

# CPC COOPERATIVE PATENT CLASSIFICATION

## F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

### WEAPONS; BLASTING

#### F42 AMMUNITION; BLASTING (NOTES omitted)

#### 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

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<b>1/00</b>	<b>Blasting methods or apparatus, e.g. loading or tamping</b>	<b>3/00</b>	<b>Particular applications of blasting techniques</b> {explosive welding <a href="#">B23K 20/08</a> ; explosive bolts or actuators <a href="#">F42B 3/006</a> ; explosive valves <a href="#">F16K 13/06</a> ; cutting devices actuated by explosion <a href="#">B23D 15/145</a> ; pyrotechnical actuators <a href="#">F15B 15/19</a> ; switching devices actuated by explosion <a href="#">H01H 39/00</a> }
1/02	. Arranging blasting cartridges to form an assembly (adaptation of blasting cartridges therefor <a href="#">F42B 3/02</a> )		
1/04	. Arrangements for ignition {(ignition systems for shaped charge perforators <a href="#">E21B 43/1185</a> ; ignition devices for seismic energy generators <a href="#">G01V 1/06</a> )}	3/02	. for demolition of tall structures, e.g. chimney stacks
1/041	. . {Tools for adapting cartridges for the mounting of detonators (cartridges specially adapted for the mounting of detonators <a href="#">F42B 3/26</a> )}	3/04	. for rock blasting
1/042	. . {Logic explosive circuits, e.g. with explosive diodes}	3/06	. for seismic purposes
1/043	. . {Connectors for detonating cords and ignition tubes, e.g. Nonel tubes (mounting of detonators in blasting cartridges <a href="#">F42B 3/26</a> )}	<b>5/00</b>	<b>Safety arrangements</b>
1/045	. . Arrangements for electric ignition (dynamo-electric generators <a href="#">H02K</a> )	5/02	. Locating undetonated charges
1/05	. . . Electric circuits for blasting	5/04	. Rendering explosive charges harmless, e.g. destroying ammunition ({ <a href="#">F42B 39/14</a> and <a href="#">F42B 39/20</a> take precedence } ; extracting primers, dismantling ammunition <a href="#">F42B 33/04</a> , <a href="#">F42B 33/06</a> { ; chemical deactivating of explosives <a href="#">C06B 21/0091</a> } ); Rendering detonation of explosive charges harmless
1/055	. . . specially adapted for firing multiple charges with a time delay	5/045	. . Detonation-wave absorbing or damping means
1/06	. . Relative timing of multiple charges ({ <a href="#">F42D 1/043</a> and } <a href="#">F42D 1/055</a> take precedence)	5/05	. . . Blasting mats
1/08	. Tamping methods; Methods for loading boreholes with explosives; Apparatus therefor	5/055	. . Silencing means for blasting operations
1/10	. . Feeding explosives in granular or slurry form; Feeding explosives by pneumatic or hydraulic pressure	5/06	. Unloading boreholes
1/12	. . Feeding tamping material by pneumatic or hydraulic pressure	<b>99/00</b>	<b>Subject matter not provided for in other groups in this subclass</b>
1/14	. . Hand-operated tamping or loading		
1/16	. . . Tamping tools		
1/18	. . Plugs for boreholes		
1/20	. . Tamping cartridges, i.e. cartridges containing tamping material (flexible or deformable blasting cartridges <a href="#">F42B 3/087</a> )		
1/22	. . Methods for holding or positioning for blasting cartridges or tamping cartridges		
1/24	. . characterised by the tamping material		
1/26	. . . Tamping with foaming agents		
1/28	. . . Tamping with gelling agents		