

(19) World Intellectual Property Organization
International Bureau



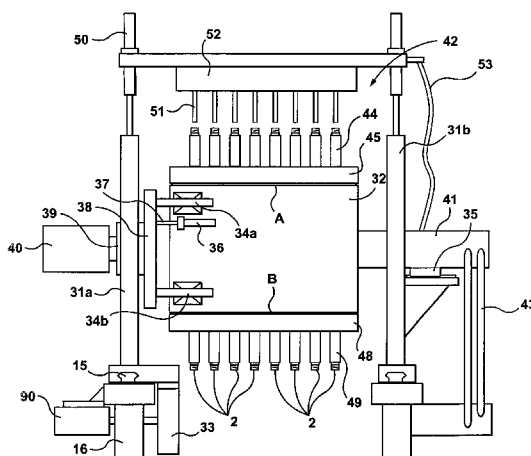
(43) International Publication Date
27 November 2003 (27.11.2003)

PCT

(10) International Publication Number
WO 03/097327 A1

- (51) International Patent Classification⁷: **B29C 45/72**
- (21) International Application Number: PCT/CA03/00569
- (22) International Filing Date: 17 April 2003 (17.04.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/147,360 17 May 2002 (17.05.2002) US
10/351,596 27 January 2003 (27.01.2003) US
- (71) Applicant: **HUSKY INJECTION MOLDING SYSTEMS LTD.** [CA/CA]; 500 Queen Street South, Bolton, Ontario L7E 5S5 (CA).
- (72) Inventors: **UNTERLANDER, Richard, M.**; 37 Witherspoon Way, Nobleton, Ontario L0G 1N0 (CA). **NETER, Witold**; 62 Shadow Lake Trail, Newnan, GA 30265 (US). **ROMANSKI, Zbigniew**; 1018 Franconia Drive, Mississauga, Ontario L4Y 2L7 (CA). **ARNOTT, Robin, A.**; #7688, R.R. #3, Alliston, Ontario L9R 1V3 (CA).
- (74) Agent: **SMITH, Derek, K., W.**; Husky Injection Molding Systems Ltd., 500 Queen Street South, Bolton, Ontario L7E 5S5 (CA).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- 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: POST MOLD COOLING APPARATUS AND METHOD HAVING ROTATIONAL AND TRANSVERSE MOVEMENT



(57) Abstract: Post mold cooling apparatus (30) and method having transverse movement preferably includes structure and/or steps for cooling a plurality of plastic articles molded on a row of mold cores (70a, 70b). A post mold cooling device (30) is provided having (i) a first row of cooling tubes (44, 49) configured to hold a first plurality of the molded plastic articles, and (ii) a second row of cooling tubes (44, 49) configured to hold a second plurality of the molded plastic articles. A cooling station (42) is disposed adjacent the cooling device and is configured to provide a cooling fluid to an interior of both the first and second pluralities of molded articles inside the respective first and second rows of cooling tubes (44, 49). Movement structure is configured to (i) provide a rotational movement to cause the first and second pluralities of molded articles inside the respective first and second rows of cooling tubes (44, 49) to be presented to the cooling station, and (ii) provide a transverse, axial movement to alternately cause the first row of cooling tubes (44, 49) and then the second row of cooling tubes (44, 49) to be presented to the row of mold cores (70a, 70b).



WO 03/097327 A1