

(12) International Application Status Report

Received at International Bureau: 04 July 2018 (04.07.2018)

Information valid as of: 22 January 2019 (22.01.2019)

Report generated on: 26 August 2019 (26.08.2019)

(10) Publication number:

WO2019/026445

(43) Publication date:

07 February 2019 (07.02.2019)

(26) Publication language:

Japanese (JA)

(21) Application Number:

PCT/JP2018/023231

(22) Filing Date:

19 June 2018 (19.06.2018)

(25) Filing language:

Japanese (JA)

(31) Priority number(s):

2017-151564 (JP)

(31) Priority date(s):

04 August 2017 (04.08.2017)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

A61B 1/00 (2006.01); **G02B 7/04** (2006.01); **G02B 23/24** (2006.01)

(71) Applicant(s):

OLYMPUS CORPORATION [JP/JP]; 2951 Ishikawa-machi, Hachioji-shi, Tokyo 1928507 (JP) *(for all designated states)*

(72) Inventor(s):

NAGAMIZU Hiroyuki; c/o OLYMPUS CORPORATION, 2951 Ishikawa-machi, Hachioji-shi, Tokyo 1928507 (JP)

(74) Agent(s):

ITOH Susumu; Musashi Bldg., 4-4, Nishishinjuku 7-chome, Shinjuku-ku, Tokyo 1600023 (JP)

(54) Title (EN): LINEAR ACTUATOR FOR ENDOSCOPE, OPTICAL UNIT FOR ENDOSCOPE, AND ENDOSCOPE

(54) Title (FR): ACTIONNEUR LINÉAIRE POUR ENDOSCOPE, UNITÉ OPTIQUE POUR ENDOSCOPE ET ENDOSCOPE

(54) Title (JA): 内視鏡用リニアアクチュエータ、内視鏡用光学ユニットおよび内視鏡

(57) Abstract:

(EN): This linear actuator 40 for an endoscope is provided with: a movable frame 42 formed from a magnetic body; a stationary frame 43 which has provided therein the movable frame 42 so that the movable frame 42 can move forward and backward, and which is formed from a non-magnetic body; two coils 44, 45 formed and wound on the outer surface of the stationary frame 43 and arranged side by side in a longitudinal axis direction; a permanent magnet 46 disposed in a stacked manner so as to overlap the two coils 44, 45; and two yokes 47, 48 arranged in front of and behind the permanent magnet 46 and the two coils 44, 45.

(FR): Cette invention concerne un actionneur linéaire 40 pour endoscope comprenant : un cadre mobile 42 constitué d'un corps magnétique ; un cadre fixe 43 qui contient le cadre mobile 42 de façon que le cadre mobile 42 puisse se déplacer vers l'avant et l'arrière, et qui est constitué d'un corps non magnétique ; deux bobines 44, 45 formées et enroulées sur la surface externe du cadre fixe 43 et agencées côte à côte dans le sens de l'axe longitudinal ; un aimant permanent 46 dans une relation empilée de manière à chevaucher les deux bobines 44, 45 ; et deux dispositifs d'accouplement 47, 48, devant et derrière l'aimant permanent 46 et les deux bobines 44, 45.

(JA): 内視鏡用リニアアクチュエータ 40 は、磁性体から形成された移動枠 42 と、移動枠 42 が進退自在に内部に設けられ、非磁性体から形成された固定枠 43 と、固定枠 43 の外表面に巻回形成され、長手軸方向に並設された 2 つのコイル 44, 45 と、2 つのコイル 44, 45 に重畳するように積層配置された永久磁石 46 と、永久磁石 46 および 2 つのコイル 44, 45 の前後に配設された 2 つのヨーク 47, 48 と、を具備する。

International search report:

Received at International Bureau: 20 August 2018 (20.08.2018) [JP]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM