

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

F42 AMMUNITION; BLASTING

F42B EXPLOSIVE CHARGES, e.g. FOR BLASTING; FIREWORKS; AMMUNITION (explosive compositions C06B; fuzes F42C; blasting F42D) [2, 5]

Subclass index

CHARGES CHARACTERISED BY THE FORM.....	1/00
BLASTING CARTRIDGES.....	3/00
Initiators.....	3/10
FIREWORKS.....	4/00
CARTRIDGE AMMUNITION.....	5/00
PROJECTILES FOR BLOWGUNS, BOWS, SPRING OR AIR GUNS.....	6/00
SHOTGUN AMMUNITION.....	7/00
TRAINING AMMUNITION.....	8/00
STEERING, STABILISING OR RETARDING OF AMMUNITION.....	10/00
AMMUNITION CHARACTERISED BY WARHEAD, INTENDED EFFECT OR MATERIAL.....	12/00
GUIDING OR SEALING AMMUNITION IN BARRELS, LUBRICATING OR CLEANING BARRELS BY AMMUNITION.....	14/00
TYPES OF AMMUNITION	
Warhead types.....	12/00
Self-propelled projectiles or missiles, rocket torpedoes, marine torpedoes.....	15/00-19/00
Depth charges.....	21/00
Marine mines.....	22/00
Land mines.....	23/00
Fall bombs.....	25/00
Hand grenades.....	27/00
Noiseless, smokeless or flashless projectiles.....	29/00
Bullets, rifle grenades, ordnance projectiles, harpoons.....	30/00
MANUFACTURING OR DISMANTLING OF AMMUNITION.....	33/00
TESTING OR CHECKING OF AMMUNITION.....	35/00
PACKAGING OR STORAGE OF AMMUNITION OR EXPLOSIVE CHARGES, SAFETY FEATURES THEREOF.....	39/00
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS.....	99/00

- 1/00 Explosive charges characterised by form or shape but not dependent on shape of container [1, 2006.01]**
- 1/02 • Shaped or hollow charges (blasting cartridges with cavities in the charge F42B 3/08; oil-winning using shaped-charge perforators E21B 43/116) [1, 2006.01]
- 1/024 • • provided with embedded bodies of inert material [5, 2006.01]
- 1/028 • • characterised by the form of the liner [5, 2006.01]
- 1/032 • • characterised by the material of the liner [5, 2006.01]
- 1/036 • • Manufacturing processes therefor [5, 2006.01]
- 1/04 • Detonator charges not forming part of the fuze [1, 2006.01]
- 3/00 Blasting cartridges, i.e. case and explosive** (fuse cords, e.g. detonating fuse cords, C06C 5/00; chemical aspects of detonators, blasting caps or primers C06C 7/00) [1, 2006.01]
- 3/02 • adapted to be united into assemblies [1, 2006.01]
- 3/04 • for producing gas under pressure [1, 2006.01]
- 3/06 • • with re-utilisable case [1, 2006.01]

- 3/08 • with cavities in the charge, e.g. hollow-charge blasting cartridges [1, 2006.01]
- 3/087 • Flexible or deformable blasting cartridges, e.g. bags or hoses (loaded cartridge bags F42B 5/38) [5, 2006.01]
- 3/093 • • in mat or tape form [5, 2006.01]
- 3/10 • Initiators therefor (percussion fuzes F42C 7/00; percussion caps F42C 19/10; electric primers F42C 19/12) [1, 2006.01]

Note(s)

Group F42B 3/18 takes precedence over groups F42B 3/103-F42B 3/16.

