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(54) Title: SINGLE CRYSTAL DIAMOND MATERIAL

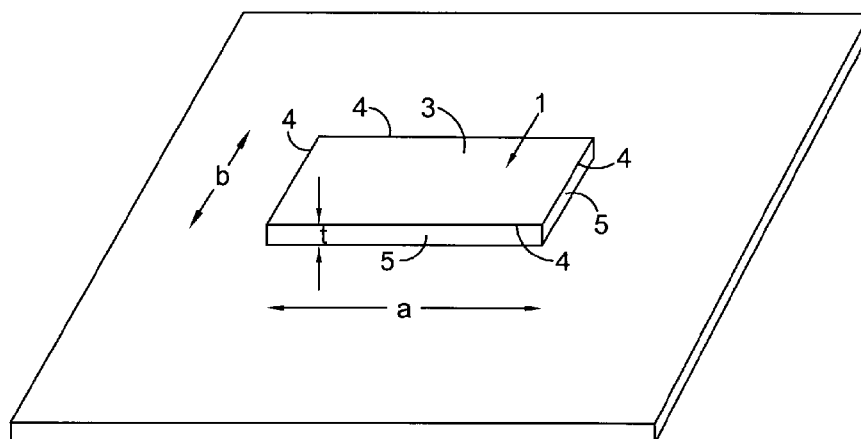


Fig.1

(57) Abstract: A method of producing a grown single crystal diamond substrate comprising: (a) providing a first diamond substrate which presents a (001) major surface, which major surface is bounded by at least one <100> edge, the length of the said at least one <100> edge exceeding any dimension of the surface that is orthogonal to the said at least one <100> edge by a ratio of at least 1.3 : 1; and (b) growing diamond material homoepitaxially on the (001) major surface of the diamond material surface under chemical vapour deposition (CVD) synthesis conditions, the diamond material growing both normal to the major (001) surface, and laterally therefrom.