The United States of America



The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

David J. Kypos

Director of the United States Patent and Trademark Office



(12) United States Patent

Ushikoshi et al.

(10) **Patent No.:** US 7,637,979 B2 (45) **Date of Patent:** Dec. 29, 2009

(54) FABRICATION METHOD OF DIESEL PARTICULAR FILTER ELEMENT

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Subject to any disclaimer, the term of this (*) Notice: patent is extended or adjusted under 35 U.S.C. 154(b) by 171 days.

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Field of Classification Search 55/522–525 See application file for complete search history.

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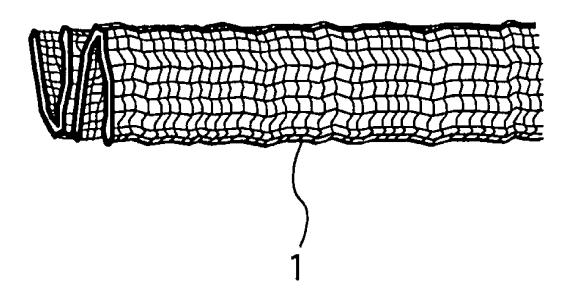
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(57) **ABSTRACT**

A diesel engine exhaust gas filter [8] is manufactured by winding a belt-like wire mesh [1] knitted from a metal wire [2] into a swirl body while being extended in the longitudinal direction and compressing it in the widthwise direction in a molding die. [6].

7 Claims, 10 Drawing Sheets



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