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

F41 WEAPONS

F41A FUNCTIONAL FEATURES OR DETAILS COMMON TO BOTH SMALLARMS AND ORDNANCE, e.g. CANNONS; MOUNTINGS FOR SMALLARMS OR ORDNANCE [5]

Note(s) [5]

1. This subclass covers those features or details which are considered to be of a kind generally applicable to, or to be concerned with intrinsic functions common to, both smallarms and ordnance.
2. Such features or details are classified in this subclass, even if they are stated to be applied only to smallarms or only to ordnance.
3. Attention is drawn to the definitions given in Note (2) following the title of class F41.

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1/00 Missile propulsion characterised by the use of explosive or combustible propellant charges (projecting missiles without use of explosive or combustible propellant charge F41B; launching rockets or torpedoes F41F 3/00; missile self-propulsion F42B 15/00) **[5, 2006.01]**

1/02 • Hypervelocity missile propulsion using successive means for increasing the propulsive force, e.g. using successively initiated propellant charges arranged along the barrel length; Multistage missile propulsion **[5, 2006.01]**

1/04 • Missile propulsion using the combustion of a liquid or gaseous fuel, e.g. hypergolic fuel **[5, 2006.01]**

1/06 • Adjusting the range without varying elevation angle or propellant charge data, e.g. by venting a part of the propulsive charge gases, or by adjusting the capacity of the cartridge or combustion chamber **[5, 2006.01]**

1/08 • Recoilless guns, i.e. guns having propulsion means producing no recoil **[5, 2006.01]**

1/10 • • a counter projectile being used to balance recoil **[5, 2006.01]**

3/00 Breech mechanism, e.g. locks [5, 2006.01]

3/02 • Block action, i.e. the main breech opening movement being transverse to the barrel axis **[5, 2006.01]**

3/04 • • with pivoting breech-block **[5, 2006.01]**

3/06 • • • about a horizontal axis transverse to the barrel axis at the rear of the block (F41A 3/08 takes precedence) **[5, 2006.01]**

3/08 • • • carrying a rotably mounted obturating plug of the screw-thread or the interrupted-thread type (F41A 3/30 takes precedence) **[5, 2006.01]**

3/10 • • with sliding breech-block, e.g. vertically **[5, 2006.01]**

3/12 • Bolt action, i.e. the main breech opening movement being parallel to the barrel axis **[5, 2006.01]**

3/14 • • Rigid bolt locks, i.e. having locking elements rigidly mounted on the bolt or bolt handle and on the barrel or breech-housing respectively **[5, 2006.01]**

3/16 • • • the locking elements effecting a rotary movement about the barrel axis, e.g. rotating cylinder bolt locks **[5, 2006.01]**

