

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NATUS MEDICAL INC., NATUS NEUROLOGY INC.,
EMBLA SYSTEMS LLC, and EMBLA SYSTEMS LTD.,
Petitioner,

v.

NOX MEDICAL EHF,
Patent Owner.

Case IPR2016-01822
Patent 9,059,532 B2

Before ERICA A. FRANKLIN, SUSAN L. C. MITCHELL, and
AMANDA F. WIEKER *Administrative Patent Judges*.

MITCHELL, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

This is a final written decision in an *inter partes* review of claims 1–9 and 13 of U.S. Patent No. 9,059,532 B2 (Ex. 1001, “the ’532 patent”) entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons set forth below, we determine that Petitioner has not shown, by a preponderance of the evidence, that claims 1–9 or 13 of the ’532 patent are unpatentable under 35 U.S.C. § 103(a). *See* 35 U.S.C. § 316(e).

A. Procedural History

Petitioner Natus Medical Inc., Natus Neurology Inc., Embla Systems LLC, and Embla Systems Ltd. (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–9 and 13 (the “challenged claims”) of the ’532 patent. *See* 35 U.S.C. §§ 311–319. Petitioner relied upon a Declaration of Dr. Justin C. Williams (Ex. 1002) in support of its Petition. *See* Pet. 2–63. Patent Owner Nox Medical Ehf (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Pursuant to 35 U.S.C. § 314(a), on March 23, 2017, we instituted an *inter partes* review of challenged claims 1–9 and 13 to determine if the claims are unpatentable under 35 U.S.C. § 103 as obvious over the combination of McIntire and Kristbjarnarson or Linville in further view of Archer, Caldecott, Uehara, Abizaid, or Orewiler. Paper 9, 26 (“Dec.”).

Patent Owner filed its Patent Owner Response (Paper 26, “PO Resp.”), along with a Declaration of Mr. Alan L. Oslan (Ex. 2013) to support its positions. Petitioner filed a Reply (Paper 34, “Reply”) to the Patent Owner Response. With the Board’s authorization (*see* Paper 38), Patent Owner filed a Sur-Response on Objective Evidence of Nonobviousness. Paper 41 (“Sur-Response”).

Both Petitioner and Patent Owner each filed three motions to seal various papers and exhibits. *See* Papers 23, 33, 37, 42, 49, 53. Patent Owner also filed a Motion to Exclude certain exhibits. Paper 43.

An oral hearing was held on December 14, 2017. A transcript of the hearing is included in the record. Paper 57 (“Tr.”).

B. Related Proceedings

The parties indicate that the ’532 patent was asserted against Petitioner in *Nox Medical Ehf. v. Natus Neurology Inc.*, Civ. Action No. 15-709-RGA (D. Del. 2015). Pet. 1; Paper 5, 2.

C. The ’532 Patent (Ex. 1001)

The ’532 patent involves a belt connector for use on a human or animal that electrically connects an electrode belt to a biometric device for measuring biosignals, such as cardiographic measurements, or for performing respiratory inductive plethysmography. *See* Ex. 1001, Abst., 1:5–8, 1:22–24, 2:20–23. Such a belt connector is preferably made from one single piece of “a molded plastic frame having a front side and a rear side, the frame having a receiving hole, having radial flexibility to function as a female snap button fastener for receiving and fastening on the front side of the frame a male snap protrusion.” *Id.* at 1:24–32. The radial flexibility is further described as being achieved by one or more slots formed by one or more elongated members “having flexibility transverse to its longitudinal axis (e.g. by being sufficiently thin), thus imparting flexibility to the width of the hole.” *Id.* at 3:6–10.

