

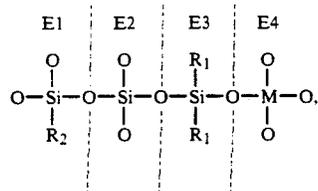
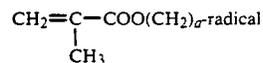


US005112884A

**United States Patent** [19][11] **Patent Number:** **5,112,884****Hanke**[45] **Date of Patent:** **May 12, 1992**[54] **DENTAL FILLING MATERIAL**[75] **Inventor:** **Bernhard Hanke**, Schwalbach, Fed. Rep. of Germany[73] **Assignee:** **The Procter & Gamble Company**, Cincinnati, Ohio[21] **Appl. No.:** **474,413**[22] **Filed:** **Feb. 2, 1990**[51] **Int. Cl.<sup>5</sup>** ..... **A61K 5/01; C08K 3/22**[52] **U.S. Cl.** ..... **523/116; 523/109; 433/228.1; 106/438; 501/8; 501/32; 501/73; 526/241**[58] **Field of Search** ..... **523/109, 116; 433/228.1; 106/438; 501/8, 32, 73; 526/241**[56] **References Cited****U.S. PATENT DOCUMENTS**3,801,344 4/1974 Dietz ..... 106/300  
3,975,203 8/1976 Dietz ..... 106/299*Primary Examiner*—Paul R. Michl*Assistant Examiner*—T. McDonald, Jr.*Attorney, Agent, or Firm*—Kim William Zerby; Douglas C. Mohl; Richard C. Witte[57] **ABSTRACT**

The invention relates to a dental filling material containing at least one polymerizable (meth)-acrylic acid ester, characterized in that it contains 20 to 90% by weight,

calculated on the total composition, of a compound consisting of the structural element E2 and at least one of the structural elements E1 and/or E3 and/or E4 of the general formula

where R<sub>1</sub> denotes a methyl, ethyl, n-propyl, isopropyl or an unsubstituted or CH<sup>3</sup>—C<sub>3</sub>H<sub>7</sub>—substituted phenyl radical, R<sub>2</sub> denotes a CH<sub>2</sub>=CH—, CH<sub>2</sub>=CHCOO(CH<sub>2</sub>)<sub>n</sub>—]oror R<sub>1</sub>, n denotes 0, 1, 2 or 3, and M denotes titanium or zirconium.**6 Claims, No Drawings**