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(54) Title: A DISPOSABLE RESPIRATOR WITH EXHALATION VENTS

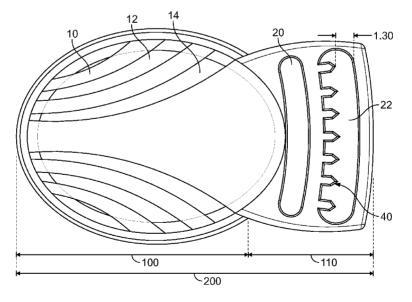


FIG. 1

(57) Abstract: A disposable respirator comprising a strap fastening system that facilitates ease of donning and comfort during wear is disclosed. More specifically, the respirator comprises a fastening system including a pull-strap fastening component and a fastening component that are configured to provide a tight seal over the mouth and nose of the user, yet be easily donned and comfortable to wear. Additionally, the respirator includes fastening components that comprise exhalation vents that direct exhaled air, at least in part, away from a user's eyes.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

A62B 7/00(2006.01)i, A61M 16/00(2006.01)i, A62B 18/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC A62B 7/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility Models and applications for Utility Models since 1975 Japanese Utility Models and applications for Utility Models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS(KIPO internal) & Keyword: respirator*, mask*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 2007-0251522 A1 (WELCHEL, D. N. et al.) 1 November 2007 See abstract; figures 1-8; pages 5-7 and claims 26-46.	1-20
A	US 4951664 A (NIEMEYER, T. A.) 28 August 1990 See abstract; figures 1-3 and claims 1,6.	1-20
A	US 4600002 A (MARYYANEK, R. D. & ZDROK, J. Z.) 15 July 1986 See abstract; figures 1-4 and claims 1,2.	1-20
A	US 6571797 B1 (MAGIDSON, M. & TURDJIAN, K. C.) 3 June 2003 See abstract; figures 1-3 and claim 1.	1-20

		Further	documents	are	listed	in	the	cont	tinua	tion	of	Box	С.
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See patent family annex.

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Date of the actual completion of the international search

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2007-0251522 A1	01.11.2007	TW 200812663 A	16.03.2008	
US 4951664 A	28.08.1990	None		
US 4600002 A	15.07.1986	BR 8505074 A CA 1245802 A1 EP 0183059 A1	29.07.1986 06.12.1988 04.06.1986	
US 6571797 B1	03.06.2003	None		