



US006896852B1

(12) **United States Patent**  
**Meiller et al.**

(10) **Patent No.:** **US 6,896,852 B1**  
(45) **Date of Patent:** **May 24, 2005**

(54) **HYDROCARBON BLEED EMISSION  
SCRUBBER WITH LOW RESTRICTION**

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(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 819 days.

(21) Appl. No.: **09/696,988**

(22) Filed: **Oct. 26, 2000**

**Related U.S. Application Data**

(60) Provisional application No. 60/192,917, filed on Mar. 29,  
2000.

(51) Int. Cl.<sup>7</sup> ..... **B01D 53/04**; B01D 53/34;  
F02M 33/02; B01J 20/00; B60L 1/02

(52) U.S. Cl. .... **422/180**; 123/519; 502/416;  
219/202

(58) Field of Search ..... 422/168, 177,  
422/180; 502/417, 427, 436, 180, 518,  
527, 19, 416; 55/523, 524; 219/202, 206;  
392/491; 123/516, 519, 520, 521

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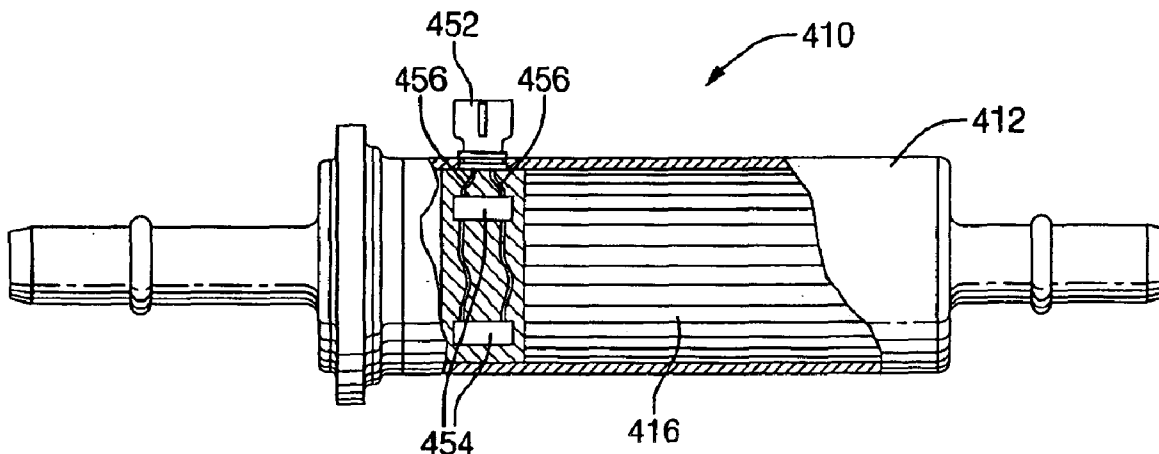
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(57) **ABSTRACT**

A hydrocarbon emissions scrubber for use in an evaporative emissions control system of a motor vehicle includes a scrubber element having an elongate body. The body defines a plurality of passageways for the flow of fluid therethrough. The plurality of passageways are one of coated with or constructed of a sorbent material. The sorbent material is adsorptive of hydrocarbons.

**6 Claims, 5 Drawing Sheets**



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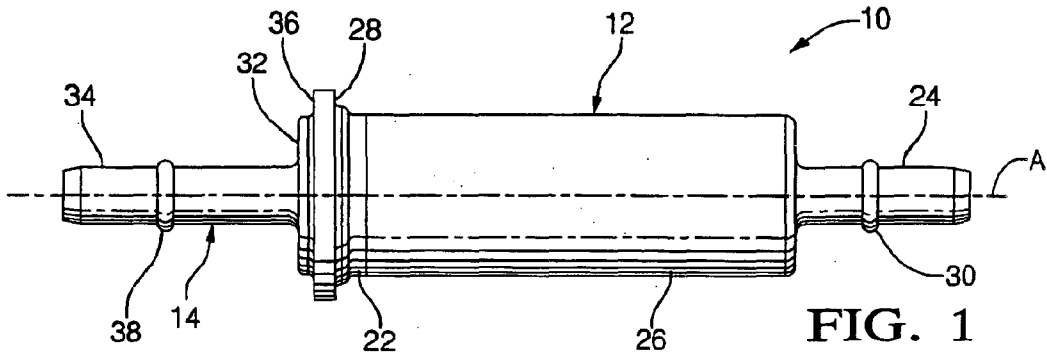


