

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number
WO 2004/068022 A2

(51) International Patent Classification⁷: **F16M**

(21) International Application Number:
PCT/GB2004/000307

(22) International Filing Date: 26 January 2004 (26.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0301937.9 28 January 2003 (28.01.2003) GB

(71) Applicant (for all designated States except US): **MELLES
GRIOT LIMITED** [GB/GB]; 3rd Floor, Medici Court,
67-69 New Bond Street, London W1S 1DF (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GALPIN, John**
[GB/GB]; Ballaquane Farm, Dalby, Isle of Man IM5

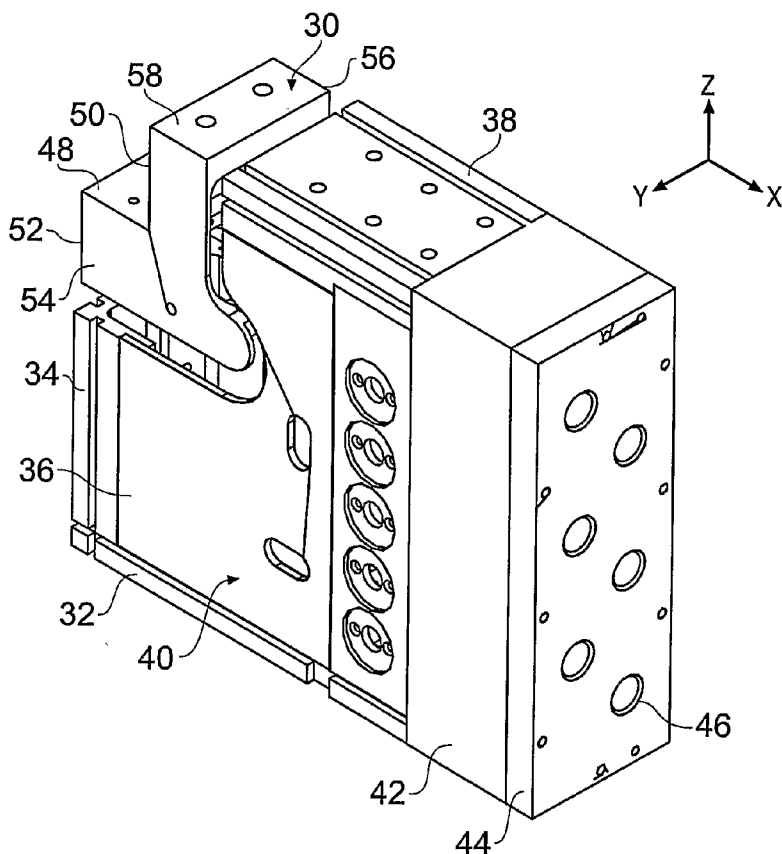
3BP (GB). **GURNER, Philip** [GB/GB]; 15 Queen Street,
Castletown, Isle of Man IM9 1PB (GB). **CHAPMAN,
Gordon** [GB/GB]; 6 Coronation Close, Waterbeach,
Cambridgeshire CB5 9NP (GB). **COATES, Jim** [GB/GB];
62 Thirlmere, Stukeley Meadows, Huntingdon, Cam-
bridgeshire PE29 6UJ (GB). **HERBERT, Terence**
[GB/GB]; 75 Pelham Way, Cottenham, Cambridgeshire
CB4 8TQ (GB).

(74) Agent: **HAINES, Miles, John**; D Young & Co, 21 New
Fetter Lane, London EC4A 1DA (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: MULTI-AXIS POSITIONER



(57) Abstract: A multi-axis positioner comprising: a fixed part (40) having drive mounts (42, 44, 46) for receiving a plurality of drive inputs and a movable part (30) having surfaces for attaching a sample, wherein multiple drive trains, one for each of up to six motion axes, connect the drive inputs to the movable part. The whole device has a cuboid shape with the movable part fitting inside one corner. All the motion axes are driven by access through the two internally facing sides of the movable part, leaving all other sides free for sample mounting and/or external access. The whole device can be mounted in any orientation, e.g. on its side or upside down. It has flat mounting surfaces on each side, on the top and bottom and on the front. Only the rear is not available for mounting, since it is reserved as a drive input face for receiving the micrometer, or other, drives.



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *without international search report and to be republished upon receipt of that 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.