

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 August 2020 (13.08.2020)



(10) International Publication Number
WO 2020/162911 A8

(51) International Patent Classification:
B41J 2/14 (2006.01)

(21) International Application Number:

PCT/US2019/016782

(22) International Filing Date:

06 February 2019 (06.02.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant: **HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.** [US/US]; 10300 Energy Drive, Spring, Texas 773889 (US).

(72) Inventors: **CUMBIE, Michael W.**; 1070 NE Circle Blvd., Corvallis, Oregon 97330-4239 (US). **LINN, Scott A.**; 1070 NE Circle Blvd., Corvallis, Oregon 97330-4239 (US). **FULLER, Anthony M.**; 1070 NE Circle Blvd., Corvallis, Oregon 97330-4239 (US). **GARDNER, James Michael**; 1070 NE Circle Blvd., Corvallis, Oregon 97330-4239 (US).

(74) Agent: **PERRY, Garry A.** et al.; HP Inc., 3390 East Harmony Road, Mail Stop 35, Fort Collins, Colorado 80528 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): 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.

(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, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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,

(54) Title: DIE FOR A PRINthead

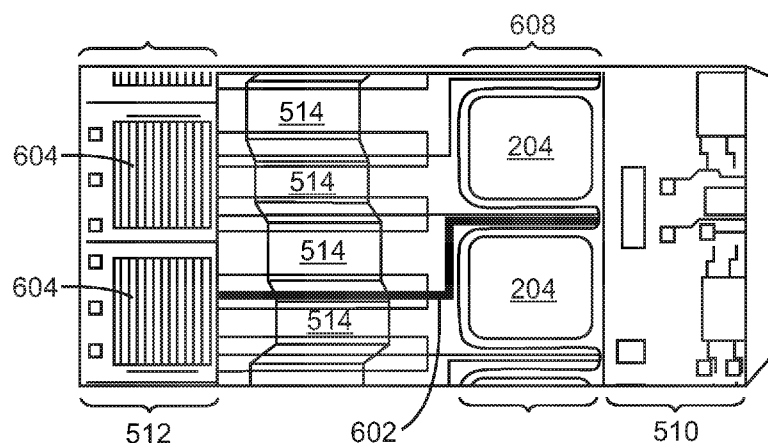


FIG. 6B

(57) Abstract: A die for a printhead is described herein. The die includes a number of fluid feed holes disposed in a line parallel to a longitudinal axis of the die, wherein the fluid feed holes are formed through a substrate of the die. The die includes a number of fluidic actuators, proximate to the fluid feed holes, to eject fluid received from the fluid feed holes. Circuitry on the die operates the fluidic actuators, wherein traces are provided in layers between adjacent fluid feed holes, connecting circuitry on each side of the fluid feed holes.



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,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i))*
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

- *with international search report (Art. 21(3))*

(48) Date of publication of this corrected version:

02 September 2021 (02.09.2021)

(15) Information about Correction:

see Notice of 02 September 2021 (02.09.2021)