- 3/103 • • Mounting initiator heads in initiators; Sealing-plugs [5, 2006.01]
- 3/107 • • • Sealing-plugs characterised by the material used [5, 2006.01]
- 3/11 • • characterised by the material used, e.g. for initiator case or electric leads (F42B 3/107 takes precedence) [5, 2006.01]

- 3/113 • • activated by optical means, e.g. laser, flashlight [5, 2006.01]
- 3/117 • • activated by friction [5, 2006.01]
- 3/12 • • Bridge initiators [1, 2006.01]
- 3/13 • • • with semiconductive bridge [5, 2006.01]
- 3/14 • • Spark initiators [1, 2006.01]
- 3/16 • • Delay initiators [1, 2006.01]
- 3/18 • • Safety initiators resistant to premature firing by static electricity or stray currents [1, 2006.01]
- 3/182 • • • having shunting means [5, 2006.01]
- 3/185 • • • having semiconductive sealing plugs [5, 2006.01]
- 3/188 • • • having radio-frequency filters [5, 2006.01]
- 3/192 • • designed for neutralisation on contact with water [5, 2006.01]
- 3/195 • • Manufacture [5, 2006.01]
- 3/198 • • • of electric initiator heads [5, 2006.01]
- 3/22 • Elements for controlling or guiding the detonation wave, e.g. tubes (using inert bodies embedded in shaped or hollow charges F42B 1/024) [5, 2006.01]
- 3/24 • Cartridge closures or seals (top closures for shotgun ammunition cartridges F42B 7/12) [5, 2006.01]
- 3/26 • Arrangements for mounting initiators; Accessories therefor, e.g. tools [5, 2006.01]
- 3/28 • Cartridge cases characterised by the material used, e.g. coatings (for initiator cases F42B 3/11) [5, 2006.01]
- 4/00 Fireworks, i.e. pyrotechnic devices for amusement, display, illumination, or signal purposes** (signalling by explosives G08B; advertising by firework G09F 13/46) [2, 2006.01]
- 4/02 • in cartridge form, i.e. shell, propellant, and primer [2, 2006.01]
- 4/04 • Firecrackers [2, 2006.01]
- 4/06 • Aerial display rockets (rockets in general F42B 15/00) [2, 2006.01]
- 4/08 • • characterised by having vanes, wings, parachutes, or balloons [2, 2006.01]
- 4/10 • • characterised by having means to separate article or charge from casing without destroying casing [2, 2006.01]
- 4/12 • • • Parachute or flare separation [2, 2006.01]
- 4/14 • • characterised by having plural successively-ignited charges [2, 2006.01]
- 4/16 • Hand-thrown impact-exploded noise makers (cap pistols F41C 3/06) [4, 2006.01]
- 4/18 • Simulations, e.g. pine cone, house that is destroyed, warship, volcano [2, 2006.01]
- 4/20 • characterised by having holder or support other than casing, e.g. whirler or spike support [2, 2006.01]
- 4/22 • characterised by having means to separate an article or charge from casing without destroying casing (in aerial display rockets F42B 4/10) [2, 2006.01]
- 4/24 • characterised by having plural successively-ignited charges (in aerial display rockets F42B 4/14) [2, 2006.01]
- 4/26 • Flares; Torches [2, 2006.01]
- 4/28 • • Parachute flares (F42B 4/12 takes precedence) [2, 2006.01]
- 4/30 • Manufacture [2, 2006.01]
