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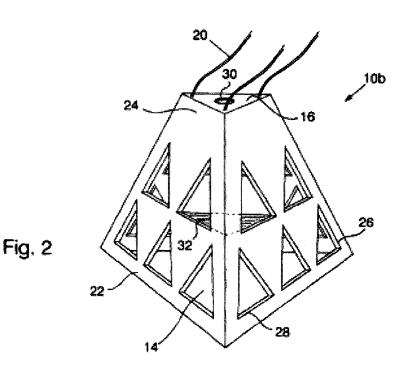
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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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[Continued on next page]

(54) Title: ARTIFICIAL REEF



(57) Abstract: An artificial reef provides a system that can inhibit coastal erosion, promote marine growth and offer shelter to marine life while being economically feasible and long-lasting. Various embodiments of the artificial reef unit devices and methods described herein can include three polygonal side walls, an enclosed top and an opened bottom, a base unit and corrugated walls.





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A. CLASSIFICATION OF SUBJECT MATTER

E02B 3/04(2006.01)i, E02B 3/06(2006.01)i, E02B 3/14(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) E02B 3/04; A01B 61/00; E02B 3/00; E02B 3/14; A01K 61/00; E02B 3/06

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:artificial reef, wall, hollow base, enclosure, concrete, impervious, and corrugate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6186702 B1 (BARTKOWSKI, MICHAEL SCOTT) 13 February 2001 See claims 1-2,5-6,9 and figures 1-2.	1-9
Y	JP 06-185034 A (MIYAZAKI, SHIRO) 05 July 1994 See abstract, paragraph [0006] and figures 3-5.	1-4,6
Y	US 4502816 A (CRETER, JR. et al.) 05 March 1985 See column 2, lines 15-48, claim 1 and figures 1-2.	5-9
A	JP 09-025621 A (OISHI et al.) 28 January 1997 See paragraphs [0011]-[0014] and figures 1-4.	1-9
A	US 4997311 A (VAN DOREN, DAVID A.) 05 March 1991 See claims 1-5 and figures 1-3.	1-9

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See patent family annex.

- * Special categories of cited documents:
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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 6186702 B1	13/02/2001	None	
JP 06-185034 A	05/07/1994	None	
US 04502816 A	05/03/1985	None	
JP 09-025621 A	28/01/1997	JP 03074130 B2	07/08/2000
US 04997311 A	05/03/1991	None	