3/18 • • • • hand-operated **[5, 2006.01]**
3/20 • • • • • Straight-pull operated bolt locks, i.e. the operating hand effecting only a straight movement parallel to the barrel axis **[5, 2006.01]**
3/22 • • • • • the locking being effected by rotating the operating handle or lever transversely to the barrel axis **[5, 2006.01]**
3/24 • • • • • • the locking elements forming part of the operating handle or lever **[5, 2006.01]**
3/26 • • • • semi-automatically or automatically operated, e.g. having a slidable bolt-carrier and a rotatable bolt **[5, 2006.01]**
3/28 • • • • • having fixed locking elements on the non-rotating bolt and rotating locking elements mounted on the barrel or breech housing, e.g. rotatable rings **[5, 2006.01]**
3/30 • • • • Interlocking means, e.g. locking lugs, screw threads **[5, 2006.01]**
3/32 • • • the bolt being rocked about a notional axis transverse to the barrel axis **[5, 2006.01]**
3/34 • • • the bolt additionally effecting a sliding movement transverse to the barrel axis **[5, 2006.01]**
3/36 • • Semi-rigid bolt locks, i.e. having locking elements movably mounted on the bolt or on the barrrel or breech housing **[5, 2006.01]**
3/38 • • • having rocking locking elements, e.g. pivoting levers or vanes **[5, 2006.01]**
3/40 • • • • mounted on the bolt (F41A 3/42 takes precedence) **[5, 2006.01]**
3/42 • • • • hand-operated **[5, 2006.01]**
3/44 • • • having sliding locking elements, e.g. balls, rollers **[5, 2006.01]**
3/46 • • • • mounted on the bolt (F41A 3/48 takes precedence) **[5, 2006.01]**
3/48 • • • • hand-operated **[5, 2006.01]**
3/50 • • • Toggle-joint locks, e.g. crank-operated **[5, 2006.01]**
3/52 • • • • hand-operated **[5, 2006.01]**
3/54 • • Bolt locks of the unlocked type, i.e. being inertia operated **[5, 2006.01]**
3/56 • • • the bolt being provided with an additional slidable mass **[5, 2006.01]**
3/58 • Breakdown breech mechanisms, e.g. for shotguns **[5, 2006.01]**
3/60 • Breech mechanisms for guns having two or more barrels (F41A 3/58 takes precedence; for revolving-cannon guns F41F 1/10) **[5, 2006.01]**
3/62 • using combustion gas pressure for adding to the mechanical locking action, or for delaying breech opening movement **[5, 2006.01]**
3/64 • Mounting of breech-blocks; Accessories for breech-blocks or breech-block mountings **[5, 2006.01]**
3/66 • • Breech housings or frames; Receivers **[5, 2006.01]**
3/68 • • Bolt stops, i.e. means for limiting bolt opening movement **[5, 2006.01]**
3/70 • • Anti-rebound arrangements, i.e. preventing rebound of the bolt out of the firing position **[5, 2006.01]**
3/72 • • Operating handles or levers; Mounting thereof in breech-blocks or bolts **[5, 2006.01]**
3/74 • • Obturating or packing devices for gas leak prevention in breech mechanisms **[5, 2006.01]**
3/76 • • • specially adapted for sealing the gap between the forward end of the cartridge chamber and the rearward end of the barrel, e.g. sealing devices for revolvers or revolver-type guns **[5, 2006.01]**
3/78 • • Bolt buffer or recuperator means **[5, 2006.01]**
3/80 • • • Adjustable spring buffers **[5, 2006.01]**
3/82 • • • Coil spring buffers (F41A 3/80 takes precedence) **[5, 2006.01]**
3/84 • • • • mounted within the gun stock **[5, 2006.01]**
3/86 • • • • mounted under the barrel **[5, 2006.01]**
3/88 • • • • mounted around the barrel **[5, 2006.01]**
3/90 • • • Fluid buffers **[5, 2006.01]**
3/92 • • • • adjustable **[5, 2006.01]**
3/94 • • • • in combination with spring buffers **[5, 2006.01]**

5/00 Mechanisms or systems operated by propellant charge energy for automatically opening the lock [5, 2006.01]
5/02 • recoil-operated **[5, 2006.01]**
5/04 • • the barrel being tilted during recoil **[5, 2006.01]**
5/06 • • the barrel being rotated about its longitudinal axis during recoil **[5, 2006.01]**
5/08 • • having an accelerator lever acting on the breech-block or bolt during the opening movement **[5, 2006.01]**
5/10 • • having a movable inertia weight **[5, 2006.01]**
5/12 • • • mounted in a gun having a fixed barrel **[5, 2006.01]**
5/14 • • Barrel stops, i.e. devices for holding the recoiling barrel in a predetermined position, e.g. the recoil position **[5, 2006.01]**
5/16 • • having a barrel moving forwardly after the firing of a shot **[5, 2006.01]**
5/18 • gas-operated **[5, 2006.01]**
5/20 • • using a gas piston arranged concentrically around the barrel **[5, 2006.01]**
5/22 • • having two or more gas pistons **[5, 2006.01]**
5/24 • • by direct action of gas pressure on bolt or locking elements **[5, 2006.01]**
5/26 • • Arrangements or systems for bleeding the gas from the barrel (F41A 5/20-F41A 5/24 take precedence) **[5, 2006.01]**
5/28 • • • Adjustable systems **[5, 2006.01]**
5/30 • Gas- or recoil-operation, e.g. selection of gas- or recoil-operated systems **[5, 2006.01]**
5/32 • Energy accumulator systems, i.e. systems for opening the breech-block by energy accumulated during barrel or gas piston recoil **[5, 2006.01]**
5/34 • • with spring accumulators **[5, 2006.01]**
5/36 • • with fluid accumulators **[5, 2006.01]**

