

Title (en)  
METHOD AND APPARATUS FOR CHARGING A HOLE

Title (de)  
VERFAHREN UND VORRICHTUNG ZUM LADEN VON BOHRLÖCHERN

Title (fr)  
PROCEDE ET APPAREIL DE CHARGEMENT D'UN TROU DE FORAGE

Publication  
**EP 1144943 A4 20020522 (EN)**

Application  
**EP 99966764 A 19991214**

Priority  
• AU 9901107 W 19991214  
• AU PP769998 A 19981214  
• US 13443899 P 19990517

Abstract (en)  
[origin: WO0036364A1] A method of charging hole (12) drilled in rock or concrete (10), the method including inserting a quantity of energetic material (14) on or near the bottom (16) of hole (12). Lead (28) connects initiator (18) with an initiation source at ground level. Hole (12) is filled with stemming material (20) to a level (L) and plug (22) is positioned to rest on stemming material (20). Lead (28) threads through plug (22) via a slot, recess or passage. Mass (30) such as the bucket of excavator (32) and plug (22) prevent stemming material (20) from being blown out of hole (12) when energetic material (14) is detonated. The risk of collar area (C) being fragmented and energised to produce fly rock is reduced since the length of plug (22) is commensurate with the length of collar area (C). Plug (22) and stemming material (20) can be replaced by a stemming bar, with the stemming bar attached directly to energetic material (14).

IPC 1-7  
**E21C 37/16**; **F42D 1/08**; **F42D 1/18**

IPC 8 full level  
**F42D 1/08** (2006.01); **F42D 1/18** (2006.01)

CPC (source: EP)  
**F42D 1/08** (2013.01); **F42D 1/18** (2013.01)

Citation (search report)  
• [XY] DE 628934 C 19360420 - GEORG MANDEL  
• [Y] US 1616048 A 19270201 - HOLT VICTOR L  
• [A] EP 0109067 A1 19840523 - KRUPP GMBH [DE]  
• [A] DE 949633 C 19560920 - OTTO LYNKER G M B H  
• [A] US 2812712 A 19571112 - THOMAS ASHURST  
• [A] US 1491661 A 19240422 - VIDO BAYAT  
• [A] US 1479070 A 19240101 - EDWARD HARRIS WILLIAM  
• [A] US 1896817 A 19330207 - HEITZMAN RICHARD J  
• See references of WO 0036364A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 0036364 A1 20000622**; CA 2360771 A1 20000622; CN 1338038 A 20020227; EP 1144943 A1 20011017; EP 1144943 A4 20020522; HK 1040762 A1 20020621; JP 2002532678 A 20021002; NO 20012883 D0 20010611; NO 20012883 L 20010724

DOCDB simple family (application)  
**AU 9901107 W 19991214**; CA 2360771 A 19991214; CN 99816176 A 19991214; EP 99966764 A 19991214; HK 02102560 A 20020404; JP 2000588562 A 19991214; NO 20012883 A 20010611