

Title (en)
DISPENSING CARTRIDGE WITH TORTUOUS VENT PATH

Title (de)
ABGABEPATRONE MIT GEWUNDENER LÜFTUNGSBAHN

Title (fr)
CARTOUCHE DE DISTRIBUTION AVEC CIRCUIT D'AERATION SINUEUX

Publication
EP 1461268 A4 20090325 (EN)

Application
EP 02786916 A 20021206

Priority

- US 0239041 W 20021206
- US 33893501 P 20011210
- US 34808802 P 20020111

Abstract (en)

[origin: WO03050012A1] A dispensing cartridge (20) in accordance with the present invention is relatively simple in configuration while minimizing leakage of the fluid (28) and eliminating problems associated with chemical attack of the O-ring (112) by the fluid (28) in the dispensing cylinder (22). The air vent (41) is configured as a tortuous path, which in a pre-staged position allows air to freely escape along the spiral path along the circumference of the plug (26). As the piston (24) contacts the fluid (28), the forward motion of piston (24) is resisted by the high backpressure created by the small effective diameter and relatively long length of the spiral path. Once the piston (24) contacts the fluid (28), the spiral plug (26) is pushed into the piston (24) closing the spiral path. By controlling the fluid flow, the amount of fluid backflow through the piston (24) is minimized if not eliminated, thus eliminating the need for an annular overflow chamber. To improve the sealing of the piston (24) within the dispensing cartridge (20), the piston (24) may be provided with one or more radially extending sealing lips (64, 66) that can be used in lieu of or in conjunction with an O-ring (112).

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