

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

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**