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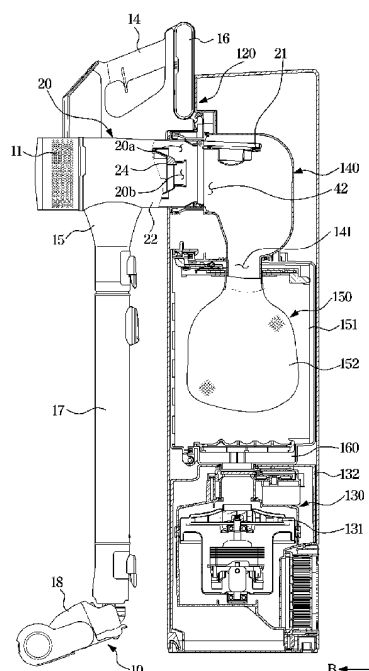
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(54) **CLEANING DEVICE COMPRISING VACUUM CLEANER AND DOCKING STATION**

(57) Provided is a cleaning apparatus including: a vacuum cleaner including a battery configured to generate a suction force and a dust collecting chamber in which foreign substances suctioned by the suction force are collected; and a docking station connected to the vacuum cleaner and having a long axis extending in a first direction, wherein the docking station includes: a charging part provided to come in contact with the battery to charge the battery; a docking part connected to the dust collecting chamber to remove the foreign substances collected in the dust collecting chamber; and a suction device configured to suction the foreign substances and internal air in the dust collecting chamber docked onto the docking part, wherein the docking part includes a docking opening that is opened in a second direction different from the first direction such that at least a portion of the dust collecting chamber is inserted into the docking opening.

FIG. 3





EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	KR 2020 0074055 A (SAMSUNG ELECTRONICS CO LTD [KR]) 24 June 2020 (2020-06-24) * claims; figures * -----	1-11	INV. A47L9/10
A	KR 2020 0073966 A (SAMSUNG ELECTRONICS CO LTD [KR]) 24 June 2020 (2020-06-24) * claims; figures * -----	1-11	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47L
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		21 January 2025	Lopez Vega, Javier
CATEGORY OF CITED DOCUMENTS			
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 20200074055 A	24-06-2020	NONE	

KR 20200073966 A	24-06-2020	AU 2019397017 A1	24-06-2021
		CN 113226141 A	06-08-2021
		CN 115281557 A	04-11-2022
		CN 115399666 A	29-11-2022
		CN 115399667 A	29-11-2022
		CN 115399668 A	29-11-2022
		CN 115399669 A	29-11-2022
		CN 116369784 A	04-07-2023
		CN 116369785 A	04-07-2023
		CN 116473459 A	25-07-2023
		DE 202019005876 U1	20-12-2022
		EP 3878337 A1	15-09-2021
		EP 4005452 A1	01-06-2022
		EP 4011264 A1	15-06-2022
		EP 4122366 A2	25-01-2023
		EP 4122370 A2	25-01-2023
		EP 4218523 A1	02-08-2023
		EP 4226834 A1	16-08-2023
		EP 4230105 A1	23-08-2023
		EP 4233664 A1	30-08-2023
		KR 20200073966 A	24-06-2020
		KR 20200074001 A	24-06-2020
		KR 20200074054 A	24-06-2020
		KR 20200131208 A	23-11-2020
		KR 20210033462 A	26-03-2021
		KR 20210033463 A	26-03-2021
		KR 20210033464 A	26-03-2021
		KR 20210060421 A	26-05-2021
		KR 20210060424 A	26-05-2021
		US 2021052121 A1	25-02-2021
		US 2021259489 A1	26-08-2021
		US 2021259490 A1	26-08-2021
		US 2021259491 A1	26-08-2021
		US 2021290017 A1	23-09-2021
		US 2021298549 A1	30-09-2021
		US 2021298550 A1	30-09-2021
		US 2022095862 A1	31-03-2022
		US 2023012532 A1	19-01-2023
		US 2023200607 A1	29-06-2023
		US 2024016352 A1	18-01-2024

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82