

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 IPR: IPR2019-00497  
Patent No. 8,769,747

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

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**DECLARATION OF DR. JOSHUA PHINNEY, PH.D., P.E.  
IN SUPPORT OF PETITIONER'S OPPOSITION TO  
PATENT OWNER'S MOTION TO AMEND**

WA 14162379.4

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I, Joshua Phinney, declare as follows:

## I. INTRODUCTION

1. I am a Principal Engineer in the Electrical Engineering and Computer Science practice at Exponent, an engineering and scientific consulting firm headquartered at 149 Commonwealth Drive, Menlo Park, California 94025.

2. I have been retained as an independent expert consultant in this proceeding before the United States Patent and Trademark Office (the “Patent Office”). I am a salaried employee of Exponent. Exponent charges an hourly rate of \$550 plus expenses for my work performed in connection with this case. My compensation is not dependent on the opinions I render or the outcome of this proceeding.

3. I submitted expert declarations in support of American National Manufacturing’s (“ANM”) Petitions for *inter partes* review (IPR) of U.S. Patent Nos. 8,769,747 (“the ’747 patent”) and 9,737,154 (“the ’154 patent”) (Ex. 1007 in each proceeding). I understand that IPRs were instituted in the following proceedings: IPR2019-00497 (for the ’747 patent), and IPR2019-00500 (for the ’154 patent).

4. I understand that Patent Owner Sleep Number Corporation (“PO”) submitted a Motion to Amend in IPR2018-00497 and another Motion to Amend in IPR2019-00500, each providing substitute claims contingent on a finding of

invalidity of the challenged original claim(s). I submit this expert declaration in support of ANM's Oppositions to those Motions to Amend.

## II. QUALIFICATIONS

5. I received a Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology ("MIT") in 2005. I also earned S.M. and B.S. degrees in Electrical Engineering from MIT and the University of Illinois, Chicago ("UIC"), respectively. While at MIT, I worked on the Laser Interferometric Gravitational Wave Observatory (LIGO) experiment, where I designed and tested hydraulic systems for outer-stage seismic isolation of the experimental apparatus. My job responsibilities included the design and testing of a hydraulic manifold and pressure control system, as well as the selection and testing of the pump, motor drive, pressure transducers, and hydraulic spool valves that were components of the pressure control system.

6. After earning my Ph.D., I joined Exponent and have led technical investigations pertaining to portable electronic devices, microcomputers, and electromechanical devices with embedded controllers. My job functions include analyzing hardware and software of these devices to understand their modes of failure, and testifying regarding these devices in legal matters involving patents and trade secrets.

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