

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMERICAN NATIONAL MANUFACTURING INC.,
Petitioner,

v.

SELECT COMFORT CORPORATION,
Patent Owner.

Case No. IPR2019-00500
Patent No. 9,737,154

**DECLARATION OF DR. WILLIAM C. MESSNER
IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE**

TABLE OF CONTENTS

I.	BACKGROUND	3
II.	QUALIFICATIONS	4
III.	RELEVANT FIELD AND LEVEL OF ORDINARY SKILL IN THE ART	6
IV.	MATERIALS REVIEWED	8
V.	THE UNDERSTANDINGS APPLIED TO MY ANALYSIS.....	10
VI.	BRIEF SUMMARY OF THE ‘154 PATENT AND PRIOR ART.....	14
	A. The ‘154 Patent	14
	B. Summary of the Asserted Prior Art.....	21
	1. Gifft.....	21
	2. Mittal.....	26
	3. Pillsbury	34
	4. Ebel	36
VII.	Claim Construction.....	37
	A. “Determining”	39
VIII.	NON-ANALOGOUSNESS.....	43
IX.	NO MOTIVATION TO COMBINE.....	45
	A. Conclusory Motivation to Combine.....	46
	B. There is No Motivation to Combine Gifft and Mittal.....	47
	1. Combining Gifft and Mittal Would Slow Down the Pressure Adjustment Cycle of Gifft.	48
	2. Would Teach Away or Change the Principle of Operation.....	50

C.	There is No Motivation to Combine Gifft-Mittal with Pillsbury or Ebel.....	56
X.	IMPERMISSIBLE HINDSIGHT	58
XI.	PETITIONER FAILS TO IDENTIFY EACH LIMITATION OF THE CLAIMS IN THE ASSERTED ART	61

I. BACKGROUND

I, William C. Messner, make the present Declaration in support of the Patent Owner's Preliminary Response rebutting the Petition for *Inter Partes* Review (IPR) of U.S. Patent 9,737,154 (the '154 Patent) (Ex. 1001). To that end, I hereby declare as follows:

1. I am over the age of 21 years and am fully competent to make this Declaration. I make the following statements based on personal knowledge and, if called to testify to them, could and would do so. I have been retained on behalf of Sleep Number Corporation to prepare a declaration that will be used in its Patent Owner's Preliminary Response to the *inter partes* review proceedings related to Patent Number 9,737,154 (referred to as the "154 Patent"), and to opine regarding the applicability of prior art references and arguments presented by petitioner. My fee is not contingent on the outcome of any matter or on any of the technical positions that I explain in this declaration. I have no financial interest in Sleep Number Corporation or the '154 Patent.

2. This declaration briefly sets forth my background and qualifications to provide my opinion, describes the technology at issue and background of the art, identifies the materials I reviewed to prepare this declaration, and sets forth my understanding of the patent claims at issue and my analysis regarding the application to the patent claims of the prior art provided to me. I reserve the right to supplement

my opinions in the future, to clarify responses where appropriate, and to take into account new information as it becomes available to me.

II. QUALIFICATIONS

3. My qualifications as an expert in the general field of mechanical and electrical engineering are set forth in the paragraphs below and in my *curriculum vitae*, attached as Appendix A.

4. I received a B.S. in mathematics from Massachusetts Institute of Technology (“MIT”) in Cambridge, MA in 1985. I received an M.S. and Ph.D. in mechanical engineering at the University of California, Berkeley in Berkeley, CA in 1989 and 1992, respectively.

5. Following my graduation from MIT, I worked as an engineer at BBN Laboratories in Newport, RI where I developed software for analyzing data from tests of a new torpedo under development for the US Navy. After receiving my Ph.D., I joined the Department of Mechanical Engineering at Carnegie Mellon University (CMU) in 1993. At CMU I held courtesy appointments with the Department of Electrical and Computer Engineering and with the Robotics Institute. There I specialized in control and design for data storage systems, robotics, and microfluidics. I was the leader the of the Servo Control effort at CMU’s Data Storage Systems Center. I had extensive work in robotics including developing flight controls for unmanned air vehicles (UAVs), developing autonomous vehicles for

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.