- 5/00 Cartridge ammunition, e.g. separately-loaded propellant charges** (shotgun ammunition F42B 7/00; practice or training ammunition F42B 8/00; missiles therefor F42B 12/00, F42B 14/00, F42B 15/00) [1, 2006.01]
- 5/02 • Cartridges, i.e. cases with propellant charge and missile [1, 2006.01]
- 5/03 • • containing more than one missile [4, 2006.01]
- 5/045 • • of telescopic type (F42B 5/184 takes precedence) [5, 2006.01]
- 5/05 • • for recoilless guns (recoilless guns using a counter-projectile to balance recoil F41A 1/10) [4, 2006.01]
- 5/067 • • Mounting or locking missiles in cartridge cases (F42B 5/18 takes precedence) [5, 2006.01]
- 5/073 • • • using an auxiliary locking element [5, 2006.01]
- 5/08 • • modified for electric ignition [1, 2006.01]
- 5/10 • • with self-propelled bullet [1, 2006.01]
- 5/14 • • for marking cattle [1, 2006.01]
- 5/145 • • for dispensing gases, vapours, powders, particles or chemically-reactive substances (from projectiles F42B 12/46, F42B 12/70) [5, 2006.01]
- 5/15 • • • for creating a screening or decoy effect, e.g. using radar chaff or infra-red material (infra-red flares F42B 4/26) [5, 2006.01]
- 5/155 • • • • Smoke-pot projectors, e.g. arranged on vehicles [5, 2006.01]
- 5/16 • • characterised by composition or physical dimensions or form of propellant charge or powder (chemical composition C06B) [1, 2006.01]
- 5/18 • • Caseless ammunition; Cartridges having combustible cases [1, 5, 2006.01]
- 5/184 • • • telescopic [5, 2006.01]
- 5/188 • • • Manufacturing processes therefor [5, 2006.01]
- 5/192 • • • Cartridge cases characterised by the material used [5, 2006.01]
- 5/196 • • • • Coatings [5, 2006.01]
- 5/24 • • for cleaning; for cooling; for lubricating [1, 5, 2006.01]
- 5/26 • Cartridge cases (F42B 5/18 takes precedence) [1, 2006.01]
- 5/28 • • of metal [1, 2006.01]
- 5/285 • • • formed by assembling several elements [4, 2006.01]
- 5/29 • • • • wound from sheets or strips [4, 2006.01]
- 5/295 • • • coated [4, 2006.01]
- 5/297 • • • • with plastics [5, 2006.01]
- 5/30 • • of plastics [1, 2006.01]
- 5/307 • • • formed by assembling several elements [4, 2006.01]
- 5/313 • • • • all elements made of plastics [4, 2006.01]
- 5/32 • • for rim fire [1, 2006.01]
- 5/34 • • with provision for varying the length [1, 2006.01]
- 5/36 • • modified for housing an integral firing-cap [1, 2006.01]
- 5/38 • Separately-loaded propellant charges, e.g. cartridge bags [4, 2006.01]
- 6/00 Projectiles or missiles specially adapted for projection without use of explosive or combustible propellant charge, e.g. for blow guns, bows or crossbows, hand-held spring or air guns** (for delivering hypodermic charges F42B 12/54; throwing-darts A63B 65/02; projectiles or missiles incorporating springs as the projecting means F41B 7/02) [5, 2006.01]
- 6/02 • Arrows; Crossbow bolts; Harpoons for hand-held spring or air guns [5, 2006.01]
- 6/04 • • Archery arrows (F42B 6/08, F41B 5/06 take precedence) [5, 2006.01]
- 6/06 • • • Tail ends, e.g. nocks, fletching [5, 2006.01]

