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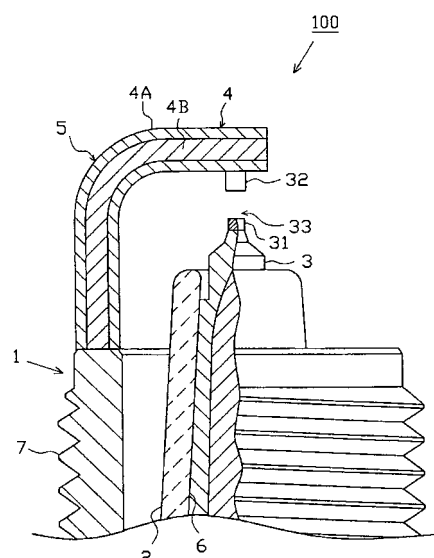
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(54) **Spark plug for use in an internal-combustion engine**

(57) A spark plug 100 is comprised of a metal shell 1, an insulator 2, a center electrode 3 and a ground electrode 4. A rear-end face of the ground electrode 4 is welded to a front-end face of the metal shell 1, and a bent portion 5 located at the intermediated position in the longitudinal direction is bent toward the center of the spark plug 100. The ground electrode 4 assumes a circular-shape with a diameter of 2mm or less whereby an inflow of an air-fuel mixture is not disturbed even when the air-fuel mixture directly flows into a back face of the ground electrode 4. The ground electrode 4 is comprised of an outer layer 4A made of a nickel alloy and an inner layer 4B made of pure copper with an excellent thermal conductivity, in which a ratio of a cross-sectional area of the inner layer 4B to the entire cross-sectional area of the ground electrode 4 is 10% or more to 35% or less. Thus, the spark plug 100 which is excellent in heat sinking ability and can prevent a spring back phenomenon due to a difference in a coefficient of thermal expansion.

Fig. 2





EUROPEAN SEARCH REPORT

Application Number
EP 07 25 1139

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
			H01T
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 12 December 2012	Examiner Bijn, Eric
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 07 25 1139

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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