UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOUGHBUILT INDUSTRIES, INC.,
Petitioner,
v.
MERIDIAN INTERNATIONAL CO., LTD.,
Patent Owner.

Case IPR2025-01462
Patent 11,192,689

SUPPLEMENTAL DECLARATION OF GLENN E. VALLEE, Ph.D., P.E. IN SUPPORT OF PATENT OWNER'S RESPONSE TO PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,192,689

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I, Glenn E. Vallee, Ph.D., P.E., hereby declare as follows:

I. INTRODUCTION

1. I have been retained as an expert witness on behalf of Patent Owner Meridian International Co., Ltd. ("Meridian") in the above *inter partes* review ("IPR").

2. I submitted an expert declaration in this matter on May 14, 2026. (**Exhibit 2012**.) It is my understanding that Petitioner has filed Objections to Evidence (Paper 28) wherein Petitioner contends that "Patent Owner has not shown that Dr. Vallee is competent to testify as a witness and he lacks requisite personal knowledge of the subject matter upon which he testifies" because "Patent Owner has not shown that Dr. Vallee is qualified to testify as an expert in the relevant subject matter or that his testimony is based on sufficient facts or data, is the product of reliable principles or methods, or that the testimony will help the Board understand the evidence or determine a fact in issue."

3. I submit the present declaration to further emphasize the evidence already included in my Declaration which makes clear that (a) I am qualified to testify as an expert in the relevant subject matter; (b) my testimony is based on sufficient facts or data and reliable principles or methods; and (c) my testimony will help the Board understand the evidence or determine a fact in issue.

4. I understand that this Declaration accompanies Patent Owner's Response to Petitioner's Objection to Evidence.

II. I AM AN EXPERT IN MECHANICAL ENGINEERING, CONSUMER PRODUCT DESIGN, AND LATCHING MECHANISMS

5. As set forth in more detail in my curriculum vitae (**Exhibit 2013**), I have substantial expertise in the areas of mechanical engineering, consumer product design and development, quality assurance, mechanical testing, and the design of a wide variety of products utilizing methods of mechanical securement and latching. Prior to joining Western New England University, I served as the Director of Engineering and Quality Assurance, Worldwide for the Remington Products Company, L.L.C., in Bridgeport, CT, from 1997 until 2002. Remington Products Company is a major manufacturer of consumer products, including electric shavers, beard trimmers, hair dryers, and hair setters. My responsibilities included directing the activities of Design and Product Engineering, Quality Assurance, and Manufacturing departments in the U.S., U.K., and Asia, responsible for the design and development of international consumer products, and for focusing new product engineering toward continuously improving customer satisfaction through improved product design, performance, and quality.

6. Prior to my employment at Remington Products, I served as the

Manager of the Engineering Laboratories at the Stanley Bostitch Company, now a division of Stanley/Black & Decker. Stanley Bostitch is a leading manufacturer of pneumatic nailers and staplers, a variety of hand tools such as hammer tackers and staplers, and a number of other office products. I was employed by Stanley Bostitch from 1985 until 1997, serving first as a Technician, then Test Engineer, then Product Design/Development Engineer, and was promoted to Manager of the Engineering Laboratories in 1995.

7. During my employment at Stanley Bostitch, I acquired extensive experience in the design and testing of a variety of mechanical, pneumatic, and electromechanical products, including pneumatic fastening tools, electric trackers and staplers, and electric pencil sharpeners. My work as a Technician and then Test Engineer allowed me to acquire experience in conducting and developing test methodologies for all products. My work as a Product Design/Development Engineer involved designing and developing products from conception through manufacture and quality control. Here I designed latching mechanisms for nailer nail magazines, and feed systems.

8. As the Manager of the Engineering Laboratories, I managed the largest of the Engineering Laboratories in Stanley Works and supervised 18 employees. This position required that I coordinate testing and allocate resources to meet

stringent scheduling requirements of the Product Development, Manufacturing, and Marketing departments.

9. As set forth more fully above and in my Declaration (**Exhibit 2012**, ¶¶ 2-6), I am an expert in the field of mechanical engineering. I hold the rank of Professor Emeritus at Western New England University where I was formerly an Associate Professor and Chair of Mechanical Engineering. I have a Ph.D. in Mechanical Engineering from the University of Rhode Island and my Ph.D. dissertation research focused on the use of polymetric materials in pneumatic nailers. As an Assistant then Associate Professor of Mechanical Engineering, I served the university from 2002 to 2025 and taught courses in Mechanical Design, Materials Science, Kinematics, Vibrations, Mechanics of Materials, and a Product Development and Innovation (PDI) course where students design consumer products having commercial potential.

10. As is also set forth fully above and in my Declaration (**Exhibit 2012**, ¶¶ 2-6), I am an expert in the field of consumer product design. As an Assistant then Associate Professor of Mechanical Engineering, I served the university from 2002 to 2025 and taught courses in Mechanical Design, Materials Science, Kinematics, Vibrations, Mechanics of Materials, and a Product Development and Innovation (PDI) course where students design consumer products having commercial potential.