- 6/08 • • Arrow heads; Harpoon heads [5, 2006.01]
6/10 • Air gun pellets [5, 2006.01]
- 7/00 Shotgun ammunition [1, 2006.01]**
7/02 • Cartridges, i.e. cases with propellant charge and missile [1, 2006.01]
7/04 • • of pellet type [1, 2006.01]
7/06 • • with cartridge case of plastics [1, 2006.01]
7/08 • • Wads therefor [1, 2006.01]
7/10 • • Ball or slug shotgun cartridges [1, 2006.01]
7/12 • • Cartridge top closures, i.e. for the missile side (closures for blasting cartridges F42B 3/24) [5, 2006.01]
- 8/00 Practice or training ammunition** (range-reducing, destabilising or braking arrangements F42B 10/00; with signalling effect F42B 12/02; F42B 19/00 takes precedence) [4, 2006.01]
8/02 • Cartridges [5, 2006.01]
8/04 • • Blank cartridges, i.e. primed cartridges without projectile but containing an explosive or combustible powder charge [5, 2006.01]
8/06 • • • for cap-firing pistols [5, 2006.01]
8/08 • • Dummy cartridges, i.e. inert cartridges containing neither primer nor explosive or combustible powder charge [5, 2006.01]
8/10 • • with sub-calibre adaptor [5, 2006.01]
8/12 • Projectiles or missiles (F42B 19/36 takes precedence) [5, 2006.01]
8/14 • • disintegrating in flight or upon impact [5, 2006.01]
8/16 • • • containing an inert filler in powder or granular form [5, 2006.01]
- Note(s) [5]**
Group F42B 8/14 takes precedence over groups F42B 8/18-F42B 8/26.
- 8/18 • • Rifle grenades [5, 2006.01]
8/20 • • Mortar grenades [5, 2006.01]
8/22 • • Fall bombs [5, 2006.01]
8/24 • • Rockets [5, 2006.01]
8/26 • • Hand grenades [5, 2006.01]
8/28 • Land or marine mines; Depth charges [5, 2006.01]
- 10/00 Means for influencing, e.g. improving, the aerodynamic properties of projectiles or missiles; Arrangements on projectiles or missiles for stabilising, steering, range-reducing, range-increasing or fall-retarding** (F42B 6/00 takes precedence; sub-calibre projectiles having sabots F42B 14/00) [5, 2006.01]
10/02 • Stabilising arrangements [5, 2006.01]
10/04 • • using fixed fins (F42B 10/22 takes precedence) [5, 2006.01]
10/06 • • • Tail fins [5, 2006.01]
10/08 • • • • Flechette-type projectiles [5, 2006.01]
10/10 • • • • the fins being formed in the barrel by deformation of the projectile body [5, 2006.01]
10/12 • • using fins longitudinally-slidable with respect to the projectile or missile [5, 2006.01]
10/14 • • using fins spread or deployed after launch, e.g. after leaving the barrel [5, 2006.01]
10/16 • • • Wrap-around fins [5, 2006.01]
10/18 • • • using a longitudinally slidable support member [5, 2006.01]
10/20 • • • deployed by combustion gas pressure, or by pneumatic or hydraulic forces [5, 2006.01]
- 10/22 • • Projectiles of cannellured type [5, 2006.01]
10/24 • • • with inclined grooves [5, 2006.01]
10/26 • • using spin (F42B 10/04, F42B 10/12, F42B 10/14, F42B 10/24, F42B 14/02 take precedence) [5, 2006.01]
10/28 • • • induced by gas action [5, 2006.01]
10/30 • • • • using rocket motor nozzles [5, 2006.01]
10/32 • Range-reducing or range-increasing arrangements; Fall-retarding means [5, 2006.01]
10/34 • • Tubular projectiles [5, 2006.01]
10/36 • • • Ring-foil projectiles [5, 2006.01]
10/38 • • Range-increasing arrangements (F42B 10/34 takes precedence) [5, 2006.01]
10/40 • • • with combustion of a slow-burning charge, e.g. fumers, base-bleed projectiles [5, 2006.01]
10/42 • • • Streamlined projectiles [5, 2006.01]
10/44 • • • • Boat-tails specially adapted for drag reduction [5, 2006.01]
10/46 • • • • Streamlined nose cones; Windshields; Radomes [5, 2006.01]
10/48 • • Range-reducing, destabilising or braking arrangements; Fall-retarding means (F42B 10/34 takes precedence) [5, 2006.01]
10/50 • • • Brake flaps [5, 2006.01]
10/52 • • • Nose cones [5, 2006.01]
10/54 • • • Spin braking means [5, 2006.01]
10/56 • • • of parachute type [5, 2006.01]
10/58 • • • of rotochute type [5, 2006.01]
10/60 • Steering arrangements (F42B 19/01 takes precedence) [5, 2006.01]
10/62 • • Steering by movement of flight surfaces [5, 2006.01]
10/64 • • • of fins [5, 2006.01]
10/66 • • Steering by varying intensity or direction of thrust (thrust vector control of rocket engine plants F02K 9/80) [5, 2006.01]
- 12/00 Projectiles, missiles or mines characterised by the warhead, the intended effect, or the material** (F42B 6/00, F42B 10/00, F42B 14/00 take precedence; for practice or training F42B 8/12, F42B 8/28; self-propulsion or guidance aspects F42B 15/00) [5, 2006.01]
12/02 • characterised by the warhead or the intended effect [5, 2006.01]
12/04 • • of armour-piercing type [5, 2006.01]
12/06 • • • with hard or heavy core; Kinetic energy penetrators (F42B 12/16, F42B 12/74 take precedence) [5, 2006.01]
12/08 • • • with armour-piercing caps; with armoured cupola [5, 2006.01]
12/10 • • • with shaped or hollow charge (shaped or hollow charges per se F42B 1/02) [5, 2006.01]
12/12 • • • • rotatably mounted with respect to missile housing [5, 2006.01]
12/14 • • • • the symmetry axis of the hollow charge forming an angle with the longitudinal axis of the projectile [5, 2006.01]
12/16 • • • • in combination with an additional projectile or charge, acting successively on the target [5, 2006.01]
12/18 • • • • • Hollow charges in tandem arrangement [5, 2006.01]
12/20 • • of high-explosive type (F42B 12/44 takes precedence) [5, 2006.01]
12/22 • • • with fragmentation-hull construction [5, 2006.01]

