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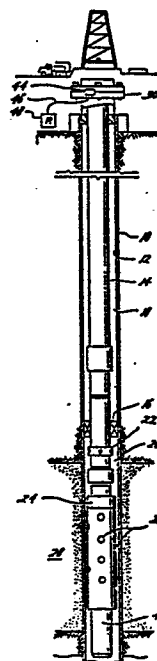
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54 Method and apparatus for detecting firing of perforating gun.

57 The present invention provides a method and apparatus for detecting complete firing of a perforating gun (24), particularly a perforating gun suspended on a string of tubing (14). The apparatus includes a time delay device (40) coupled to the lower end of the perforating gun (24) and arranged for ignition by an ignition train within the perforating gun. Complete firing of the perforating gun ignites the time delay device, which produces a distinctive signal. The distinctive signal is detected at the surface by at least one transducer (40), which is coupled to a recorder assembly (48). The recorder assembly provides an indication as to whether the perforating gun fired as intended.



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
E	EP-A-0 114 103 (SUMNER) * The whole document *	1-8, 16 -19, 24 -27	E 21 B 43/118 F 42 D 1/04
A	US-A-3 106 131 (BARR) * The whole document *	9, 10	
A	PRODUCT ENGINEERING, vol. 35, no. 8, April 13, 1964, pages 68-69, New York, US; A.W. SCHELLMAN: "Instant muscle with pyrotechnic power"	9, 10	
A	US-A-3 888 158 (TEMPLE) * Abstract; figure 3 *	12	
A	US-A-3 336 869 (PETERSON)		TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	CH-A- 643 354 (RYFFEL et al.)		E 21 B F 42 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24-06-1985	Examiner BENZE W.E.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