FIG. 1

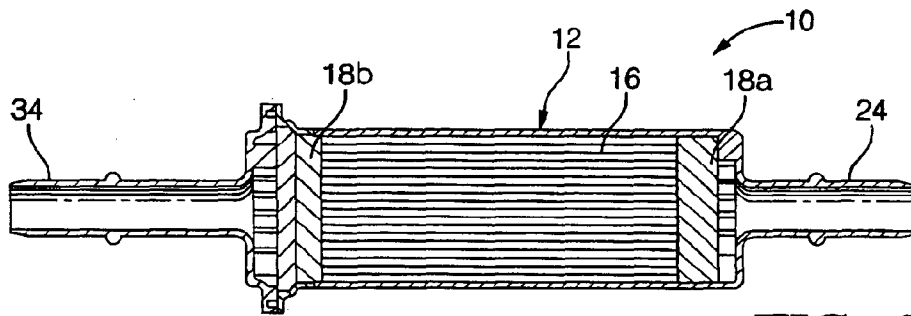


FIG. 2

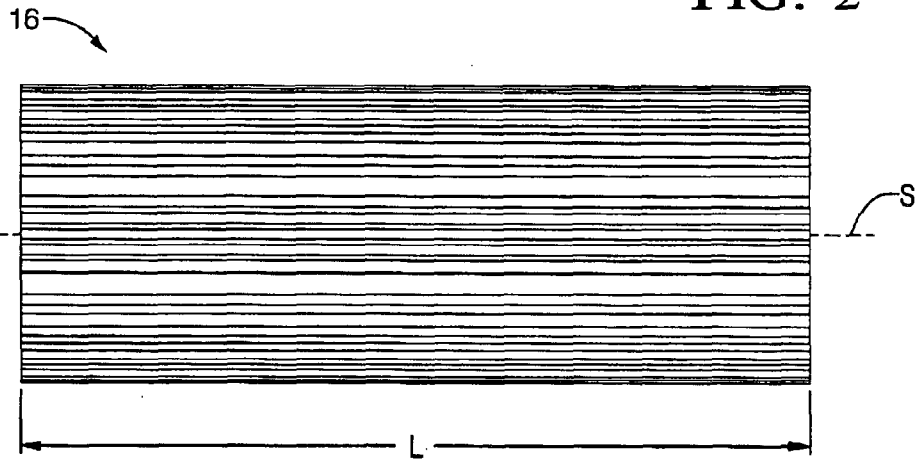


FIG. 3A

