

CPC**COOPERATIVE PATENT CLASSIFICATION****F42D**

BLASTING (fuses, e.g. fuse cords, [C06C 5/00](#) ; { for obtaining fluid from wells [E21B 43/00](#) ; for mining or quarrying [E21C 37/00](#) ; for making tunnels or galleries [E21D 9/006](#) } ; cartridges [F42B 3/00](#))

WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

~~F42D 7/00~~ covered by [F42D 1/00](#) , [F42D 3/00](#)

F42D 1/00**Blasting methods or apparatus, e.g. loading or tamping**

- F42D 1/02 . Arranging blasting cartridges to form an assembly (adaptation of blasting cartridges therefor [F42B 3/02](#))
- F42D 1/04 . Arrangements for ignition ({ ignition systems for shaped charge perforators [E21B 43/1185](#) ; ignition devices for seismic energy generators [G01V 1/06](#))}
- F42D 1/041 .. { Tools for adapting cartridges for the mounting of detonators (Cartridges specially adapted for the mounting of detonators [F42B 3/26](#))}
- F42D 1/042 .. { Logic explosive circuits, e.g. with explosive diodes }
- F42D 1/043 .. { Connectors for detonating cords and ignition tubes, e.g. Nonel tubes (mounting of detonators in blasting cartridges [F42B 3/26](#))}
- F42D 1/045 .. Arrangements for electric ignition (dynamo-electric generators [H02K](#))
- F42D 1/05 ... Electric circuits for blasting
- F42D 1/055 specially adapted for firing multiple charges with a time delay
- F42D 1/06 .. Relative timing of multiple charges ({ [F42D 1/043](#) and [F42D 1/055](#) take precedence)
- F42D 1/08 . Tamping methods; Methods for loading boreholes with explosives; Apparatus therefor
- F42D 1/10 .. Feeding explosives in granular or slurry form; Feeding explosives by pneumatic or hydraulic pressure
- F42D 1/12 .. Feeding tamping material by pneumatic or hydraulic pressure
- F42D 1/14 .. Hand-operated tamping or loading
- F42D 1/16 ... Tamping tools
- F42D 1/18 .. Plugs for boreholes
- F42D 1/20 .. Tamping cartridges, i.e. cartridges containing tamping material (flexible or deformable blasting cartridges [F42B 3/087](#))
- F42D 1/22 .. Methods for holding or positioning for blasting cartridges or tamping cartridges
- F42D 1/24 .. characterised by the tamping material
- F42D 1/26 ... Tamping with foaming agents
- F42D 1/28 ... Tamping with gelling agents

F42D 3/00	Particular applications of blasting techniques { explosive welding B23K 20/08 ; explosive bolts or actuators F42B 3/00D ; explosive valves F16K 13/06 ; cutting devices actuated by explosion B23D 15/14B ; pyrotechnical actuators F15B 15/19 ; switching devices actuated by explosion H01H 39/00 }
F42D 3/02	. for demolition of tall structures, e.g. chimney stacks
F42D 3/04	. for rock blasting
F42D 3/06	. for seismic purposes
F42D 5/00	Safety arrangements
F42D 5/02	. Locating undetonated charges
F42D 5/04	. Rendering explosive charges harmless, e.g. destroying ammunition ({ F42B 39/14 and F42B 39/20 take precedence } ; extracting primers, dismantling ammunition F42B 33/04 , F42B 33/06 ; { chemical deactivating of explosives C06B 21/0091 }); Rendering detonation of explosive charges harmless
F42D 5/045	. . Detonation-wave absorbing or damping means
F42D 5/05	. . . Blasting mats
F42D 5/055	. . Silencing means for blasting operations
F42D 5/06	. Unloading boreholes
F42D 99/00	Subject matter not provided for in other groups in this subclass