



(12) **EUROPEAN PATENT APPLICATION**

(21) Application number: **89302337.4**

(51) Int. Cl.⁵: **E21B 43/1185**

(22) Date of filing: **09.03.89**

(30) Priority: **27.04.88 US 186906**
20.09.88 US 248329

(43) Date of publication of application:
02.11.89 Bulletin 89/44

(84) Designated Contracting States:
DE FR GB IT NL

(88) Date of deferred publication of the search report:
08.05.91 Bulletin 91/19

(71) Applicant: **HALLIBURTON COMPANY**
P.O. Drawer 1431

Duncan Oklahoma 73536(US)

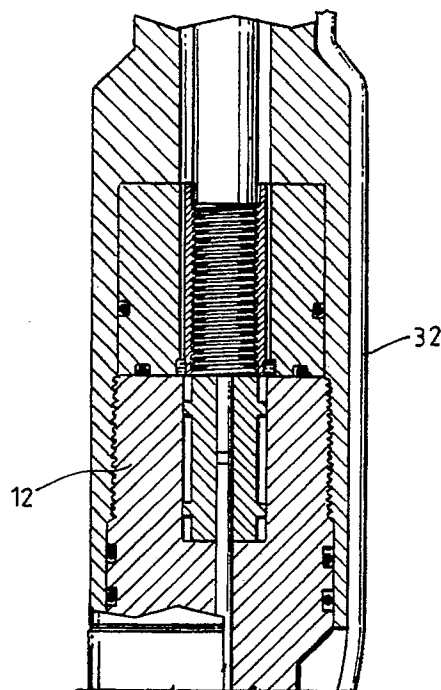
(72) Inventor: **Wesson, David S.**
P.O. Box 1170
Katy Texas 77492-1170(US)
 Inventor: **George Kevin R.**
P.O. Box 172
Columbus Texas 78934(US)

(74) Representative: **Wain, Christopher Paul et al**
A.A. THORNTON & CO. Northumberland
House 303-306 High Holborn
London WC1V 7LE(GB)

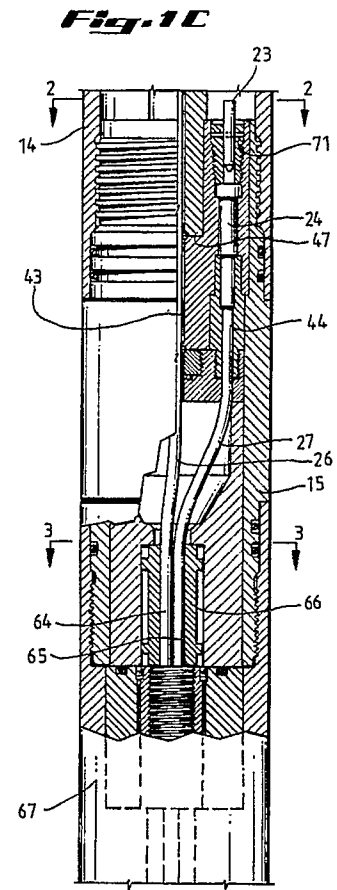
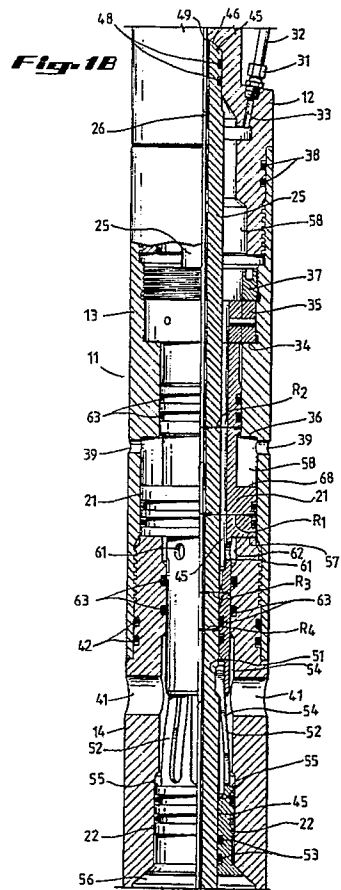
(54) **Firing head for well perforating gun.**

(57) A firing head assembly for a well bore perforating gun in which assembly alternative firing paths are provided. A first detonation cord (26) passes longitudinally through a generally cylindrical housing (11), providing a firing path from a firing head above the housing to a perforating gun below the housing. A firing pin (23) and second detonation cord (27) are located in the housing and are positioned radially offset from the longitudinal axis of the housing. Boosters (64,65) on the first and second detonation cords are positioned adjacent one another and opposite a third booster. Either or both of the first and second boosters may be used to fire the third booster. No splicing of detonation cords is required and the detonation cords are completely within a protective housing. The firing pin may be actuated by pressure or mechanical means.

Fig. 1A



EP 0 339 774 A3





European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 30 2337

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.5)
A	US-A-4 610 312 (NELSON) * Abstract; figures * - - -	1	E 21 B 43/1185
A	US-A-4 531 590 (PETERSON) * Abstract; figures * - - -	1	
A	US-A-4 657 089 (STOUT) * Abstract; figures * - - - - -	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			E 21 B
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		19 February 91	WEIAND T.
<div>CATEGORY OF CITED DOCUMENTS</div> <div><div>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 T: theory or principle underlying the invention</div><div>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</div></div>			