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(54) **ANTI-BACTERIAL AND FLAME-RETARDANT WALL COVERING STRUCTURE**

(58) **Field of Classification Search**
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See application file for complete search history.

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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 220 days.

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(57) **ABSTRACT**

An anti-bacterial and flame-retardant wall covering structure is provided. The wall covering structure includes a fiber substrate, two polyolefin substrates, and an anti-bacterial layer. The two polyolefin substrates are formed on both side surfaces of the fiber substrate to form a sandwich laminate. A polyolefin composition of each of the polyolefin substrates includes a first polyolefin resin material, a second polyolefin resin material, and a flame-retardant additive material. The first polyolefin resin material is a polyethylene resin, and the second polyolefin resin material is a polypropylene resin that includes a propylene block copolymer. Based on a total weight of the polyolefin composition being 100 parts by weight, a content of the propylene block copolymer is not less than 5 parts by weight. The anti-bacterial layer is formed on a surface of the sandwich laminate and includes a fluorine-containing polymer.

(52) **U.S. Cl.**
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