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(54) **BEVELED BROOM AND STEP-ON DUSTPAN CLEANING SYSTEM**

(57) A beveled broom and step-on dustpan cleaning system including a step-on dustpan having a step-on portion configured to allow a user to collect debris in a receptacle of the dustpan when a force is applied on the step-on portion. The dustpan includes a lip portion which is configured to seal against a floor surface upon a user stepping on the step-on portion to collect debris. A beveled broom having a broom head configured with a beveled or chamfered shape at a functional angle to provide an effective and efficient contact surface to a floor surface to collect debris during use.

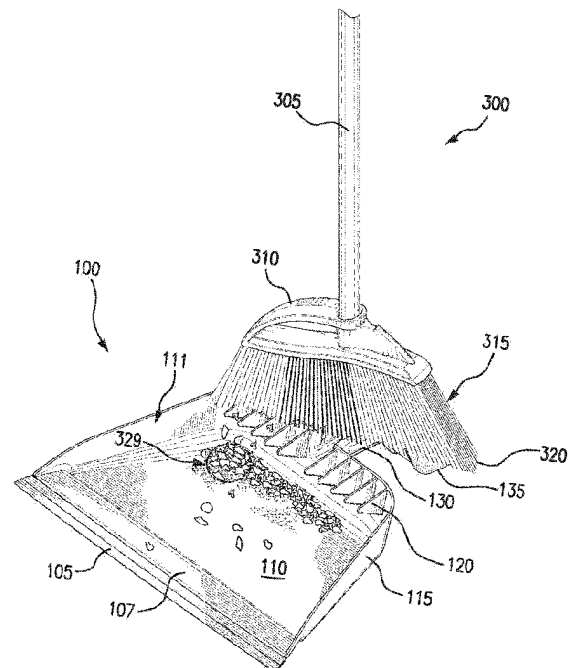


FIG. 14



EUROPEAN SEARCH REPORT

Application Number

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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	US 2012/260453 A1 (WARD BILL [US] ET AL) 18 October 2012 (2012-10-18) * paragraphs [0029] - [0031] * -----	1-13	INV. A47L13/10 A46B5/00 A47L13/52
A	WO 2019/089079 A1 (WISP IND INC [US]) 9 May 2019 (2019-05-09) * paragraphs [0075] - [0080] * -----	1-13	
A	US 1 908 730 A (CALDWELL JAMES R ET AL) 16 May 1933 (1933-05-16) * page 1, lines 34-73 * -----	1-13	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47L A61D A46B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 November 2024	Examiner Eckenschwiller, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 24 19 6252

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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19-11-2024

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
15	US 2012260453 A1	18-10-2012	US 2012260453 A1	18-10-2012
			US 2013091651 A1	18-04-2013
			US 2014310909 A1	23-10-2014
			US 2016338564 A1	24-11-2016
	-----	-----	-----	-----
	WO 2019089079 A1	09-05-2019	NONE	
	-----	-----	-----	-----
20	US 1908730 A	16-05-1933	NONE	
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