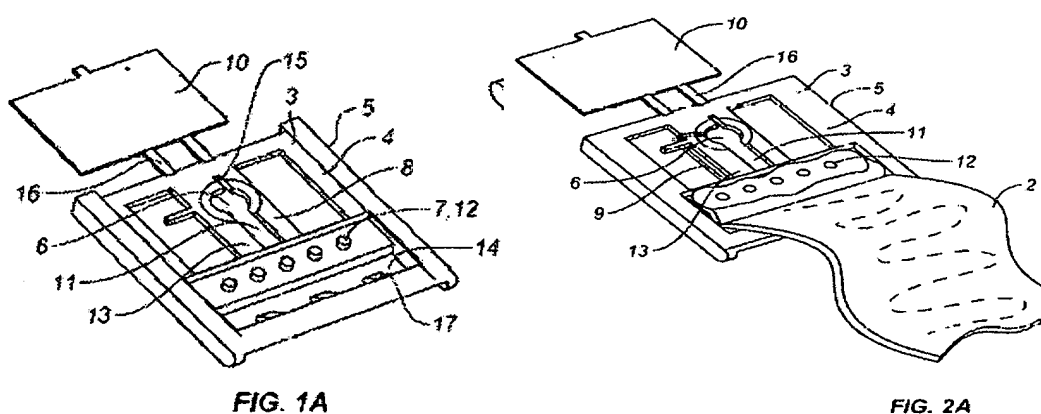
The ’532 patent further describes

fastening means for fastening to the frame a belt end of said electrode belt, and a member adjacent to said snap fastener

receiving hole to engage an electrode wire end electrically connected to said belt such that said wire end is in electrical contact with said hole, either by extending into the hole or coming in electrical contact e.g. through a bridging conductor, with a conducting male snap fastener inserted in said receiving hole.

Id. at 1:33–40, *see id.* at 3:16–19.

Figures 1A and 2A, set forth below, and their descriptions as set forth in the '532 patent provide further elucidation concerning the claimed electrode belt and belt connector.



Figures 1A and 2A depicted above show different embodiments of the belt connector. *See id.* at 4:55–57, 4:64–65. Specifically, Figures 1A and 2A show the following:

[A] biometric belt connector (1) is electrically connected to an electrode belt (2). The connector (1) may comprise a molded plastic frame (3) having a front side (4) and a rear side (5), a shaped circular or semi-circular hole (6) with radial flexibility to function as a female snap button fastener, fastening means (7) which comprise a ridge member (12). . . . The frame (3) may include two members (8, 13) adjacent to said hole (6), the two members (8, 13) forming a slot (11) extending from the hole and a second slot (15) across from the first slot (11).

The elongated members and slots provide the hole with sufficient flexibility (i.e. elasticity in the width of the hole) to

function as a female snap fastener. The member (13) also functions to engage an electrode wire end (9) from the belt end electrically connecting the belt with the hole and which comes in electrical contact with a conducting male snap fastener inserted in said hole. The connector further comprises a belt slot (14) with teeth members or pins (17), through which slot a loop of said belt (2) can be inserted such that it is held by the teeth/pins when pulled back, to adjust the length of the belt.

The connector further comprises a shield member (10) which may be molded in one piece with the frame (3) and joined to the frame with foldable hinges (16) such that the shield member can be folded over to cover the rear side of the hole and wire end.

Id. at 5:4–33 (cmphases omitted).

D. Illustrative Claims

Of the challenged claims, claim 1 is the only independent claim of the '532 patent. The remaining challenged claims 2–9 and 13 depend directly or indirectly from claim 1. Claim 1 is illustrative of the challenged claims and recites (with pertinent portions emphasized):

1. An electrode belt and a belt connector for electrically connecting a conductor of the electrode belt to a male portion of a snap connector electrode connected to a biometric device, the belt connector comprising:
 - a molded plastic frame including a receiving hole having radial flexibility, the receiving hole being configured to function as a female snap button fastener for receiving and fastening the frame to a protrusion of the male portion of the snap connector electrode,
 - a fastener configured to fasten the frame to a first end of said electrode belt, and
 - an engaging member adjacent to said receiving hole, the

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