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The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Katherine Kelly Vidal

DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE



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(12) **United States Patent Rundle**

(10) **Patent No.:** US 11,490,462 B2
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(54) **GROOVED FLOOR UNDERLAYMENT FOR RADIANT HEAT**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 389 days.

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H05B 3/34 (2006.01)

(52) **U.S. Cl.**
CPC **H05B 3/34** (2013.01); **H05B 2203/026** (2013.01); **H05B 2203/032** (2013.01)

(58) **Field of Classification Search**
CPC . H05B 3/34; H05B 3/56; H05B 3/267; H05B 2203/026; H05B 2203/032; H05B 2203/017

See application file for complete search history.

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Primary Examiner — Shawntina T Fuqua

(57) **ABSTRACT**

Disclosed is a floor underlayment system and method for radiant heat, comprising: one half inch tile or other floor underlayment board, a series of grooves cut into the tile or other floor underlayment board, electric resistance heating cable inserted into the series of grooves cut into the tile or other floor underlayment board, and sensor wires inserted into the series of grooves cut into the tile or other floor underlayment board.

7 Claims, 2 Drawing Sheets

