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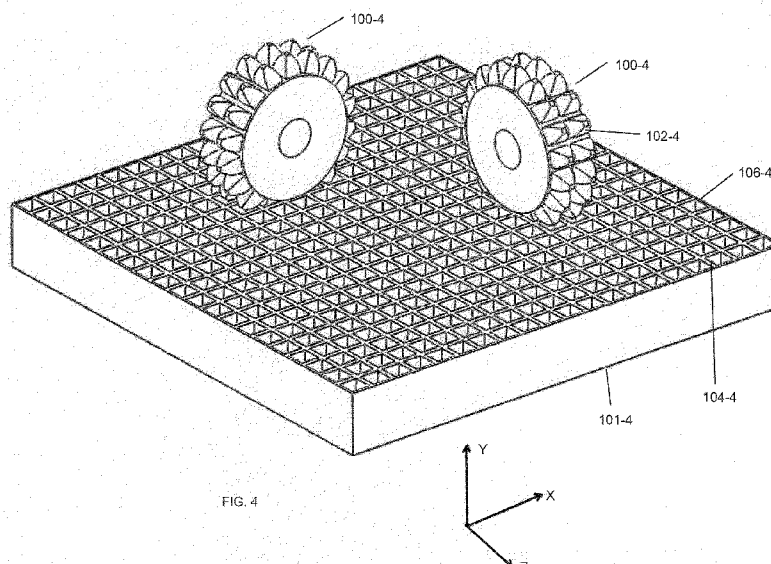
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[Continued on next page]

(54) Title: BIDIRECTIONAL GEAR, METHOD, AND APPLICATIONS



(57) Abstract: A bidirectional gear set includes a male bidirectional gear component having an array of addendum teeth and a female bidirectional gear component having an array of dedendum sockets, wherein each dedendum socket has a full boundary edge around an open end thereof. One or both of the male and female gear components may have a circular cross sectional geometry, or one may have a non-circular cross sectional geometry. The non-circular cross sectional geometry may be a flat sheet or a sheet with surface contour. In an intermeshed state, neither the male nor the female component can 'slide' relative to the other regardless of whether the male and female components are arranged in a parallel or perpendicular orientation. A method of making a bidirectional gear set is disclosed.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/027146**A. CLASSIFICATION OF SUBJECT MATTER*****F16H 55/02(2006.01)i, F16H 55/00(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)

F16H 55/02; A61H 15/00; G01C 22/00; F16H 3/30; F16H 25/24

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: bidirectional gear, array, teeth, socket, and rack.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6786497 B1 (OLSZEWSKI) 07 September 2004 See the abstract; Figs. 2-3; column 5, lines 47-67.	1-21
A	US 04204112 A (LANE) 20 May 1980 See the abstract; Fig. 1; column 4, lines 19-34.	1-21
A	JP 3097201 U (HOO) 06 August 2003 See the abstract; Fig. 1; paragraph [0003].	1-21
A	EP 0068633 A2 (KORYO et al.) 24 May 1982 See the abstract; Figs. 5-7b; page 6, line 19-page 8, line 15.	1-21

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

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6786497 B1	07.09.2004	None	
US 04204112 A	20.05.1980	None	
JP 3097201 U	06.08.2003	None	
EP 0068633 A2	24.05.1982	EP 0068633 A3 JP 57-209725 A	20.07.1983 23.12.1982