(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 October 2001 (11.10.2001)

PCT

(10) International Publication Number
WO 01/75529 A1

(51) International Patent Classification[7]: G03G 15/00

(21) International Application Number: PCT/US01/08633

(22) International Filing Date: 30 March 2001 (30.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/540,287 31 March 2000 (31.03.2000) US

(71) Applicant: **MITSUBISHI CHEMICAL AMERICA, INC.** [US/US]; 401 Volvo Parkway, Chesapeake, VA 23320 (US).

(72) Inventors: **GRUNE, Guerry, L.**; 784 S. Villier Court, Virginia Beach, VA 23452 (US). **NIEDERSTADT, William, F.**; 624 Norcova Drive, Chesapeake, VA 23320 (US). **WORKING, Dennis**; 1324 Milton Street, Norfolk, VA 23505 (US).

(74) Agent: **WEIHROUCH, Steven, P.**; Oblon, Spivak, McClelland, Maier & Neustadt, P.C., Suite 400, 1755 Jefferson Davis Highway, Arlington, VA 22202 (US).

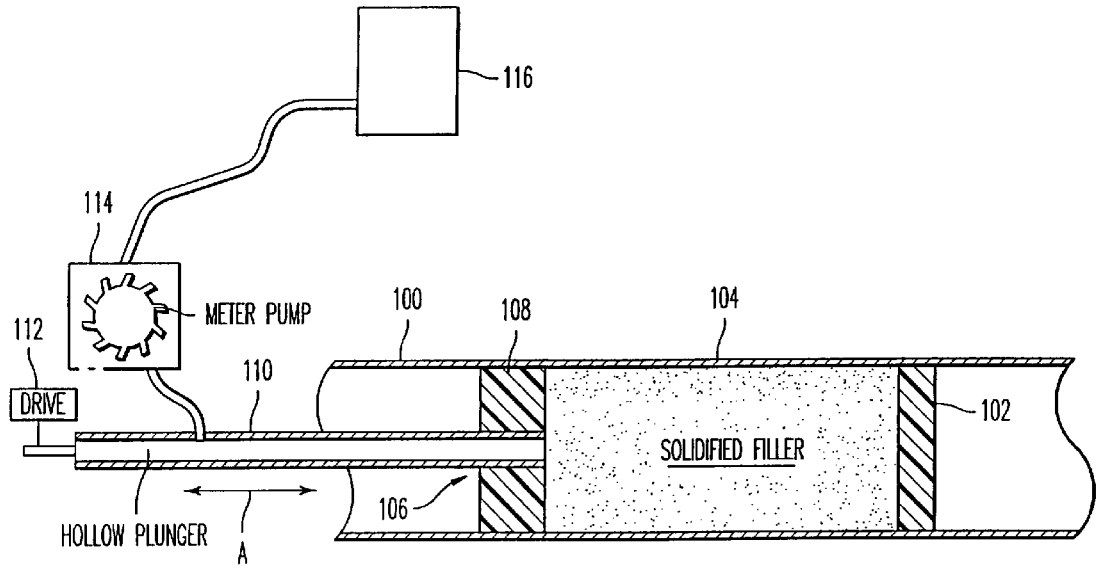
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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: PHOTOSENSITIVE DRUM HAVING INJECTION MOLDED INSERT



(57) Abstract: A photosensitive drum (100) is provided with an insert (104) by injecting a rapidly curing material directly into the drum (100) such that when the material cures, a noise/vibration reducing insert (104) is provided. The insert material can be injected by a reciprocating nozzle (106) during the manufacture/assembly of the drum (100). By injecting the insert material into the drum (100) when the drum (100) is being manufactured/assembled, it is not necessary to separately design the insert (104) or to procure tooling to separately manufacture the insert (104). In addition, the insert (104) will closely conform to the interior of the drum (100) since the insert (104) is molded inside of the drum (100). In addition, modifications to the insert (104) (e.g., to vary the mass or size of the insert (104)) are readily achievable without tooling modifications.

WO 01/75529 A1