7/00 Auxiliary mechanisms for bringing the breech-block or bolt or the barrel to the starting position before automatic firing (operating handles or levers F41A 3/00)**; Drives for externally-powered guns** (revolving-cannon guns F41F 1/00)**; Remote-controlled gun chargers [5, 2006.01]**
7/02 • Machine-gun rechargers, e.g. manually operated **[5, 2006.01]**
7/04 • • fluid operated **[5, 2006.01]**
7/06 • • electrically operated **[5, 2006.01]**
7/08 • Drives for externally-powered guns, i.e. drives for moving the breech-block or bolt by an external force during automatic firing **[5, 2006.01]**

7/10 • • using a rotating cylindrical drum having a camming groove **[5, 2006.01]**

9/00 **Feeding or loading of ammunition** (adaptations for feeding or loading missiles from magazines in air guns F41B 11/50)**; Magazines; Guiding means for the extracting of cartridges** (cartridge extractors or ejectors F41A 15/00) **[5, 2006.01]**

9/01 • Feeding of unbelted ammunition **[5, 2006.01]**

9/02 • • using wheel conveyors, e.g. star-wheel-shaped conveyors **[5, 2006.01]**

9/03 • • using screw or rotary-spiral conveyors **[5, 2006.01]**

9/04 • • using endless-chain belts carrying a plurality of ammunition **[5, 2006.01]**

9/05 • • • in tandem sequence **[5, 2006.01]**

9/06 • • using cyclically moving conveyors, i.e. conveyors having ammunition pusher or carrier elements which are emptied or disengaged from the ammunition during the return stroke **[5, 2006.01]**

9/07 • • • Reciprocating conveyors, i.e. conveyors pushing a plurality of ammunition during the feeding stroke **[5, 2006.01]**

9/09 • • • Movable ammunition carriers or loading trays, e.g. for feeding from magazines **[5, 2006.01]**

9/10 • • • • pivoting or swinging **[5, 2006.01]**

9/11 • • • • • in a horizontal plane **[5, 2006.01]**

9/12 • • • • • • mounted within a smallarm **[5, 2006.01]**

9/13 • • • • • in a vertical plane **[5, 2006.01]**

9/14 • • • • • • transverse to the barrel axis **[5, 2006.01]**

9/15 • • • • • • • mounted within a smallarm **[5, 2006.01]**

9/16 • • • • • • parallel to the barrel axis **[5, 2006.01]**

9/17 • • • • • • • mounted within a smallarm **[5, 2006.01]**

9/18 • • • • • • • • feeding from a magazine under the barrel **[5, 2006.01]**

9/19 • • • • • • • • feeding from a magazine mounted in the stock **[5, 2006.01]**

9/20 • • • • sliding, e.g. reciprocating **[5, 2006.01]**

9/21 • • • • • in a vertical direction (F41A 9/23 takes precedence) **[5, 2006.01]**

9/22 • • • • • in a horizontal direction (F41A 9/23 takes precedence) **[5, 2006.01]**

9/23 • • • • • mounted within a smallarm **[5, 2006.01]**

9/24 • • using a movable magazine or clip as feeding element **[5, 2006.01]**

9/25 • • • using a sliding clip **[5, 2006.01]**

9/26 • • • using a revolving drum magazine **[5, 2006.01]**

9/27 • • • • in revolver-type guns **[5, 2006.01]**

9/28 • • • • • of smallarm type (in revolvers F41C 3/14) **[5, 2006.01]**

9/29 • Feeding of belted ammunition **[5, 2006.01]**

9/30 • • Sprocket-type belt transporters **[5, 2006.01]**

9/31 • • • with cartridge stripping means **[5, 2006.01]**

9/32 • • Reciprocating-slide-type belt transporters **[5, 2006.01]**

9/33 • • • with cartridge stripping means **[5, 2006.01]**

9/34 • • from magazines (magazines for belted ammunition <u>per se</u> F41A 9/79) **[5, 2006.01]**

9/35 • Feeding multibarrel guns **[5, 2006.01]**

<u>Note(s) [5]</u>

Feeding elements or concepts of general interest, not specially adapted for feeding multibarrel guns, are classified in groups F41A 9/01 or F41A 9/29.

9/36 • • Feed mechanisms for revolving-cannon guns **[5, 2006.01]**

9/37 • Feeding two or more kinds of ammunition to the same gun; Feeding from two sides **[5, 2006.01]**

<u>Note(s) [5]</u>

Feeding elements or concepts of general interest, not specially adapted for feeding two or more kinds of ammunition or from two sides, are classified in groups F41A 9/01 or F41A 9/29.

