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(54) Title: A DETECTING SYSTEM WITH CIRCULAR MOTION SENSOR GROUPS

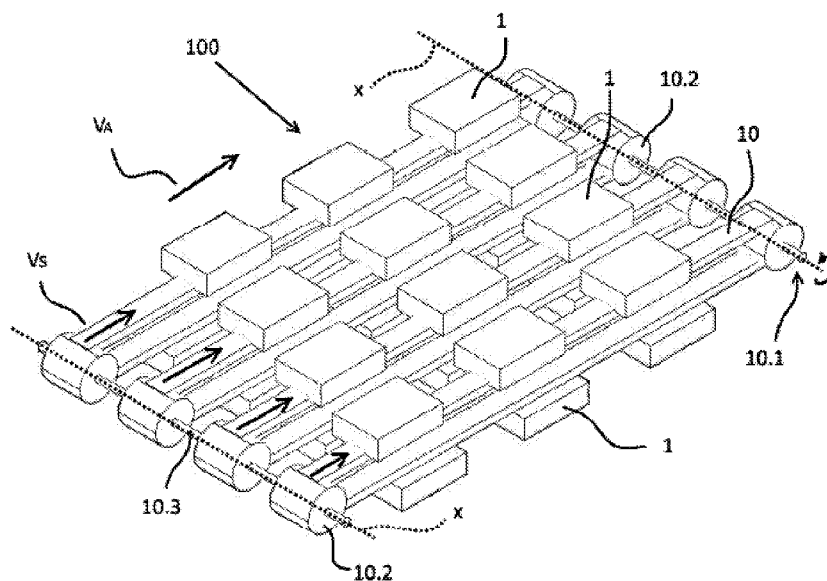


Figure 2

(57) Abstract: A detecting system (100) containing multiple number of sensor group (1) detecting explosives buried under the earth, equipped with feature of integration with vehicles (2) and capable to perform its functions even when the vehicle (2) reaches high speed and it is characterized in comprising multiple numbers of rotary bearings (10.2) housed onto at least two bearing axis (x) and at least one or two of them have drive center (10.1), at least one carrier rotary component (10) tightened on said rotary bearings (10.2) and forming continuous rotation with driving of the drive center (10.1), and multiple number of sensor groups (1) fixed on said bearing rotary component(s) (10) and rotated continuously together with the bearing rotary component (10).



MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,  
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## INTERNATIONAL SEARCH REPORT

International application No.

**PCT/TR2017/050692****A. CLASSIFICATION OF SUBJECT MATTER**

F41H 11/12 (2011.01)i; G01V 3/15 (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)

F41H; G01V

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

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

Epodoc, Wpi

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 2004044594 A2 (UNIV JOHNS HOPKINS [US]) 27 May 2004 (2004-05-27) paragraphs 3-46; figures 3,4,6	1-2,8-12 3-7
Y	US 2015032293 A1 (O'NEILL TREVOR [US]) 29 January 2015 (2015-01-29) paragraphs 4-5,10-11,23,33-45,47-51,53,54,75	3-7
A	WO 2016157077 A2 (DIRECTOR GENERAL DEFENCE RES & DEV ORGANISATION (DRDO) [IN]) 06 January 2016 (2016-01-06) the whole document	1-12
A	US 5712441 A (WEGMANN & CO [DE]) 27 January 1998 (1998-01-27) the whole document	1-12
A	US 5892360 A (INST DR FORSTER PRUFGERATEBAU [DE]) 06 April 1999 (1999-04-06) the whole document	1-12

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

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**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2004044594	A2	27 May 2004	AU	2003294237	A1	03 June 2004
				US	2005270154	A1	08 December 2005
US	2015032293	A1	29 January 2015	US	2016011596	A1	14 January 2016
				US	2017192427	A1	06 July 2017
WO	2016157077	A2	06 January 2016	EP	3278051	A2	07 February 2018
				US	2018252503	A1	06 September 2018
US	5712441	A	27 January 1998	CA	2174496	A1	21 October 1996
				EP	0738868	A2	23 October 1996
				ES	2120259T	T3	16 October 1998
				DK	0738868T	T3	19 April 1999
US	5892360	A	06 April 1999	EP	0769707	A	06 April 1999