F42B

- 12/24 • • • • with grooves, recesses or other wall weakenings [5, 2006.01]
- 12/26 • • • • the projectile wall being formed by a spirally-wound element [5, 2006.01]
- 12/28 • • • • the projectile wall being built from annular elements [5, 2006.01]
- 12/30 • • • • Continuous-rod warheads [5, 2006.01]
- 12/32 • • • • the hull or case comprising a plurality of discrete bodies, e.g. steel balls, embedded therein [5, 2006.01]
- 12/34 • • expanding before or on impact, i.e. of dum-dum or mushroom type [5, 2006.01]
- 12/36 • • for dispensing materials; for producing chemical or physical reaction; for signalling [5, 2006.01]
- 12/38 • • • of tracer type [5, 2006.01]
- 12/40 • • • of target-marking, i.e. impact-indicating, type (F42B 12/48 takes precedence) [5, 2006.01]
- 12/42 • • • of illuminating type, e.g. carrying flares [5, 2006.01]
- 12/44 • • • of incendiary type (F42B 12/46 takes precedence) [5, 2006.01]
- 12/46 • • • for dispensing gases, vapours, powders or chemically-reactive substances (F42B 12/70 takes precedence) [5, 2006.01]
- 12/48 • • • • smoke-producing [5, 2006.01]
- 12/50 • • • • by dispersion [5, 2006.01]
- 12/52 • • • • • Fuel-air explosive devices [5, 2006.01]
- 12/54 • • • • by implantation, e.g. hypodermic projectiles [5, 2006.01]
- 12/56 • • • for dispensing discrete solid bodies (F42B 12/70 takes precedence) [5, 2006.01]
- 12/58 • • • • Cluster or cargo ammunition, i.e. projectiles containing one or more submissiles (F42B 12/32 takes precedence) [5, 2006.01]
- 12/60 • • • • • the submissiles being ejected radially [5, 2006.01]
- 12/62 • • • • • the submissiles being ejected parallel to the longitudinal axis of the projectile [5, 2006.01]
- 12/64 • • • • • the submissiles being of shot- or flechette-type [5, 2006.01]
- 12/66 • • • • • Chain-shot, i.e. the submissiles being interconnected by chains or the like [5, 2006.01]
- 12/68 • • • • Line-carrying missiles, e.g. for life-saving (harpoons F42B 30/14) [5, 2006.01]
- 12/70 • • • • for dispensing radar chaff or infra-red material (radar-reflector targets, active targets transmitting infra-red radiation F41J 2/00; radar-reflecting surfaces H01Q 15/14) [5, 2006.01]
- 12/72 • characterised by the material (heat treatment for explosive shells C21D 9/16) [5, 2006.01]
- 12/74 • • of the core or solid body [5, 2006.01]
- 12/76 • • of the casing [5, 2006.01]
- 12/78 • • • of jackets for smallarm bullets [5, 2006.01]
- 12/80 • • • Coatings [5, 2006.01]
- 12/82 • • • • reduction friction [5, 2006.01]
- 14/00 Projectiles or missiles characterised by arrangements for guiding or sealing them inside barrels, or for lubricating or cleaning barrels [5, 2006.01]**
- 14/02 • Driving bands; Rotating bands (F42B 14/04 takes precedence) [5, 2006.01]
- 14/04 • Lubrication means in missiles (coatings for reducing friction F42B 12/82) [5, 2006.01]
- 14/06 • Sub-calibre projectiles having sabots; Sabots therefor [5, 2006.01]
