SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

F42 AMMUNITION; BLASTING

F42C **AMMUNITION FUZES** (blasting cartridge initiators F42B 3/10; chemical aspects C06C)**; ARMING OR SAFETY MEANS THEREFOR** (filling fuzes F42B 33/02; fitting or extracting primers in or from fuzes F42B 33/04; containers for fuzes F42B 39/30) **[5]**

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FUZE-OPERATING PRINCIPLES
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1/00 **Impact fuzes, i.e. fuzes actuated only by ammunition impact [1, 2006.01]**

1/02 • with firing pin structurally combined with fuze **[1, 2006.01]**

1/04 • • operating by inertia of members on impact **[1, 2006.01]**

1/06 • • • for any direction of impact **[1, 2006.01]**

1/08 • • with delayed action after ignition of fuze (time fuzes F42C 9/00) **[1, 2006.01]**

1/09 • • the fuze activating a propulsive charge for propelling the ammunition or the warhead into the air, e.g. in rebounding projectiles **[5, 2006.01]**

1/10 • without firing pin **[1, 2006.01]**

1/12 • • with delayed action after ignition of fuze (time fuzes F42C 9/00) **[1, 2006.01]**

1/14 • operating at a predetermined distance from ground or target by means of a protruding member **[1, 2006.01]**

3/00 **Fuzes actuated by exposure to a liquid, e.g. sea-water** (F42C 5/00 takes precedence; time fuzes F42C 9/00) **[1, 2006.01]**

5/00 **Fuzes actuated by exposure to a predetermined ambient fluid pressure [1, 2006.01]**

5/02 • barometric pressure **[1, 2006.01]**

7/00 **Fuzes actuated by application of a predetermined mechanical force, e.g. tension, torsion, pressure** (by ammunition impact F42C 1/00; by exposure to a predetermined ambient fluid pressure F42C 5/00) **[1, 2006.01]**

7/02 • Contact fuzes, i.e. fuzes actuated by mechanical contact between a stationary ammunition, e.g. a land mine, and a moving target, e.g. a person (F42C 7/12 takes precedence) **[1, 2006.01]**

7/04 • • actuated by applying pressure on the ammunition head **[5, 2006.01]**

7/06 • • • and comprising pneumatic or hydraulic retarding means **[5, 2006.01]**

7/08 • • of release type, i.e. actuated by releasing pressure from the ammunition head **[5, 2006.01]**

7/10 • • of antenna type **[5, 2006.01]**

7/12 • Percussion fuzes of the double-action type, i.e. fuzes cocked and fired in a single movement, e.g. by pulling an incorporated percussion pin or hammer (percussion caps F42C 19/10) **[5, 2006.01]**

9/00 **Time fuzes; Combined time- and percussion- or pressure-actuated fuzes; Fuzes for timed self-destruction of ammunition [1, 2006.01]**

9/02 • the timing being caused by mechanical means **[1, 2006.01]**

9/04 • • by spring motor **[1, 2006.01]**

9/06 • • by flow of fluent material, e.g. shot, fluids **[1, 2006.01]**

9/08 • the timing being caused by chemical action, e.g. of acids **[1, 2006.01]**

9/10 • the timing being caused by combustion **[1, 2006.01]**

9/12 • • with ring combustion elements **[1, 2006.01]**

9/14 • Double fuzes; Multiple fuzes **[1, 2006.01]**

9/16 • • for self-destruction of ammunition **[1, 2006.01]**

9/18 • • • when the spin rate falls below a predetermined limit, e.g. a spring force being stronger than the locking action of a centrifugally-operated lock **[5, 2006.01]**

11/00 Electric fuzes (proximity fuzes F42C 13/00; electric igniters F42C 19/12) **[1, 2006.01]**
11/02 • with piezo-crystal **[1, 2006.01]**
11/04 • with current induction **[1, 2006.01]**
11/06 • with time delay by electric circuitry **[1, 2006.01]**

13/00 Proximity fuzes; Fuzes for remote detonation [1, 2006.01]
13/02 • operated by intensity of light or similar radiation **[1, 2006.01]**
13/04 • operated by radio waves **[1, 2006.01]**
13/06 • operated by sound waves **[1, 2006.01]**
13/08 • operated by variations in magnetic field **[1, 2006.01]**

14/00 Fuzes characterised by the ammunition class or type (F42C 1/00, F42C 13/00, F42C 15/00 take precedence) **[5, 2006.01]**
14/02 • for hand grenades **[5, 2006.01]**
14/04 • for torpedoes, marine mines or depth charges (influenced marine mines F42B 22/04) **[5, 2006.01]**
14/06 • for fall bombs **[5, 2006.01]**
14/08 • for land mines **[5, 2006.01]**

