



- (51) **International Patent Classification:**
B24B 23/04 (2006.01) *B24B 55/10* (2006.01)
- (21) **International Application Number:**
PCT/US2024/054124
- (22) **International Filing Date:**
01 November 2024 (01.11.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/547,224 03 November 2023 (03.11.2023) US
- (71) **Applicant:** SWIMC LLC [US/US]; 101 W. Prospect Avenue, Cleveland, Ohio 44115 (US).
- (72) **Inventors:** LAMBERTSON JR., Michael C.; 1241 Bryce Avenue, Aurora, Ohio 44202 (US). GAURAV, Sharad; 11850 Edgewater Drive, Apt. 906, Lakewood, Ohio 44107 (US). GOODWIN JR., Edward Ray; 2718 Walter Road, Westlake, Ohio 44145 (US). BUCKEL JR., Charles T.; 1877 Abbeyville Road, Valley City, Ohio 44280 (US).
- (74) **Agent:** KOWALSKI, Ross M.; Tucker Ellis LLP, 950 Main Avenue, Suite 1100, Cleveland, Ohio 44113 (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, 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, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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))

(54) **Title:** SANDER DEVICE WITH VACUUM FUNCTIONALITY

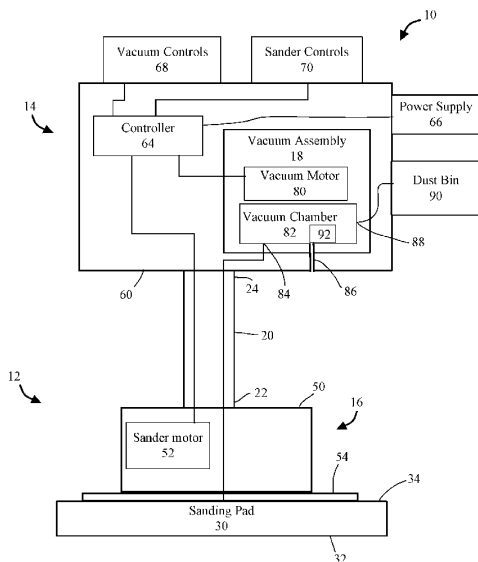


FIG. 1

(57) **Abstract:** A sanding device includes a sander assembly having a sander motor mounted to a sanding plate and a main body including a vacuum motor that oscillates the sanding pad, dust bin, and a motor control. A hollow extension pole has a first end configured to pivotally attach to the sander assembly and a second end configured to attach to the main body and configured to provide fluid communication between an outlet of the sander plate and the dust bin. A controller is configured to control and provide power from a power supply to at least one of the sander motor and the vacuum motor according to operation of the motor control. The vacuum motor may create a vacuum in the main body that draws in dust at the sanding surface of the sanding pad, moves the dust through the extension pole, and draws the dust into the dust bin.