- 14/08 • • Sabots filled with propulsive charges; Removing sabots by combustion of pyrotechnic elements or by propulsive-gas pressure (arrangements on barrels for removing sabots from projectiles F41A 21/46) [5, 2006.01]
- 15/00 Self-propelled projectiles or missiles, e.g. rockets; Guided missiles (F42B 10/00, F42B 12/00, F42B 14/00 take precedence; for practice or training F42B 8/12; rocket torpedoes F42B 17/00; marine torpedoes F42B 19/00; cosmonautic vehicles B64G; jet-propulsion plants F02K) [1, 4, 2006.01]**
- 15/01 • Arrangements thereon for guidance or control (aircraft flight control B64C; guidance systems other than those only installed aboard F41G 7/00, F41G 9/00; locating by use of radio or other waves G01S; flight control in general G05D 1/00; computing aspects G06) [5, 2006.01]
- 15/04 • • using wire, e.g. for guiding ground-to-ground rockets [1, 2006.01]
- 15/08 • for carrying measuring instruments (adaptations for meteorology G01W 1/08) [1, 2006.01]
- 15/10 • Missiles having a trajectory only in the air [1, 2006.01]
- 15/12 • • Intercontinental ballistic missiles (F42B 15/01 takes precedence) [1, 4, 2006.01]
- 15/20 • Missiles having a trajectory beginning below water surface (having additional propulsion means for movement through water F42B 17/00) [1, 2006.01]
- 15/22 • Missiles having a trajectory finishing below water surface (having additional propulsion means for movement through water F42B 17/00) [1, 2006.01]
- 15/34 • Protection against overheating or radiation, e.g. heat shields; Additional cooling arrangements [5, 2006.01]
- 15/36 • Means for interconnecting rocket-motor and body section; Multi-stage connectors; Disconnecting means [5, 2006.01]
- 15/38 • • Ring-shaped explosive elements for the separation of rocket parts [5, 2006.01]
- 17/00 Rocket torpedoes, i.e. missiles provided with separate propulsion means for movement through air and through water (F42B 12/00 takes precedence) [1, 2006.01]**
- 19/00 Marine torpedoes, e.g. launched by surface vessels or submarines (having additional propulsion means for movement through air F42B 17/00); Sea mines having self-propulsion means (F42B 12/00 takes precedence; launching means F41F; locating by use of radio or other waves G01S; automatic control of course G05D 1/00; firing directors or calculators G06G) [1, 2006.01]**
- 19/01 • Steering control [1, 2006.01]
- 19/04 • • Depth control [1, 2006.01]
- 19/06 • • Directional control [1, 2006.01]
- 19/08 • • with means for preventing rolling or pitching [1, 2006.01]
- 19/10 • • remotely controlled, e.g. by sonic or radio control (control systems using wire F41G 7/32) [1, 2006.01]
- 19/12 • Propulsion specially adapted for torpedoes (marine propulsion in general B63H) [1, 2006.01]
- 19/14 • • by compressed-gas motors [1, 2006.01]
- 19/16 • • • of cylinder type [1, 2006.01]
- 19/18 • • • of turbine type [1, 2006.01]

