

Title (en)
HIGH-VOLTAGE GENERATING DEVICE

Publication
EP 0225393 B1 19910306 (EN)

Application
EP 85115398 A 19851204

Priority
US 80131385 A 19851125

Abstract (en)
[origin: EP0225393A1] A high-voltage generating device comprising: an outer case 12; an anvil member 13, a piezoelectric element 2 and a support member 14 which are assembled together and held and fixed in the outer case 12 by means of an adhesive 16; and an inner case 11 slidably received in the outer case 12 and accommodating therein, a striking mechanism including a striker 9 and a striker 9 spring. The improvement comprises that the element mounting space 12b in the outer case 12 has a volume which is at least 2.5 times as large as the volume of the piezoelectric element 2; and the adhesive 16 filling the element mounting space 12b is made of a plastic having a high bonding force and a high hardness. The piezoelectric element together with the anvil member and the support member are rigidly fixed in the outer case, by the adhesive, so that the vibration of the piezoelectric element impacted by the striker is accompanied by resonance vibration of the adhesive and the outer case, the resonance vibration enhancing the vibration of the piezoelectric element and prolonging the period of duration of the vibration. In consequence, a high level of high-voltage energy and, hence, a high ignition energy are obtained such as to permit the manual effort for causing the impact to be reduced.

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