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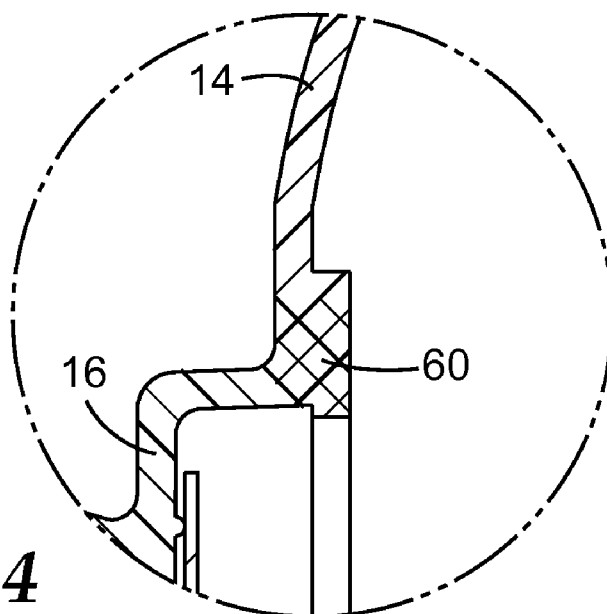
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[Continued on next page]

(54) Title: FACE MASK HAVING WELDED THERMOPLASTIC MASK BODY

**FIG. 4**

(57) Abstract: A respirator (10) that includes a mask body (12) and at least one filter cartridge (24). The mask body (12) has a central portion (14) and a peripheral portion (16). The filter cartridge (24) is attached to the rigid central portion (16). The peripheral portion 14 is made from a low stiffness first thermoplastic material, and the central portion (16) is made from a rigid second thermoplastic material. The first thermoplastic material is welded to the second thermoplastic material. A respirator of this structure can be made in a convenient manner, with a sound hermetic bond between the parts, while also being light in weight.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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— *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))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/031841**A. CLASSIFICATION OF SUBJECT MATTER****A62B 18/02(2006.01)i, A62B 7/10(2006.01)i, A62B 23/00(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)

A62B 18/02; A62B 7/10; A62B 23/02; A62B 9/04; A61B 19/00; A62B 18/08

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: respirator, mask body, thermoplastic material, non-elastomeric, weld, hermetic seal.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0109343 A1 (FLANNINGAN, PAUL J. et al.) 26 May 2005 See paragraphs [0030], [0038], [0040], [0042], and [0044]; claims 1-2 and 22-23; and figures 1 and 3.	1-17
A	US 5,592,937 A (FREUND, PAUL X.) 14 January 1997 See col.2, lines 6-26 and 46-49; claims 1, 3, 7, 15, and 20; and figures 1-2.	1-17
A	US 2005-0139218 A1 (BOSTOCK, GRAHAM J. et al.) 30 June 2005 See paragraphs [0045], [0052], [0054], and [0060]-[0064]; claims 1-3 and 11; and figures 3-4 and 8-9.	1-17
A	US 2005-0211251 A1 (HENDERSON, CHRISTOPHER P. et al.) 29 September 2005 See paragraphs [0006], [0031], [0035], [0037], and [0047]; claims 1-4 and 32-33; and figures 1 and 3.	1-17

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

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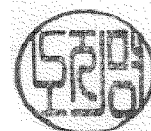
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/031841

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