9/38 • Loading arrangements, i.e. for bringing the ammunition into the firing position **[5, 2006.01]**

9/39 • • Ramming arrangements **[5, 2006.01]**

9/40 • • • the breech-block itself being the rammer **[5, 2006.01]**

9/41 • • • • pushing unbelted ammunition from a box magazine on the gun frame into the cartridge chamber **[5, 2006.01]**

9/42 • • • Rammers separate from breech-block **[5, 2006.01]**

9/43 • • • • Chain rammers **[5, 2006.01]**

9/44 • • • • Fluid-operated piston rammers **[5, 2006.01]**

9/45 • • the cartridge chamber or the barrel as a whole being tiltable between a loading and a firing position **[5, 2006.01]**

9/46 • • the cartridge chamber being formed by two complementary elements, movable one relative to the other for loading **[5, 2006.01]**

9/47 • • using forwardly-sliding barrels or barrel parts for loading **[5, 2006.01]**

9/48 • • by gravitational force **[5, 2006.01]**

9/49 • Internally-powered drives, i.e. operated by propellant charge energy, e.g. couplings, clutches, energy accumulators **[5, 2006.01]**

9/50 • External power or control systems **[5, 2006.01]**

9/51 • • Boosters, i.e. externally-powered motors **[5, 2006.01]**

9/52 • Arrangements for changing from automatic or magazine-loading to hand-loading **[5, 2006.01]**

9/53 • Charged-condition indicators, i.e. indicating the presence of a cartridge in the cartridge chamber **[5, 2006.01]**

9/54 • Cartridge guides, stops or positioners, e.g. for cartridge extraction **[5, 2006.01]**

9/55 • • Fixed guiding means, mounted on, or near, the cartridge chamber **[5, 2006.01]**

9/56 • • Movable guiding means **[5, 2006.01]**

9/57 • • • Flexible chutes, e.g. for guiding belted ammunition from the magazine to the gun **[5, 2006.01]**

9/58 • • Cartridge stops; Cartridge positioners **[5, 2006.01]**

9/59 • Ejectors for clips or magazines, e.g. when empty **[5, 2006.01]**

9/60 • Empty-cartridge-case or belt-link collectors or catchers (F41A 9/81 takes precedence) **[5, 2006.01]**

9/61 • Magazines **[5, 2006.01]**

9/62 • • having means for indicating the number of cartridges left in the magazine, e.g. last-round indicators (last-round safeties F41A 17/40) **[5, 2006.01]**

9/63 • • specially adapted for releasable connection with other magazines **[5, 2006.01]**

9/64 • • for unbelted ammunition **[5, 2006.01]**

9/65 • • • Box magazines having a cartridge follower **[5, 2006.01]**
9/66 • • • • Arrangements thereon for charging, i.e. reloading (apparatus or tools for reloading magazines F41A 9/83) **[5, 2006.01]**
9/67 • • • • • having means for depressing the cartridge follower, or for locking it in a depressed position **[5, 2006.01]**
9/68 • • • • Plural magazines, e.g. tandem magazines **[5, 2006.01]**
9/69 • • • • characterised by multiple-row or zigzag arrangement of cartridges **[5, 2006.01]**
9/70 • • • • Arrangements thereon for discharging, e.g. cartridge followers or discharge throats **[5, 2006.01]**
9/71 • • • • Arrangements thereon for varying capacity; Adapters or inserts for changing cartridge size or type **[5, 2006.01]**
9/72 • • • Tubular magazines, i.e. magazines containing the ammunition in lengthwise tandem sequence **[5, 2006.01]**
9/73 • • • Drum magazines **[5, 2006.01]**
9/74 • • • • with radially disposed cartridges **[5, 2006.01]**
9/75 • • • • having a spiral cartridge channel **[5, 2006.01]**
9/76 • • • Magazines having an endless-chain conveyor **[5, 2006.01]**
9/77 • • • Magazines having a screw conveyor **[5, 2006.01]**
9/78 • • • Magazines having a reciprocating conveyor **[5, 2006.01]**
9/79 • • for belted ammunition **[5, 2006.01]**
9/80 • • • having provision for quick-coupling of the belts of adjacent magazines **[5, 2006.01]**
9/81 • • • having provision for collecting belt links or empty cartridge cases **[5, 2006.01]**
9/82 • Reloading of magazines **[5, 2006.01]**
9/83 • • Apparatus or tools for reloading magazines with unbelted ammunition, e.g. cartridge clips **[5, 2006.01]**
9/84 • • • Clips **[5, 2006.01]**
9/85 • • • • for reloading revolver-type magazines **[5, 2006.01]**
9/86 • • Feeding belted ammunition into magazines **[5, 2006.01]**
9/87 • Ammunition handling dollies or transfer carts (F41A 9/86 takes precedence) **[5, 2006.01]**

