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[Continued on next page]

- (54) **Title:** DISTRIBUTED CLAMPS FOR A DOWNHOLE SEISMIC SOURCE

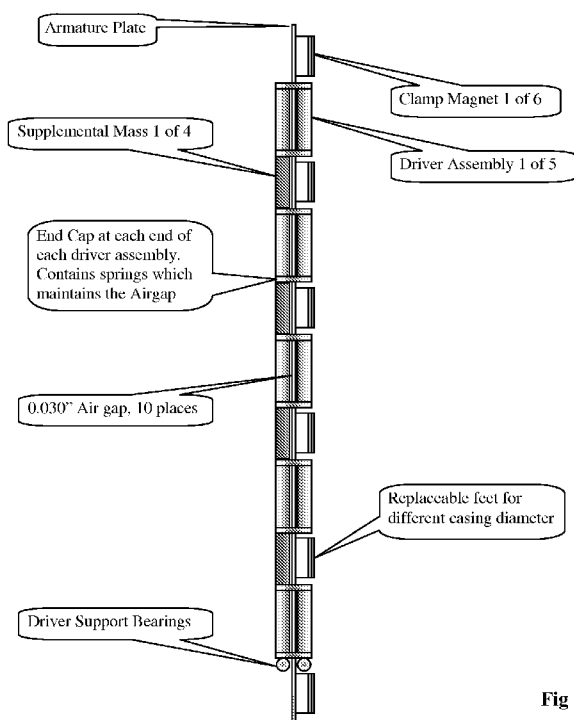


Fig 1

(57) **Abstract:** The present disclosure relates to increasing the output power of a clamped seismic or acoustic source disposed in a wellbore without damaging the borehole/casing/cement. One or more sources are provided and carried on a conveyance mechanism. The conveyance mechanism may be a wireline, a coiled tubing, or a drill pipe. The one or more sources are run into and/or out of the wellbore and temporarily disposed at various locations within the wellbore. The one or more sources are temporarily clamped to the wellbore at the various locations using distributed clamping, and a source signal is generated by the distributed clamped source. The distributed clamping device may have multiple clamping mechanisms along an increased length of the source or a continuous clamping mechanism along an increased length of the source.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/042554**A. CLASSIFICATION OF SUBJECT MATTER****G01V 1/40(2006.01)i, G01V 1/04(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)

G01V 1/40; G21B 23/00; E21B 47/00; G01V 3/00; E21B 47/06; E21B 31/06; G01V 3/18; E21B 47/12; G01V 1/52

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: seismic, earthquake, magnet, wellbore, borehole, clamp and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 7721809 B2 (MINTO, JAMES) 25 MAY 2010 See column 2 line 24-column 4 line 10, claims 1,6,7 and figures 1,4.	1-22
Y	US 2004-0196046 A1 (AIDAN et al.) 7 OCTOBER 2004 See paragraphs [0049],[0050],[0054],[0055], and figures 1,2.	1-22
A	US 2006-0225881 A1 (O'SHAUGHNESSY et al.) 12 OCTOBER 2006 See claims 1,2 and 5.	1-22
A	US 7187620 B2 (NUTT et al.) 6 MARCH 2007 See column 7 lines 32-35 and claim 1.	1-22
A	WO 2004-076813 A1 (SENSOR HIGHWAY LIMITED) 10 SEPTEMBER 2004 See claims 1-3 and 5.	1-22



Further documents are listed in the continuation of Box C.



See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

27 FEBRUARY 2013 (27.02.2013)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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