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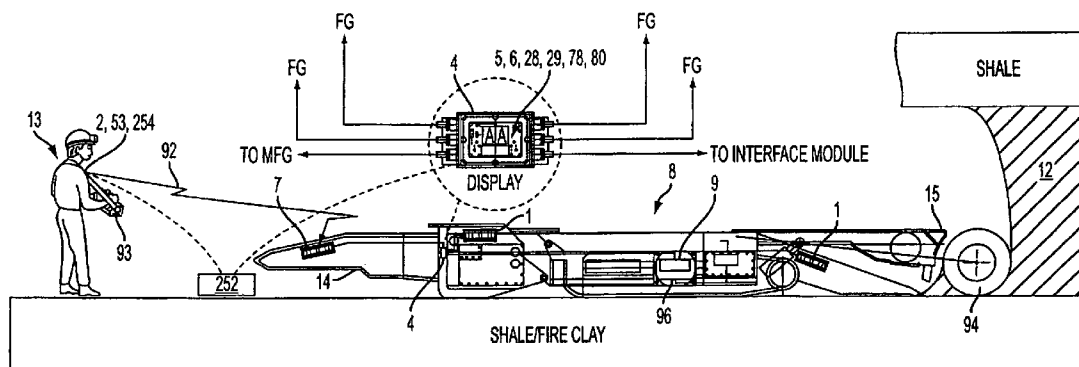
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(54) Title: SAFETY SYSTEM FOR MINING EQUIPMENT



(57) Abstract: A safety system for mining equipment is provided having a proximity-based system with a marker field generator in an explosion-proof housing. The generator has a resonant circuit with an inductive reactance that is provided by a ferrite rod wound with an electrical conductor. Also provided is an RF receiver to receive information about the strength of the generated marker field from a sensing device used by a worker. The system provides for a personal alert device, carried by personnel to be kept at a safe distance from the mining machine, the personal alert device being capable of detecting the marker field. Also disclosed is a geosteering system that stops the cutting of a continuous miner when the cutter reaches an interface between a mineral being mined and an adjacent formation that is not to be mined.

INTERNATIONAL SEARCH REPORT

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PCT/US05/34071

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G08B 13/14

USPC: 340/572.7

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)

U.S. : 340/572.7

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,452,163 B1 (FREDERICK et al) 17 September 2002, claims 1-13.	1-18, 25, 26, 28-31, 36-40
A	US 4,104,592 A (RATZ et al) 01 August 1978, see entire document.	1-78
A	US 4,173,140 A (LIEBMAN et al) 06 November 1979, see entire document.	1-78
A	US 4,314,602 A (FREDERICK et al) 09 February 1982, see entire document.	1-78
A	US 4,894,497 A (LYCAN) 16 January 1990, see entire document.	1-78
A	US 5,742,057 A (FREDERICK et al) 21 April 1998, see entire document.	1-78
A	US 5,796,109 A (FREDERICK et al) 18 August 1998, see entire document.	1-78



Further documents are listed in the continuation of Box C.



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"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
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PCT/US05/34071**C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,962,855 A (FREDERICK et al) 5 October 1999, see entire document.	1-78
A	US 6,355,932 B1 (FREDERICK) 12 March 2002, see entire document.	1-78
A	US 6,465,788 B1 (MEDLEY) 15 October 2002, see entire document.	1-78
A	US 6,469,619 B1 (MAYERCHECK et al) 22 October 2002, see entire document.	1-78
A	US 6,734,796 B2 (FORSTER et al) 11 May 2004, see entire document.	1-78
A, P	US 6,894,610 B2 (SCHUBERT et al) 17 May 2005, see entire document.	1-78
A, E	US 7,005,576 B2 (NIEDERRITER et al) 28 February 2006, see entire document.	1-78
A, E	US 7,034,305 B2 (FREDERICK et al) 25 April 2006, see entire document.	1-78