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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
04 September 2025 (04.09.2025)

WIPO | PCT

(10) International Publication Number
WO 2025/184590 A1

(51) International Patent Classification:
A47L 7/00 (2006.01) *G06V 20/20* (2022.01)
G06V 20/10 (2022.01) *G06V 20/52* (2022.01)

(21) International Application Number:
PCT/US2025/017968

(22) International Filing Date:
28 February 2025 (28.02.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
18/590,153 28 February 2024 (28.02.2024) US

(71) Applicant: **CLUTTERBOT, INC.** [US/US]; 2093 Philadelphia Pike, #1348, Claymont, De 19703, United States, Claymont, DE 19703 (US).

(72) Inventor: **HAMILTON, Justin, David**; C/o Clutterbot Inc., 2093 Philadelphia Pike #1348, Claymont, DE 19703 (US).

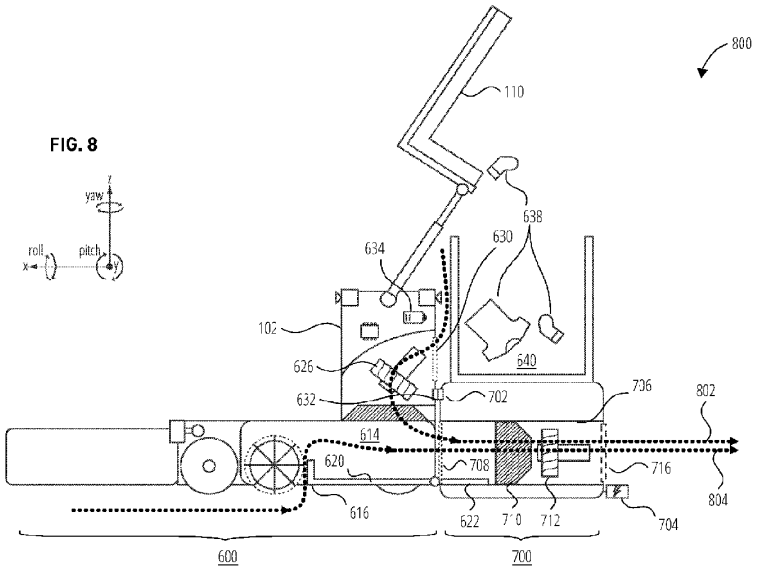
(74) Agent: **AUERBACH, Robert**; 431 H Street, Crescent City, CA 95531 (US).

(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, UY, UZ, VC, VN, WS, ZA, ZM, ZW.

WO 2025/184590 A1

(54) **Title:** ROBOT TIDYING INTO NON-STANDARD CATEGORIES

FIG. 8



(57) **Abstract:** A method and computing apparatus are disclosed for allowing a tidying robot to organize objects into non-standard categories that match a user's needs. The tidying robot navigates an environment using cameras to map the type, size, and location of toys, clothing, obstacles, furniture, structural elements, and other objects. The robot comprises a neural network to determine the type, size, and location of objects based on input from a sensing system. An augmented reality view allows user interaction to refine and customize areas within the environment to be tidied, object categories, object home locations, and operational task rules controlling robot operations.

[Continued on next page]

(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).

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))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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))*