

Title (en)

DEVICE FOR SEQUENTIALLY FIRING ELECTRICAL DETONATORS

Title (de)

VORRICHTUNG ZUM SEQUENTIELLEN ZÜNDEN VON ELEKTRISCHEN ZÜNDERN

Title (fr)

DISPOSITIF DE MISE A FEU SEQUENTIELLE DE DETONATEURS ELECTRIQUES

Publication

EP 0653046 B1 19960918 (DE)

Application

EP 93917631 A 19930723

Priority

- DE 4225330 A 19920731
- EP 9301962 W 19930723

Abstract (en)

[origin: WO9403771A1] The invention concerns a device for the sequential firing of electrical detonators in several firing circuits, the device consisting of a detonating machine, electric leads and switches for activating the firing circuits. The detonating machine (1) is connected by a lead (2) to an electronic firing switch (3) to which are connected the firing circuits (13a... 13n) which consist of one or more series-connected electrical detonators (14a... 14n) and explosive charges (4a... 4n) designed to be detonated by the detonators, the electronic firing switch (3) consisting of a firing-current detection circuit (7), a logic circuit (8), switching relays (10a... 10n), a power supply (9) and protective resistors (11a... 11n).

IPC 1-7

F42D 1/055

IPC 8 full level

F42D 1/055 (2006.01)

CPC (source: EP US)

F42D 1/055 (2013.01 - EP US)

Designated contracting state (EPC)

FR GB

DOCDB simple family (publication)

WO 9403771 A1 19940217; DE 4225330 C1 19931104; EP 0653046 A1 19950517; EP 0653046 B1 19960918; US 5517920 A 19960521; ZA 935193 B 19940302

DOCDB simple family (application)

EP 9301962 W 19930723; DE 4225330 A 19920731; EP 93917631 A 19930723; US 36712195 A 19950302; ZA 935193 A 19930719