11/00 Assembly or disassembly features; Modular concepts; Articulated or collapsible guns (F41A 3/64, F41A 19/10-F41A 19/15, F41A 21/48, F41A 25/26 take precedence) **[5, 2006.01]**
11/02 • Modular concepts, e.g. weapon-family concepts **[5, 2006.01]**
11/04 • Articulated or collapsible guns, i.e. with hinged or telescopic parts for transport or storage (breakdown shotguns or rifles F41C 7/11; folding or telescopic stocks or stock parts F41C 23/04) **[5, 2006.01]**
11/06 • • Telescopic guns **[5, 2006.01]**

13/00 Cooling or heating systems (barrels or gun tubes with fins or ribs F41A 21/00)**; Blowing-through of gun barrels; Ventilating systems [5, 2006.01]**
13/02 • Heating systems **[5, 2006.01]**
13/04 • Injecting fluids into barrels or cartridge chambers (F41A 13/08 takes precedence) **[5, 2006.01]**
13/06 • Evacuating combustion gas from barrels (F41A 13/10 takes precedence) **[5, 2006.01]**
13/08 • • Bore evacuators, i.e. chambers disposed around barrels for storing part of the combustion gas and subsequently injecting it into the barrel to provide suction **[5, 2006.01]**
13/10 • Blowers or turbines for evacuating or cooling guns, e.g. driven by combustion gas pressure or recoil **[5, 2006.01]**
13/12 • Systems for cooling the outer surface of the barrel (F41A 13/10 takes precedence) **[5, 2006.01]**

15/00 Cartridge extractors, i.e. devices for pulling cartridges or cartridge cases at least partially out of the cartridge chamber; Cartridge ejectors, i.e. devices for throwing the extracted cartridges or cartridge cases free of the gun (F41A 9/54 takes precedence) **[5, 2006.01]**
15/02 • for revolver-type guns, e.g. revolvers **[5, 2006.01]**
15/04 • specially adapted for cartridge cases being deformed when fired, e.g. of plastics **[5, 2006.01]**
15/06 • for breakdown guns **[5, 2006.01]**
15/08 • for block-action guns **[5, 2006.01]**
15/10 • • of sliding-block type **[5, 2006.01]**
15/12 • for bolt-action guns **[5, 2006.01]**
15/14 • • the ejector being mounted on, or within, the bolt **[5, 2006.01]**
15/16 • • the ejector being mounted on the breech housing or frame **[5, 2006.01]**
15/18 • for guns with forwardly slidable barrels **[5, 2006.01]**
15/20 • specially adapted for caseless-ammunition duds **[5, 2006.01]**
15/22 • Tools for extracting cartridges **[5, 2006.01]**

17/00 Safety arrangements, e.g. safeties [5, 2006.01]
17/02 • Key-operated safeties **[5, 2006.01]**
17/04 • Safeties of the combination-lock type (F41A 17/02 takes precedence) **[5, 2006.01]**
17/06 • Electric or electromechanical safeties (F41A 17/04, F41A 17/08 take precedence) **[5, 2006.01]**
17/08 • for inhibiting firing in a specified direction, e.g. at a friendly person or at a protected area (F41A 27/02 takes precedence) **[5, 2006.01]**
17/10 • • Firing mechanisms with elevation stop **[5, 2006.01]**
17/12 • • Firing mechanisms with anti-canting safety **[5, 2006.01]**
17/14 • Double-loading prevention **[5, 2006.01]**
17/16 • Cook-off prevention, i.e. prevention of spontaneous firing of a cartridge by chamber wall heat **[5, 2006.01]**
17/18 • Hang-fire prevention **[5, 2006.01]**
17/20 • Grip or stock safeties, i.e. safeties disengaged by clasping the grip or stock (thumb-operated sliding safeties F41A 17/52, F41A 17/62, F41A 17/70, F41A 17/80) **[5, 2006.01]**
17/22 • • acting on the trigger **[5, 2006.01]**
17/24 • • acting on the firing pin **[5, 2006.01]**
17/26 • • acting on the hammer **[5, 2006.01]**
17/28 • • acting on the sear **[5, 2006.01]**
17/30 • Multiple safeties, i.e. safeties acting on at least one element of the firing mechanism and at least one other element of the gun, e.g. the moving barrel **[5, 2006.01]**
17/32 • • the other element being the breech-block or bolt **[5, 2006.01]**
17/34 • Magazine safeties **[5, 2006.01]**

