

(19) World Intellectual Property Organization
International Bureau



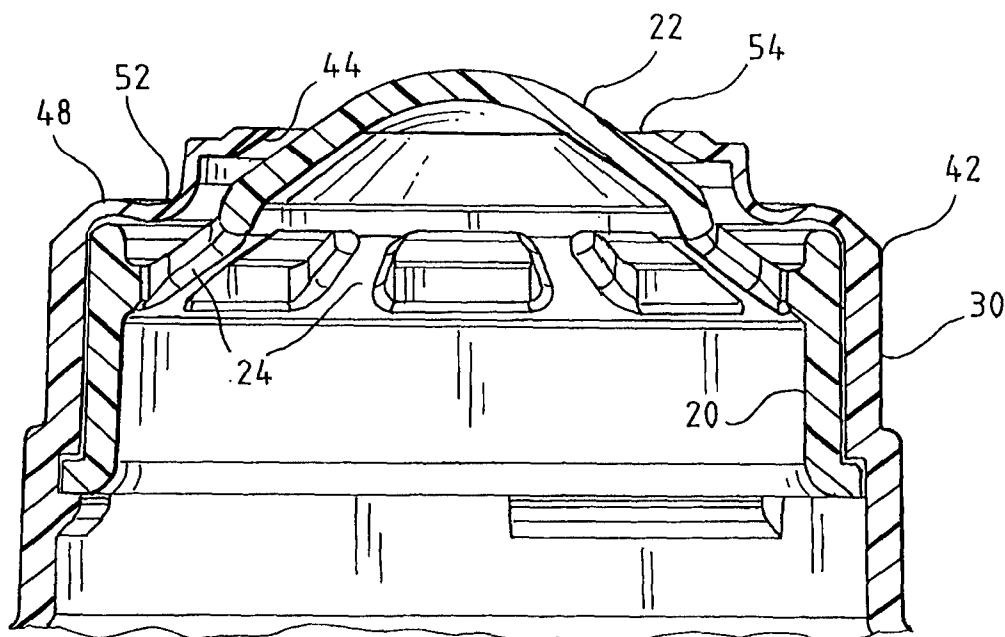
(43) International Publication Date
13 March 2003 (13.03.2003)

PCT

(10) International Publication Number
WO 03/021139 A3

- (51) International Patent Classification⁷: **B65D 25/40** (81) Designated States (*national*): AU, CA, CN, JP, MX, SG.
- (21) International Application Number: PCT/US02/19120 (84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
- (22) International Filing Date: 14 June 2002 (14.06.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/944,700 31 August 2001 (31.08.2001) US
- (71) Applicant: **SONOCO DEVELOPMENT, INC.**
[US/US]; North Second Street, Hartsville, SC 29550 (US).
- (72) Inventor: **JOHANSON, James**; 52 Church Street, Chatham, NY 12037 (US).
- (74) Agent: **FASSNACHT, Harold**; Bullwinkel Partners, Ltd., 19 S. LaSalle Street, Suite 1300, Chicago, IL 60603 (US).
- Declarations under Rule 4.17:**
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- Published:**
— with international search report
- (88) Date of publication of the international search report:
25 September 2003
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PRESSURE-ACTIVATED FLEXIBLE VALVE



(57) Abstract: A pressure-activated flexible valve (10) for use with a container for dispensing fluid material. The valve (10) has a single sealing surface and comprises an inner component (12) having a sealing portion (22) and an outer component (14) having an annular rim (44) that seats against the sealing portion (22). The outer component (14) also has a flexible portion (40) that changes shape in response to pressure from the container material, thereby opening and closing the valve (10).