19/20	<ul style="list-style-type: none"> • characterised by the composition of propulsive gas; Manufacture or heating thereof in torpedoes [1, 2006.01] 	30/00	Projectiles or missiles, not otherwise provided for, characterised by the ammunition class or type, e.g. by the launching apparatus or weapon used (F42B 10/00, F42B 12/00, F42B 14/00 take precedence) [5, 2006.01]
19/22	<ul style="list-style-type: none"> • by internal-combustion engines [1, 2006.01] 	30/02	<ul style="list-style-type: none"> • Bullets [5, 2006.01]
19/24	<ul style="list-style-type: none"> • by electric motors [1, 2006.01] 	30/04	<ul style="list-style-type: none"> • Rifle grenades [5, 2006.01]
19/26	<ul style="list-style-type: none"> • by jet propulsion [1, 2006.01] 	30/06	<ul style="list-style-type: none"> • Bullet traps or bullet decelerators therefor [5, 2006.01]
19/28	<ul style="list-style-type: none"> • with means for avoiding visible wake [1, 2006.01] 	30/08	<ul style="list-style-type: none"> • Ordnance projectiles or missiles, e.g. shells [5, 2006.01]
19/30	<ul style="list-style-type: none"> • with timing control of propulsion [1, 2006.01] 	30/10	<ul style="list-style-type: none"> • Mortar projectiles [5, 2006.01]
19/36	<ul style="list-style-type: none"> • adapted to be used for exercise purposes, e.g. indicating position or course [1, 2006.01] 	30/12	<ul style="list-style-type: none"> • with provision for additional propulsive charges, or for varying the length [5, 2006.01]
19/38	<ul style="list-style-type: none"> • with means for causing torpedoes to surface at end of run [1, 2006.01] 	30/14	<ul style="list-style-type: none"> • Harpoons (for hand-held spring or air guns F42B 6/02) [5, 2006.01]
19/40	<ul style="list-style-type: none"> • by expelling liquid ballast [1, 2006.01] 	33/00	Manufacture of ammunition; Dismantling of ammunition; Apparatus therefor (F42B 5/188 takes precedence; manufacturing processes for hollow charges F42B 1/036; manufacturing of blasting cartridge initiators F42B 3/195) [1, 2006.01]
19/42	<ul style="list-style-type: none"> • by releasing solid ballast [1, 2006.01] 	33/02	<ul style="list-style-type: none"> • Filling cartridges, missiles, or fuzes; Inserting propellant or explosive charges [1, 2006.01]
19/44	<ul style="list-style-type: none"> • by enlarging displacement [1, 2006.01] 	33/04	<ul style="list-style-type: none"> • Fitting or extracting primers in or from fuzes or charges [1, 2006.01]
19/46	<ul style="list-style-type: none"> • adapted to be launched from aircraft [1, 2006.01] 	33/06	<ul style="list-style-type: none"> • Dismantling fuzes, cartridges, projectiles, missiles, rockets, or bombs (F42B 33/04 takes precedence) [1, 2006.01]
21/00	Depth charges (F42B 12/00 takes precedence; for practice or training F42B 8/28; laying aspects B63G) [1, 2006.01]	33/10	<ul style="list-style-type: none"> • Reconditioning used cartridge cases [1, 2006.01]
22/00	Marine mines, e.g. launched by surface vessels or submarines (F42B 12/00 takes precedence; for practice or training F42B 8/28; mine laying or sweeping B63G) [1, 2006.01]	33/12	<ul style="list-style-type: none"> • Crimping shotgun cartridges [1, 2006.01]
22/02	<ul style="list-style-type: none"> • Contact mines (contact fuzes F42C 7/02) [1, 2006.01] 	33/14	<ul style="list-style-type: none"> • Surface treatment of cartridges or cartridge cases [1, 2006.01]
22/04	<ul style="list-style-type: none"> • Influenced mines, e.g. by magnetic or acoustic effect [1, 2006.01] 	35/00	Testing or checking of ammunition [1, 2006.01]
22/06	<ul style="list-style-type: none"> • Ground mines [1, 2006.01] 	35/02	<ul style="list-style-type: none"> • Gauging, sorting, trimming or shortening cartridges or missiles [1, 2006.01]
