

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
08 May 2025 (08.05.2025)



(10) International Publication Number
WO 2025/096693 A1

- (51) **International Patent Classification:**
E03D 9/03 (2006.01)
- (21) **International Application Number:**
PCT/US2024/053768
- (22) **International Filing Date:**
30 October 2024 (30.10.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/594,339 30 October 2023 (30.10.2023) US
- (72) **Inventor; and**
- (71) **Applicant: JESTER, Garrett** [US/US]; 12620 FM 1960
West, Ste A4, Houston, Texas 77065 (US).
- (74) **Agent: CHAKRABORTY, Anuraj;** 20251 Century Blvd
Ste 140, Germantown, Maryland 20874 (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))

WO 2025/096693 A1

(54) **Title:** AUTOMATED TOILET CLEANING DEVICE

(57) **Abstract:** An automated toilet cleaning device is an apparatus that dispenses an appropriate amount of cleaning solution into an excrement-related plumbing fixture (e.g., a toilet with a tank, a tankless toilet, a urinal, etc.) without hands-on intervention during each flush. The apparatus includes a source bypass, a fluid reservoir, a venturi manifold, a bypass flow-control mechanism, a reservoir flow-control mechanism, a flow-check valve, and a discharging port. The source bypass retrieves some water from the internal workings of the fixture. The bypass flow-control mechanism manages the flow of water into the venturi manifold. The fluid reservoir retains a liquid antiseptic agent. The reservoir flow-control mechanism manages the flow of liquid antiseptic agent into the venturi manifold. The venturi manifold mixes the water and the liquid antiseptic agent together into a cleaning solution, which is then dispensed by the discharging port during each flush.