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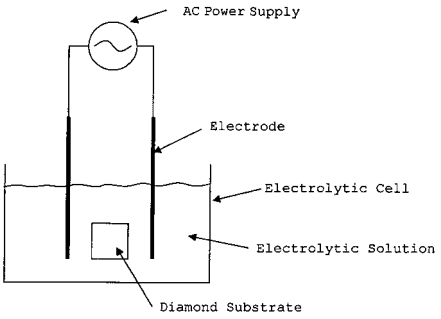
(54) METHOD FOR SEPARATING SURFACE LAYER OR GROWTH LAYER OF DIAMOND

(57) The present invention provides a method for separating a surface layer of a diamond, which comprises implanting ions into a diamond to form a non-diamond layer near a surface of the diamond; and etching the non-diamond layer in the diamond by applying an alternating-current voltage across electrodes in an electrolytic solution; and a method for separating a grown layer of a diamond, which further comprises the step of growing a diamond by a vapor-phase synthesis method, after forming a non-diamond layer according to the above-described method.

The invention is applicable to various single-crystal and polycrystal diamonds. More specifically, even with a large single-crystal diamond, a portion of the single-crystal diamond can be efficiently separated in a reusable form in a relatively short period of time.

FIG.1



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