENT NO. 10,491,982

## **DECLARATION OF NICHOLAS S. BLAIR**

**DOCKET A L A R M** Find authenticated court documents without watermarks at <u>docketalarm.com</u>. I, Nicholas S. Blair, declare as follows:

## I. BACKGROUND

1. I am the Director of Product for Koss Corporation ("Koss"). I have been employed by Koss since 2013. My prior position at Koss was Senior Industrial Designer.

- 2. Prior to my employment at Koss, I worked at:
  - RedFusion Studios ("RedFusion") from 2009 to 2013;
  - Brooks Stevens Inc. from 2006 to 2010;
  - Discovery Channel's Smash Lab from 2007 to 2008;
  - Beyond Design, Inc. in 2006;
  - Brunswick Corporation in 2005 to 2006; and
  - Design Concepts from 2003 to 2005.

3. I received a Bachelor's in Fine Arts from the Milwaukee Institute of Art & Design in 2001, and I studied architecture at the University of Wisconsin-Milwaukee.

4. My professional career has focused on designing products for consumers. Through my employment at both Koss and RedFusion, a significant focus of my work has been on the design of earphones. I am familiar with the design concepts and issues related to all types of earphones, including earbuds, in-ear, onear, and over-ear earphones. I have devoted a large portion of my professional career researching human factors, ergonomics, and human biology as it relates to delivering personal audio in a safe, reliable, and comfortable manner. A core directive, while employed at both Koss and RedFusion Studios, has been to collect expert knowledge in these areas and synthesize the related findings into cohesive personal listening solutions. Ergonomic mockups, CAD simulations, and material-targeted prototyping are all utilized to confirm proper fit, feel, and function of all headphones and earphones during their development phases. Headphone and earphone models that I have developed while under the employment of Koss and RedFusion Studios include the Pro4S, Striva Tap, KPH30i, KE7, KEB25i, KEB9i, and KPH14, among others.

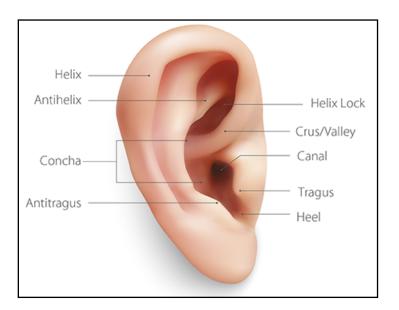
5. I am an inventor of eleven U.S. patents related to consumer audio devices: Patent Nos. 10,136,210; 10,959,014; 10,531,176; 10,785,550; 10,856,059; 9,628,880; 8,971,555; 10,291,972; 8,861,770; D687417; and 8,737,668.

6. I make this declaration to address specific issues in the "Declaration of Dr. Jeremy Cooperstock" in IPR2021-00381 for U.S. Patent 10,491,982 ("'982 Patent"). In preparing this declaration I reviewed the Declaration of Dr. Jeremy Cooperstock (hereinafter "Cooperstock Declaration," which I understand is exhibit APPLE-1003 in IPR2021-00381), published U.S. Patent Application Pub. No. 2008/0076489 to Rosener et al. (hereinafter "Rosener," which I understand is exhibit APPLE-1004 in IPR2021-00305), published U.S. Patent Application Pub. No.

2008/0166001 to Hankey et al. (hereinafter "Hankey," which I understand is exhibit APPLE-1005 in IPR2021-00381), and U.S. Patent No. 8,031,900 to Dyer et al. (hereinafter "Dyer," which I understand is exhibit APPLE-1006 in IPR2021-00381).

#### II. OPINIONS

7. The external anatomy and structure of a human ear is represented in Diagram 1 below. As shown in Diagram 1, a tragus is defined by a ridge of cartilage in front of an external opening of an ear canal. A ridge of cartilage located opposite the tragus defines an antitragus. Just outside of the opening of the ear canal, a bowlshaped cavity represents a concha. The ear canal narrows inwardly from the concha and curves away from a straight line. A heel, also called an intratragal notch, is defined between the tragus and the antitragus at the bottom of the concha bowl.



**Diagram 1. Ear anatomy.**<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> https://www.westone.com/store/hearing\_health\_care/ear-anatomy

8. Not depicted in Diagram 1 above, but a term that is used in Rosener, is "pinna." The pinna is the visible portion of the outer ear.

9. Figure 5 of Rosener, reproduced below, depicts a user wearing a pair of wireless earphones 502, 504. Each wireless earphone is "in the form of an earbud designed to fit *in the concha* of the pinna of the user's ear." APPLE-1004, ¶[0030] (emphasis added). The first and second wireless earphones 502, 504 have a securing mechanism to help maintain each earphone 502, 504 on the user's ears. The securing mechanism of the first and second earphones 502, 504 in Figure 5 consists of (1) the earbud in the concha of the pinna of the user's ear and (2) a downwardly-extending member that extends from the earbud portion of the earphone. The downwardly-extending members are not numbered with a reference number in Rosener's Figure 5, but the reproduced Figure 5 is annotated to identify the downwardly-extending members.

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