



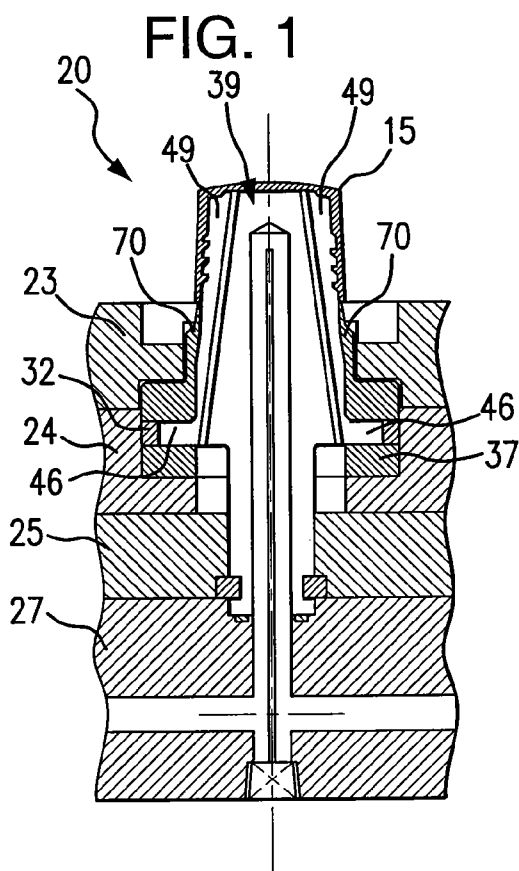
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[Continued on next page]

(54) Title: COLLAPSING CORE PART RETAINER SLEEVE



(57) Abstract: An injection molding tool having a collapsible core which is movably mounted with respect to a mold plate. The mold plate is movably mounted with respect to a stripper plate that can be used to eject or remove the molded part from the injection molding tool. A retainer is fixedly positioned with respect to the mold plate so that it contacts at least a portion of a molded part when in a mold position. The retainer can be a sleeve with a through opening within or through which the collapsible core is mounted.



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, MD, 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).

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/028772**A. CLASSIFICATION OF SUBJECT MATTER*****B29C 45/42(2006.01)i, B29C 45/44(2006.01)i***

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 45/42; B29C 45/40; C04B 41/00; B29C 43/02; B29C 45/44; B29C 33/02; B29C 45/26

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)

eKOMPASS(KIPO internal) & Keywords: injection molding tool, mold, collapsible core assembly, mount, mold plate, stripper, retainer, core base, prevent, collapsing, c-core

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 05403179A A (RAMSEY; WILLIAM C.) 04 April 1995 See abstract, columns 1~9, and claims 1~20	1-28
Y	US 04627810A A (VON HOLDT; JOHN W.) 09 December 1986 See abstract, columns 1~9, and claims 1~27	1-28
A	JP 2002-292697 A (YOSHINO KOGYOSHO CO LTD) 09 October 2002 See abstract, pages 1~8, and claims 1~6	1-28
A	US 2006-0065998 A1 (SUMITOMO HEAVY INDUSTRIES, LTD) 30 March 2006 See abstract, columns 1~16, and claims 1~12	1-28



Further documents are listed in the continuation of Box C.



See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

10 OCTOBER 2012 (10.10.2012)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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