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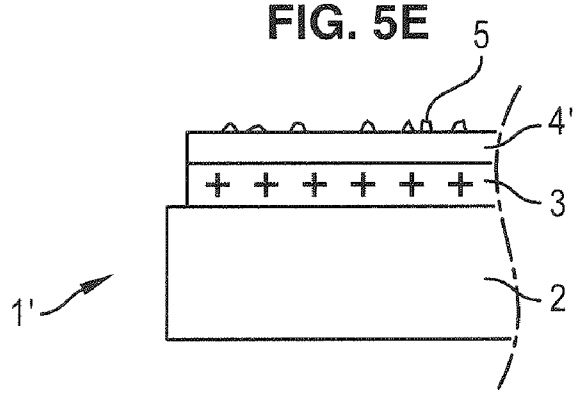
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(54) **Title**: METHOD TO THIN A SILICON-ON-INSULATOR SUBSTRATE

FIG. 5E



(57) **Abstract**: The invention concerns a method to thin an initial silicon-on-insulator SOI substrate, comprising a layer (3) of silicon oxide SiO_2 buried between a silicon carrier substrate (2) and a silicon surface layer. This method is noteworthy in that it comprises the following successive steps consisting of conducting: -thermal oxidation treatment of said initial substrate, to oxidize part of said silicon surface layer, -a first, then a second cycle of etching and cleaning, the first cycle etching being performed so as fully to remove the formed thermal oxide and to lift off all the unstable parts of the edge of said initial substrate, the second cycle etch being conducted to remove from the surface of said thinned substrate the formed polluting particles (5) deposited thereupon, so as to obtain a final SOI substrate (1') whose thinned surface layer (4') forms an active layer.

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