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 IPR: Unassigned

DECLARATION OF DR. JOSHUA PHINNEY IN SUPPORT OF *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,737,154

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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 $495 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 understand that this proceeding involves U.S. Patent No. 9,737,154 ("the '154 patent"). I have been asked to consider whether certain references disclose or suggest certain features recited in the claims of the '154 patent. The references I considered are listed in the Appendix to my Declaration, and for convenience I refer to these references using the short names listed in the Appendix. It is my opinion that the references discussed below collectively disclose or suggest all of the limitations recited in claims 1–22 of the '154 patent.

4. I have been informed that the '154 Patent, filed as U.S. Patent Application No. 14/283,675 on May 21, 2014, is a continuation of Application No.

12/936,084, filed on April 4, 2008. The '084 Application is the U.S. National Stage Application of International PCT Application No. PCT/US2008/059409, which was filed on April 4, 2008. I have been informed that the '154 patent is assigned to respondent Select Comfort Corporation ("Select Comfort"), and the respondent has contended that the inventions disclosed in the '154 Patent were conceived at least as early as June 29, 2007.

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.

7. I have testified regarding the software-defined features, internal circuitry, and physical embodiments of electronic equipment.

8. Regarding software, I have reviewed C++, Java, and machine language code for purposes of patent infringement and trade secret misappropriation. I have testified regarding microcomputer software for instrument control as well as embedded software for the control of machines, computer peripherals, tablets, cell phones, and other battery-operated equipment.

9. Regarding electronics, I have testified regarding power electronics in microcomputers, peripherals, machine controllers, and consumer electronics including tablets, cell phones, and portable media players. In addition, I have testified regarding control circuitry and compensation of motion controllers, furnace controllers, pump controllers, voltage regulators, and switched-mode power converters.

10. Regarding the mechanical elements of electronic equipment, I have testified regarding buttons and touch interfaces, connectors, linear and rotary actuators, position-measuring devices, and the design and construction of modular housings for computerized equipment and peripherals. In particular, I have

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