

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 March 2003 (27.03.2003)

PCT

(10) International Publication Number
WO 03/025439 A3

(51) International Patent Classification⁷: **F16K 1/12**, 31/04

(21) International Application Number: PCT/EP02/10487

(22) International Filing Date:
18 September 2002 (18.09.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
201 15 470.6 19 September 2001 (19.09.2001) DE

(71) Applicant (for all designated States except US): **COOPER CAMERON CORPORATION** [US/US]; 1333 West Loop South, Suite 1700, Houston, TX 77027-9109 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BIESTER, KLAUS** [DE/DE]; Am Maschsee 2, 29342 Wienhausen (DE).

(74) Agent: **GRÜNECKER, KINKELDEY, STOCKMAIR & SCHWANHÄUSSER**; Maximilianstr. 58, 80538 München (DE).

(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, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, 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, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

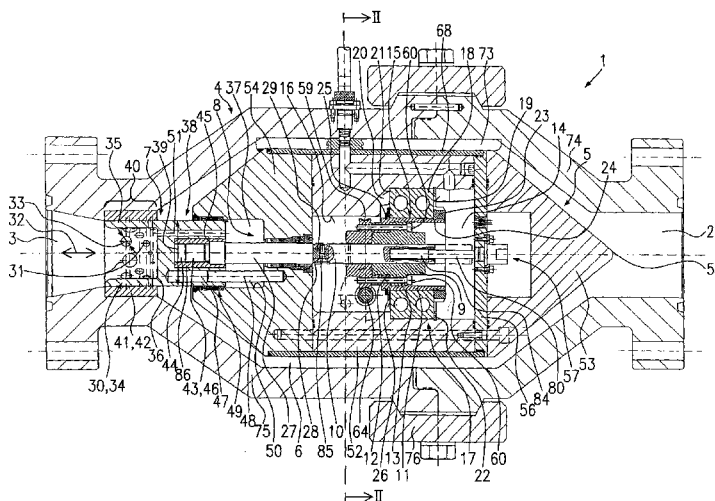
Published:

— with international search report

(88) Date of publication of the international search report:
9 October 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 REDUCER



(57) Abstract: A pressure reducer(1) has a housing(4) comprising an inlet(2) and an outlet in which a flow-around body (5)is arranged in a flow channel(6) connecting inlet and outlet(3). A flow restrictor(7) is adjustably mounted relative to the flow-around body for varying a flow rate and is movably connected with an adjusting means(8) comprising a recirculating ball nut (9) substantially fixed in an axial direction and rotatably mounted in the flow-around body and a rotating spindle(10) is axially adjustable mounted in said recirculating ball nut wherein the rotating spindle is movably connected with said flow restrictor. To improve such a pressure reducer that a corresponding flow restrictor with a facilitated construction is reliable and can exactly be adjusted in position, the recirculating ball nut is detachably fastened to a turning sleeve(11) rotatably mounted in the flow-around body and the recirculating ball nut is connected with a driving toothed wheel(59) in a rotation-resistant manner, which is rotatable by an electric drive(58) for the movable connected with recirculating ball nut.



WO 03/025439 A3