Six utility patents have been issued for student inventions developed in the course, and many products developed were related to the DIY and Industrial markets, including a stackable transportation system for tool storage containers. I have given deposition testimony over 20 times and testified before the ITC twice, all in patent related matters, and I have supported over 20 IPR matters before the PTAB. I have also provided testimony related to a wide variety of products, some of which utilize latching mechanisms, such as reusable beverage bottles, vacuum cleaners, and pneumatic and electric nailers. I am an inventor on nine patents, including an electrical power strip, devices related to hand tools, water purification, pneumatic nailers, and surgical devices. I am a member of the American Society of Mechanical Engineers (ASME member no. 1259837), and I am a licensed Professional Engineer (RI Lic. No. 6765).

11. As is also set forth fully above and in my Declaration (**Exhibit 2012**, ¶¶ 2-6), I am an expert with regard to latching mechanisms. I have for over 20 years taught machine and product design at Western New England University, which involves the design of a wide range of locking and latching mechanisms. In addition, I personally designed a novel hammer tacker utilizing polymeric staples with embedded wires (US Patent No. 10,599,969), and this product utilized a latching mechanism in the staple magazine. Similarly, I am an inventor on two patents related

to fastening tools that issued during this time, U.S. Patent Nos. 5,551,620 and 5,551,621, both of which utilize a latching mechanism in a novel combination triggering system.

12. **Exhibit 2013** is a copy of my curriculum vitae, which further expands on my qualifications and expertise and includes a list of my publications and prior testimony over the past five years.

13. Based on the foregoing, I believe myself to be well-qualified as an expert on the subject matter of U.S. Patent No. 11,192,689, which relates to a latching mechanism used in a consumer product.

III. MY TESTIMONY IS BASED ON SUFFICIENT FACTS OR DATA AND RELIABLE PRINCIPLES OR METHODS

14. As set forth in my Declaration (**Exhibit 2012, ¶¶** 7-24), in preparing my Declaration (**Exhibit 2012**), I reviewed the '689 patent, the Petition (Paper 2), the exhibits to the Petition (**Exhibits 1001-1029**), and Patent Owner's Preliminary Response (Paper 12). In formulating my opinion, I have relied upon my experience, education, and knowledge in the relevant art, and have considered the viewpoint of a person of ordinary skill in the art ("POSA") at the time of the invention (November 27, 2019). I also relied upon applicable legal principles provided to me by counsel to guide my analysis.

15. Because my opinion is based on all of the facts relied upon by

Petitioner, and based on my expert analysis of those facts using my expertise as a mechanical engineer, consumer product design expert, and expert on latching mechanisms, I believe that my testimony is based upon sufficient facts and data and reliable principles and methods.

IV. MY TESTIMONY WILL HELP THE BOARD UNDERSTAND THE EVIDENCE OR DETERMINE A FACT IN ISSUE

16. My declaration includes significant analysis, performed by me, as to why U.S. Patent No. 11,192,689 is neither anticipated nor rendered obvious in light of the art submitted by Petitioner.

17. My declaration reflects my expertise in the field of mechanical engineering, consumer product design, and latching mechanisms. This is a relatively specific expertise, as is evidenced by the fact that Petitioner's expert lacks experience and expertise in consumer product design and latching mechanisms. This specific experience allows me to provide analysis regarding, for example, the motivation to combine references, lacking in Petitioner's analysis.

18. My analysis, contained primarily in ¶¶ 33-220, reflects my expert perspective regarding the asserted art, and demonstrates the bases for my opinion that "I did not find Petitioner's arguments persuasive because (1) the art cited by Petitioner does not teach all of the elements of the claims of the '689 patent; (2) much of the art cited by Petitioner is non-analogous art; and (3) there is no

motivation to combine the art cited by Petitioner." (**Exhibit 2012**, ¶ 7.)

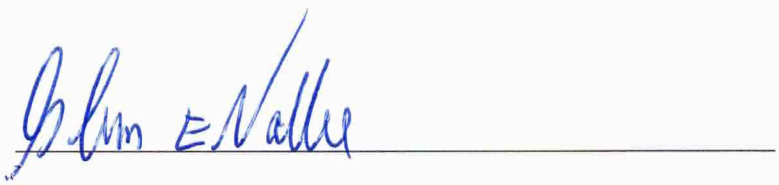
19. My testimony will, therefore, provide the Board with expertise from the perspective of an industry expert to assist the Board in determining whether the art asserted by Petitioner could render the claims of U.S. Patent No. 11,192,689 invalid.

V. CONCLUSION

20. In signing this Declaration, I recognize that this Declaration will be filed as evidence in an *inter partes* review before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in this case and that cross-examination will take place within the United States. If cross-examination is required, I will appear for cross-examination within the United States within the time allotted.

21. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and believe are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on this 3rd day of June, 2026, in Westbrook, CT.



Glenn E. Vallee, Ph.D., P.E.