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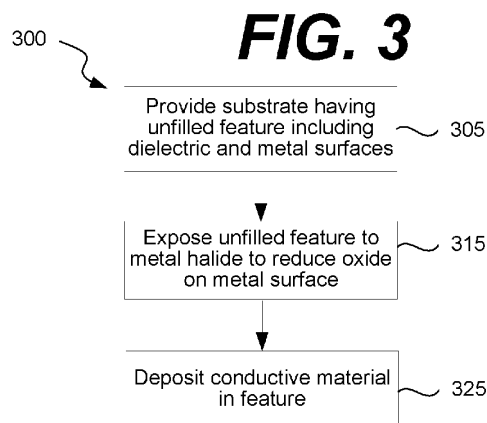
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(54) **Title:** LOW RESISTIVITY CONTACTS AND INTERCONNECTS



(57) **Abstract:** Methods of filling features including metal and dielectric surfaces with conductive materials involve cleaning the metal surfaces with little or no damage to the dielectric surfaces. After cleaning, the feature may be exposed to one or more reactants to fill the feature with the conductive material in an atomic layer deposition (ALD) or chemical vapor deposition (CVD) process. Deposition may be selective or non-selective to the metal surface. In some embodiments, the filled feature is barrier-less, such that the conductive material directly contacts the metal and dielectric surfaces with no interposing barrier or adhesion layer.

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