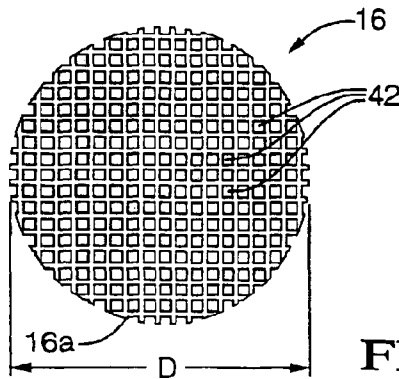


FIG. 3B

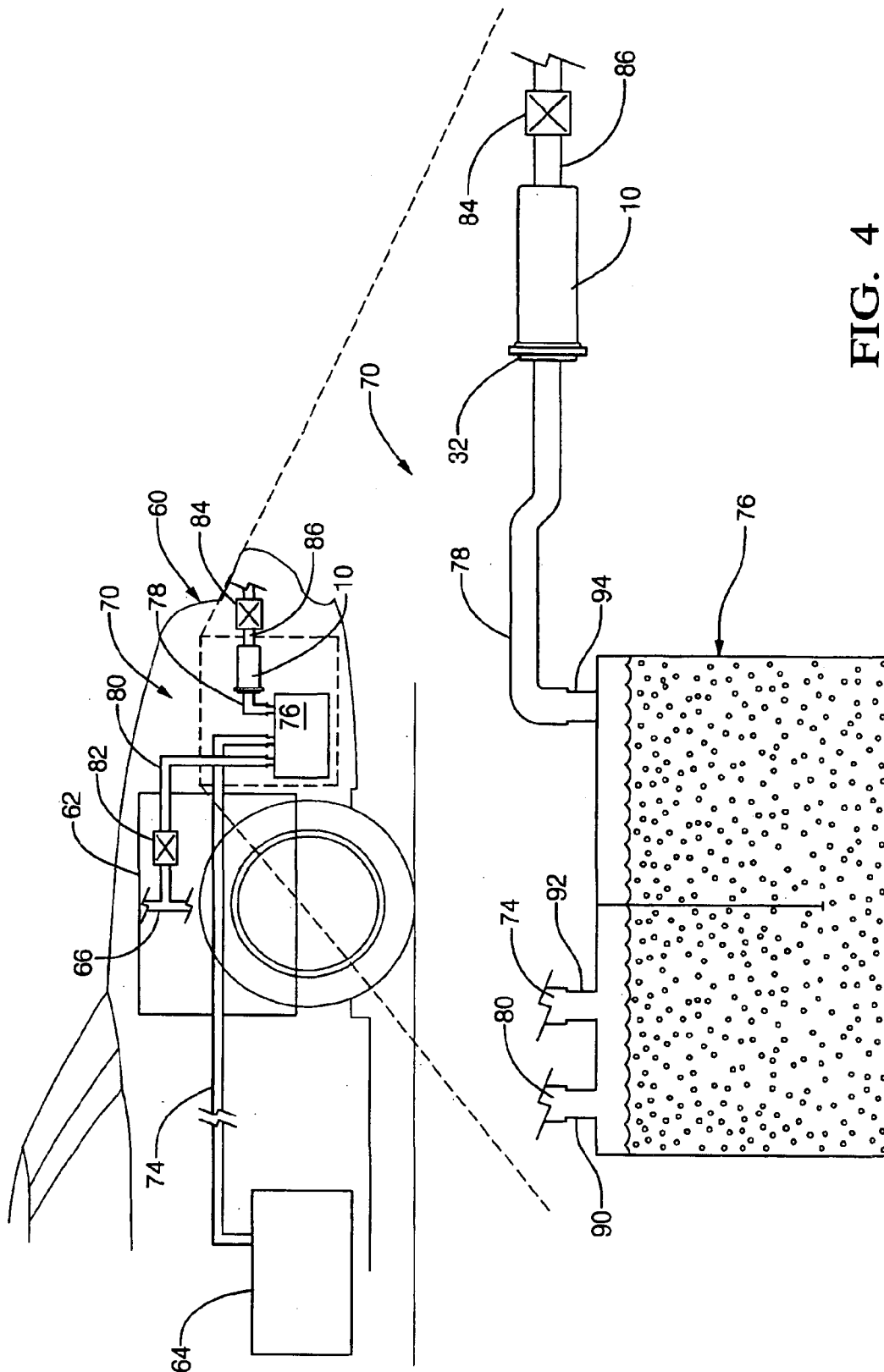


FIG. 4

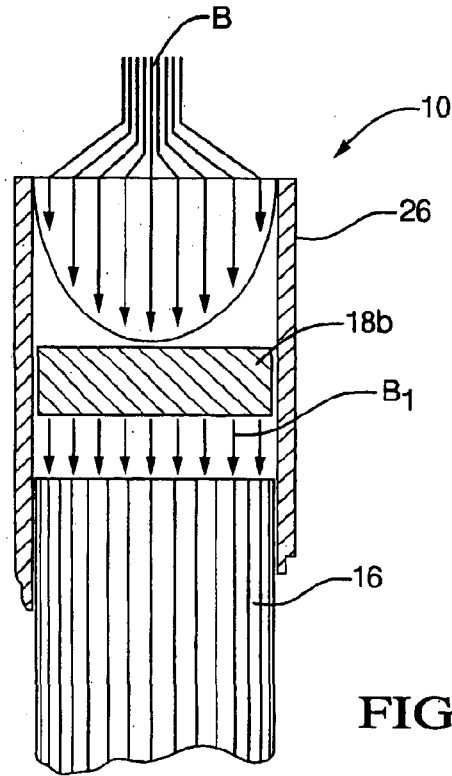


