



- (51) **International Patent Classification:**
B29C 45/18 (2006.01) *B29C 45/27* (2006.01)
- (21) **International Application Number:**
PCT/US20 12/043944
- (22) **International Filing Date:**
25 June 2012 (25.06.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/500,349 23 June 2011 (23.06.2011) US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) **Date of publication of the international search report:**
4 July 2013

(54) **Title:** INJECTION MOLDING APPARATUS AND METHOD FOR DOWNSTREAM INJECTION OF FLUID INTO MATERIAL FLOW

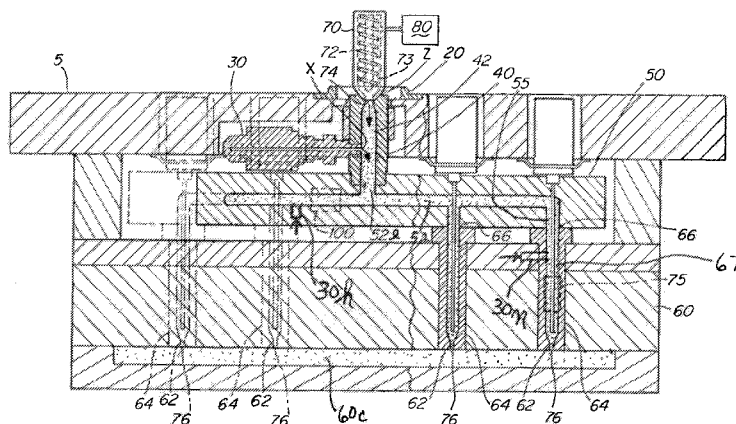


Fig. 2

(57) **Abstract:** An apparatus for expanding the matrix of a polymer material injected under pressure into the cavity (60c) of a mold (60), the apparatus comprising: an injection machine having a barrel (70) into which a selected polymer material is delivered, the barrel (70) comprising an elongated tubular passage terminating at a downstream end in a barrel exit port (74), the polymer material being converted within the barrel (70) to a fluid that travels as a flow under pressure; a manifold (50), one or more nozzles (64) each having a downstream exit port sealably communicating with a corresponding gate in the cavity (60c) of the mold (60); and, an injecting system (30, 30h, 30n) having an exit or outlet port (X) sealably communicating with an inlet (40) to the manifold (50) or with a channel to the manifold or with one or more of the nozzles, the injecting system injecting a selected inert fluid into the pressurized fluid polymer material.



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/043944

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B29C45/18 B29C45/27
 ADD.
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	STI ELER ULRICH: "Schaumen im Werkzeug" , KUNSTOFFE INTERNATIONAL, CARL HANSER VERLAG, MUNCHEN, DE, vol . 9, 1 January 2008 (2008-01-01) , pages 68-71 , XP008099929 , ISSN: 0023-5563 the whole document figure 1 page 68, right-hand column, paragraph 1 page 69 - page 70; figure 4 ----- -/- .	1-14

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Date of the actual completion of the international search 6 May 2013	Date of mailing of the international search report 15/05/2013
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International application No
PCT/US2012/043944

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2012/043944
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