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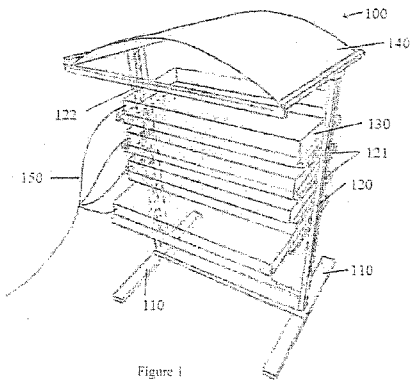


Figure 1

(57) **Abstract**: A photobioreactor (100) comprises a base (110); a supportive frame (120) extending upwardly from the base; a plurality of trays (130) for culturing phototropic microorganisms, ranking vertically from a uppermost tray to a bottommost tray, supported co-axially on the supportive frame (120) and spaced apart one and other in a predetermined gap at the vertical plane to optimize exposure to a light source; and a protective member (140) located on top of the uppermost tray by mounting onto the supportive frame (120) wherein the plurality of trays (130) and the protective member (140) are made of light permeable material.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

C12M 3/04(2006.01)i, C12M 1/14(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)

C12M 3/04; A01G 7/00; A01H 13/00; C12M 1/00; C12M 1/42; C12M 3/00; G06F 19/00

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
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: photo, bio, reactor, tray, light and circulation

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6287852 B1 (KONDO, JIRO et al.) 11 September 2001 See Claims 1-19, Figures 3-8	1-7,10
Y	Description, Claims 1-19, Figures 3-8	8-9
Y	US 2007-0231886 A1 (KAHLERT, WOLFGANG et al.) 04 October 2007 See Claims 1-16, Figures 1-3	8-9
A	US 6509188 B1 (TROSCH, WALTER et al.) 21 January 2003 See Claims 1-36, Figures 1-5	1-10
A	US 2002-0146816 A1 (VELLINGER, JOHN C. et al.) 10 October 2002 See Claims 1-3, Figures 1-16	1-10
A	US 5162051 A1 (HOEKSEMA, SCOT D.) 10 November 1992 See Claims 1-21, Figures 1-7	1-10

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Information on patent family members

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