FIG. 5

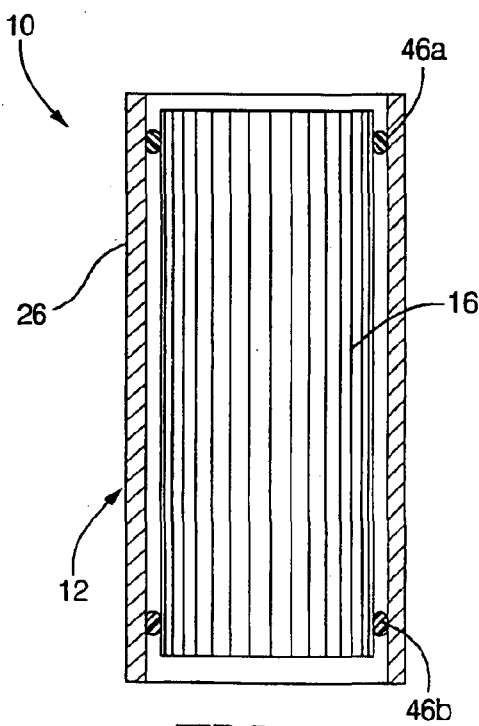


FIG. 6

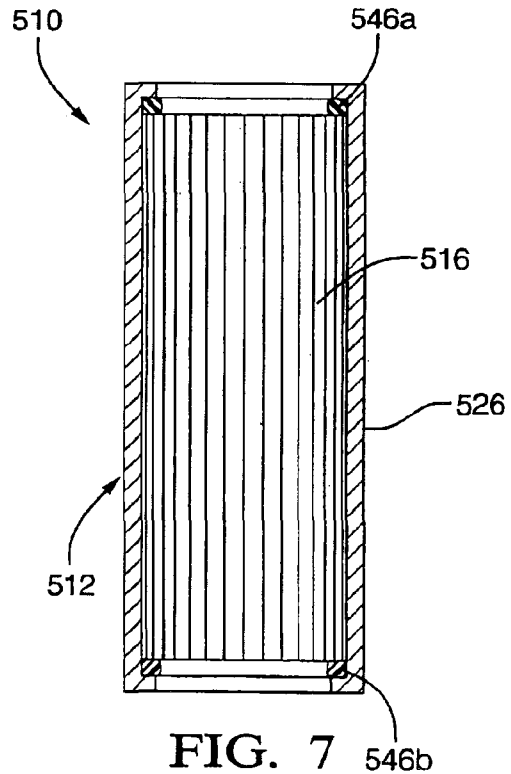


FIG. 7

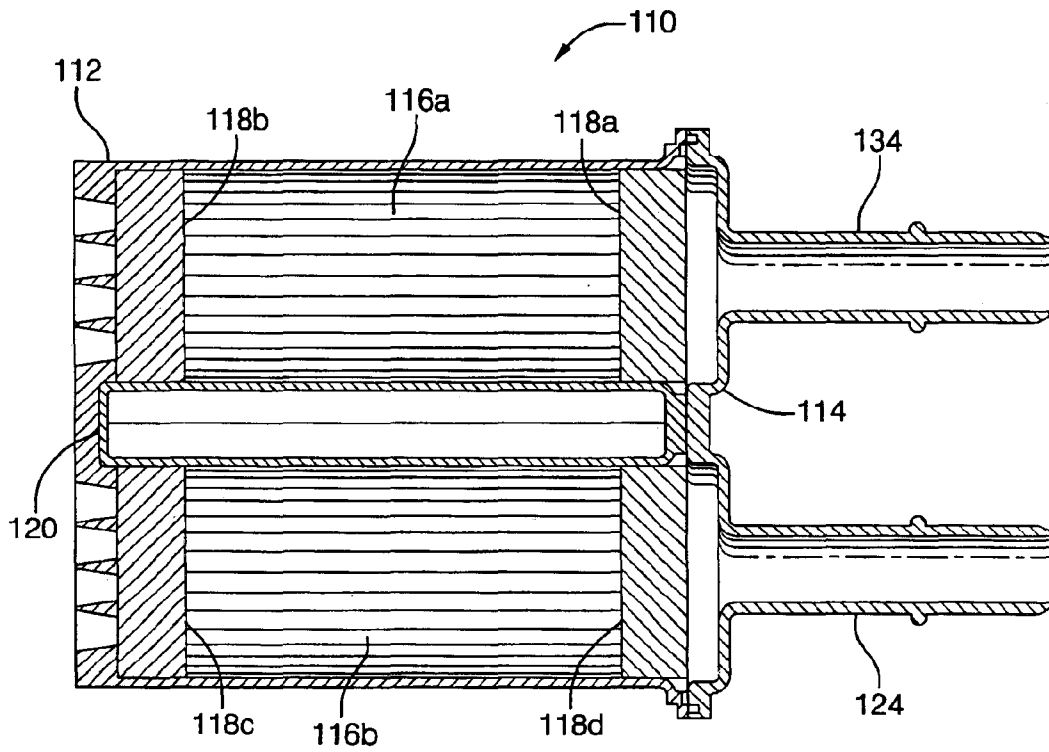