22/08	<ul style="list-style-type: none"> • Drifting mines (with propulsion means F42B 19/00) [1, 2006.01] 	39/00	Packaging or storage of ammunition or explosive charges; Safety features thereof; Cartridge belts or bags [1, 2006.01]
22/10	<ul style="list-style-type: none"> • Moored mines [1, 2006.01] 	39/02	<ul style="list-style-type: none"> • Cartridge bags; Bandoleers [1, 2006.01]
22/12	<ul style="list-style-type: none"> • at a fixed depth setting [1, 2006.01] 	39/08	<ul style="list-style-type: none"> • Cartridge belts [1, 2006.01]
22/14	<ul style="list-style-type: none"> • at a variable depth setting [1, 2006.01] 	39/10	<ul style="list-style-type: none"> • Machines for charging or for extracting cartridges from feed belts [1, 2006.01]
22/16	<ul style="list-style-type: none"> • using mechanical means, e.g. plummet and float [1, 2006.01] 	39/14	<ul style="list-style-type: none"> • Explosion or fire protection arrangements on packages or ammunition (F42B 39/20 takes precedence) [5, 2006.01]
22/18	<ul style="list-style-type: none"> • using hydrostatic means [1, 2006.01] 	39/16	<ul style="list-style-type: none"> • Fire-extinguishing [5, 2006.01]
22/20	<ul style="list-style-type: none"> • using magnetic or acoustic depth-control means [1, 2006.01] 	39/18	<ul style="list-style-type: none"> • Heat shields; Thermal insulation [5, 2006.01]
22/22	<ul style="list-style-type: none"> • having self-contained sinking means [1, 2006.01] 	39/20	<ul style="list-style-type: none"> • Packages or ammunition having valves for pressure-equalising; Packages or ammunition having plugs for pressure release, e.g. meltable [5, 2006.01]
22/24	<ul style="list-style-type: none"> • Arrangement of mines in fields or barriers (net barriers for harbour defence F41H 11/05) [1, 2006.01] 	39/22	<ul style="list-style-type: none"> • Locking of ammunition in transport containers [5, 2006.01]
22/42	<ul style="list-style-type: none"> • with anti-sweeping means, e.g. electrical [1, 2006.01] 	39/24	<ul style="list-style-type: none"> • Shock-absorbing arrangements in packages [5, 2006.01]
22/44	<ul style="list-style-type: none"> • adapted to be launched from aircraft [1, 2006.01] 	39/26	<ul style="list-style-type: none"> • Packages or containers for a plurality of ammunition, e.g. cartridges (F42B 39/14-F42B 39/24, F42B 39/28 take precedence) [5, 2006.01]
23/00	Land mines (F42B 12/00 takes precedence; for practice or training F42B 8/28) [1, 2006.01]	39/28	<ul style="list-style-type: none"> • Ammunition racks, e.g. in vehicles [5, 2006.01]
23/04	<ul style="list-style-type: none"> • anti-vehicle [1, 5, 2006.01] 	39/30	<ul style="list-style-type: none"> • Containers for detonators or fuzes (F42B 39/14, F42B 39/20 take precedence) [5, 2006.01]
23/08	<ul style="list-style-type: none"> • non-metallic [1, 5, 2006.01] 	99/00	Subject matter not provided for in other groups of this subclass [2006.01]
23/10	<ul style="list-style-type: none"> • anti-personnel [1, 5, 2006.01] 		
23/14	<ul style="list-style-type: none"> • non-metallic [1, 5, 2006.01] 		
23/16	<ul style="list-style-type: none"> • of missile type, i.e. for detonation after ejection from ground (fuzes for initiating mine ejection F42C 1/09) [1, 5, 2006.01] 		
23/24	<ul style="list-style-type: none"> • Details [1, 2006.01] 		
25/00	Fall bombs (F42B 10/00, F42B 12/00 take precedence; for practice or training F42B 8/12) [1, 5, 2006.01]		
27/00	Hand grenades (F42B 12/00 takes precedence; for practice or training F42B 8/12) [1, 2006.01]		
27/08	<ul style="list-style-type: none"> • with handle [1, 2006.01] 		
29/00	Noiseless, smokeless, or flashless missiles launched by their own explosive propellant [1, 2006.01]		