

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AMERICAN NATIONAL MANUFACTURING INC.,  
Petitioner,

v.

SLEEP NUMBER CORPORATION  
f/k/a SELECT COMFORT CORPORATION,  
Patent Owner.

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Case No. IPR2019-00514  
Patent No. 5,904,172

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

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## I. BACKGROUND

I, William C. Messner, make the present Declaration in support of the Patent Owner's Response rebutting the Petition for *Inter Partes* Review (IPR) of U.S. Patent 5,904,172 ("the '172 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 provide my expert opinion in a declaration that will be used in its Patent Owner's Response to the *inter partes* review of the '172 Patent. Specifically, I have been asked to analyze and opine regarding: (1) the prior art references and arguments presented by Petitioner, (2) the opinions of Dr. Giachetti presented in the Giachetti Report (Ex. 1005), (3) the transcript of Dr. Giachetti's deposition on October 7-8, 2019, and (4) what a person of ordinary skill in the art ("POSITA") would know and understand from the prior art references and the field.

2. I am being compensated at a rate of \$575/hr. My fee is not contingent on the outcome of this or any matter or on any of my opinions. I have no financial interest in Sleep Number Corporation or the '172 Patent.

3. This declaration briefly sets forth my background and qualifications to provide my expert 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 and opinions regarding the application to the patent claims to 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

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

5. 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.

6. 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, among other things, in mechanical design for data storage

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