FIG. 8

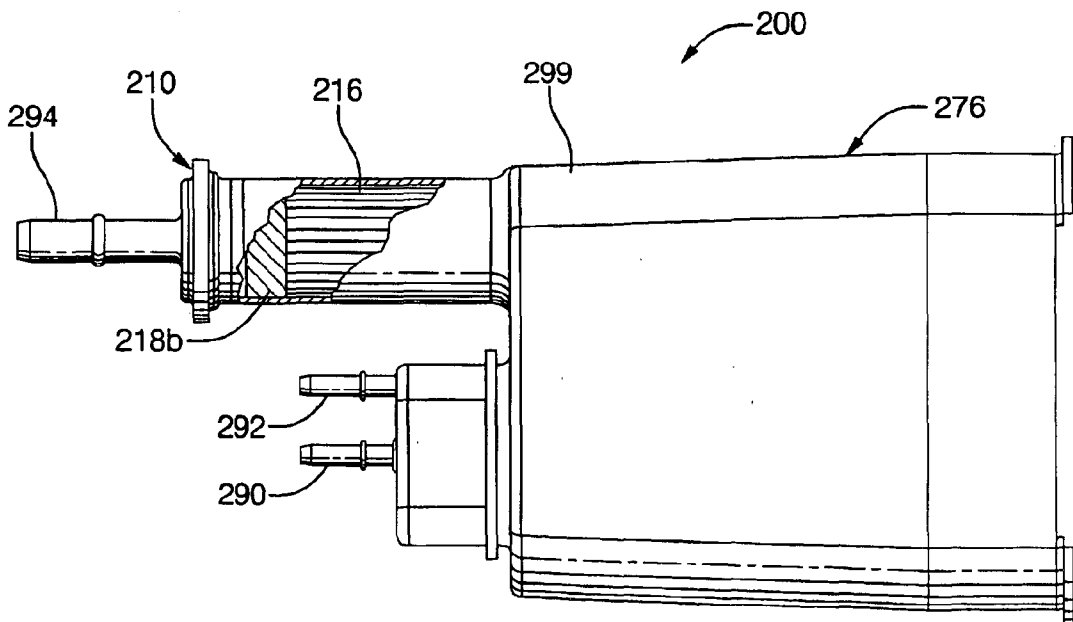


FIG. 9

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