15/00 Arming-means in fuzes; Safety means for preventing premature detonation of fuzes or charges [1, 2006.01]
15/16 • wherein the firing pin is displaced out of the action line for safety (F42C 15/40 takes precedence) **[1, 2006.01]**
15/18 • wherein a carrier for an element of the pyrotechnic or explosive train is moved (F42C 15/40 takes precedence) **[1, 5, 2006.01]**
15/184 • • using a slidable carrier **[5, 2006.01]**
15/188 • • using a rotatable carrier **[5, 2006.01]**
15/192 • • • rotatable in a plane which is parallel to the longitudinal axis of the projectile **[5, 2006.01]**
15/196 • • • • by the action of centrifugal or inertia forces on the carrier body, e.g. the carrier having eccentrically mounted weights or eccentric centre of gravity **[5, 2006.01]**
15/20 • wherein a securing-pin or latch is removed to arm the fuze, e.g. removed from the firing pin (F42C 15/40 takes precedence) **[1, 2006.01]**
15/21 • • using spring action (F42C 15/23 takes precedence) **[5, 2006.01]**
15/22 • • using centrifugal force (F42C 15/23 takes precedence) **[1, 2006.01]**
15/23 • • by unwinding a flexible ribbon or tape **[5, 2006.01]**
15/24 • wherein the safety or arming action is effected by inertia means (F42C 15/196, F42C 15/20 take precedence) **[1, 2006.01]**
15/26 • • using centrifugal force **[1, 2006.01]**
15/28 • operated by flow of fluent material, e.g. shot, fluids (F42C 15/26 takes precedence) **[1, 2006.01]**
15/285 • • stored within the fuze housing **[5, 2006.01]**
15/29 • • operated by fluidic oscillators; operated by dynamic fluid pressure, e.g. ram-air operated **[5, 2006.01]**
15/295 • • operated by a turbine or a propeller; Mounting means therefor **[5, 2006.01]**
15/30 • • of propellant gases, i.e. derived from propulsive charge or rocket motor **[1, 2006.01]**
15/31 • • generated by the combustion of a pyrotechnic or explosive charge within the fuze **[5, 2006.01]**
15/32 • operated by change of fluid pressure (F42C 5/00, F42C 15/29 take precedence) **[1, 2006.01]**
15/33 • • by breaking a vacuum or pressure container **[5, 2006.01]**
15/34 • wherein the safety or arming action is effected by a blocking-member in the pyrotechnic or explosive train between primer and main charge (F42C 15/18, F42C 15/40 take precedence) **[1, 2006.01]**
15/36 • wherein arming is effected by combustion or fusion of an element (F42C 15/31 takes precedence) **[1, 2006.01]**
15/38 • wherein arming is effected by chemical action (F42C 3/00 takes precedence) **[1, 2006.01]**
15/40 • wherein the safety or arming action is effected electrically **[1, 2006.01]**
15/42 • • from a remote location, e.g. for controlled mines or mine fields **[5, 2006.01]**
15/44 • Arrangements for disarming, or for rendering harmless, fuzes after arming, e.g. after launch **[5, 2006.01]**

17/00 Fuze-setting apparatus [1, 2006.01]
17/02 • Fuze-setting keys **[1, 2006.01]**
17/04 • for electric fuzes **[5, 2006.01]**

19/00 Details of fuzes (arming means, safety means for preventing premature detonation F42C 15/00) **[1, 2006.01]**
19/02 • Fuze bodies; Fuze housings **[1, 2006.01]**
19/04 • Protective caps **[1, 2006.01]**
19/06 • Electric contact parts specially adapted for use with electric fuzes **[1, 2006.01]**
19/07 • • Nose-contacts for projectiles or missiles **[5, 2006.01]**
19/08 • Primers (initiators for blasting cartridges F42B 3/10); Detonators **[1, 2006.01]**
19/085 • • Primers for caseless ammunition **[5, 2006.01]**
19/09 • • Primers or detonators containing a hollow charge **[5, 2006.01]**
19/095 • • Arrangement of a multiplicity of primers or detonators, dispersed around a warhead, one of the primers or detonators being selected for directional detonation effects **[5, 2006.01]**
19/10 • • Percussion caps **[1, 2006.01]**
19/12 • • electric **[1, 2006.01]**
19/14 • • • operable also in the percussion mode **[5, 2006.01]**

21/00 Checking fuzes; Testing fuzes [1, 2006.01]

99/00 Subject matter not provided for in other groups of this subclass [2006.01]