

**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 3/00 D](#); explosive valves [F16K 13/06](#) ; cutting devices actuated by explosion [B23D 15/14 B](#); 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**