17/36 • • locking the gun in a safety condition when the magazine is empty or removed **[5, 2006.01]**
17/38 • • locking the magazine in the gun **[5, 2006.01]**
17/40 • Last-round safeties (F41A 17/34 takes precedence) **[5, 2006.01]**
17/42 • Safeties for locking the breech-block or bolt in a safety position (F41A 17/32, F41A 17/36, F41A 17/40 take precedence) **[5, 2006.01]**
17/44 • Safety plugs, e.g. for plugging-up cartridge chambers **[5, 2006.01]**
17/46 • Trigger safeties, i.e. means for preventing trigger movement (F41A 17/02-F41A 17/40 take precedence) **[5, 2006.01]**
17/48 • • Automatically operated trigger safeties, i.e. operated by breech opening or closing movement **[5, 2006.01]**
17/50 • • • by breakdown action **[5, 2006.01]**
17/52 • • Thumb-operated sliding safeties mounted on the upside of the stock, e.g. for shotguns **[5, 2006.01]**
17/54 • • Protecting-caps for trigger guards; Trigger locking pieces mounted on, or within, the trigger guard **[5, 2006.01]**
17/56 • Sear safeties, i.e. means for rendering ineffective an intermediate lever transmitting trigger movement to firing pin, hammer, bolt or sear (F41A 17/02-F41A 17/40 take precedence) **[5, 2006.01]**
17/58 • • automatically operated, i.e. operated by breech opening or closing movement **[5, 2006.01]**
17/60 • • • by breakdown action **[5, 2006.01]**
17/62 • • Thumb-operated sliding safeties mounted on the upside of the stock, e.g. for shotguns **[5, 2006.01]**
17/64 • Firing-pin safeties, i.e. means for preventing movement of slidably-mounted strikers (F41A 17/02-F41A 17/40 take precedence) **[5, 2006.01]**
17/66 • • automatically operated, i.e. operated by breech opening or closing movement **[5, 2006.01]**
17/68 • • • by breakdown action **[5, 2006.01]**
17/70 • • Thumb-operated sliding safeties mounted on the upside of the stock, e.g. for shotguns **[5, 2006.01]**
17/72 • • trigger-operated, i.e. the movement of the trigger bringing a firing-pin safety into inoperative position during the firing **[5, 2006.01]**
17/74 • Hammer safeties, i.e. for preventing the hammer from hitting the cartridge or the firing pin (F41A 17/02-F41A 17/40 take precedence) **[5, 2006.01]**
17/76 • • automatically operated, i.e. operated by breech opening or closing movement **[5, 2006.01]**
17/78 • • • by breakdown action **[5, 2006.01]**
17/80 • • Thumb-operated sliding safeties mounted on the upside of the stock, e.g. for shotguns **[5, 2006.01]**
17/82 • • trigger-operated, i.e. the movement of the trigger bringing a hammer safety into inoperative position during firing **[5, 2006.01]**

19/00 Firing or trigger mechanisms; Cocking mechanisms [5, 2006.01]

19/01 • Counting means indicating the number of shots fired **[5, 2006.01]**
19/02 • • Burst limiters (F41A 19/67 takes precedence) **[5, 2006.01]**
19/03 • Shot-velocity control (F41A 3/78, F41A 5/28, F41A 19/05, F41A 19/66 take precedence) **[5, 2006.01]**
19/04 • • by regulating the time of release of the firing pin or hammer **[5, 2006.01]**
19/05 • Synchronising for firing through the propeller of an aircraft **[5, 2006.01]**
19/06 • Mechanical firing mechanisms (F41A 19/01-F41A 19/05, F41A 19/59 take precedence) **[5, 2006.01]**
19/07 • • press-button actuated, e.g. with thumb rest **[5, 2006.01]**
19/08 • • remote actuated; lanyard actuated **[5, 2006.01]**
19/09 • • Auxiliary trigger devices (F41A 19/08 takes precedence) **[5, 2006.01]**
19/10 • • Triggers; