

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 April 2023 (13.04.2023)



(10) International Publication Number
WO 2023/059668 A1

(51) International Patent Classification:

H01L 21/687 (2006.01) B25J 15/00 (2006.01)
H01L 21/683 (2006.01) B25J 15/06 (2006.01)
B25J 11/00 (2006.01) B25J 9/00 (2006.01)

(21) International Application Number:

PCT/US2022/045712

(22) International Filing Date:

05 October 2022 (05.10.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/262,240 07 October 2021 (07.10.2021) US

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(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

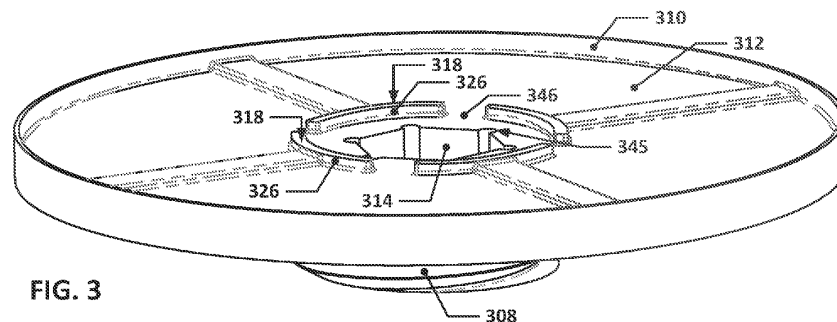
(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

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, MC, ME, 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).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: END EFFECTOR PAD DESIGN FOR BOWED WAFERS



(57) Abstract: End effector pads are provided that may be used to secure substrates to an end effector on a wafer handling robot. An end effector may have a plurality of end effector pads. Each of the end effector pads may have a thin diaphragm that allows a peripheral ring of the pad to tilt slightly to allow the ring to seal against a bottom surface of a bowed substrate. A vacuum may be used to pull down the substrate against a hard-stop on each end effector pad and hold the substrate more securely. The hard-stop may be used to consistently locate the z-position of the bottom surface of the substrate relative to the end effector.



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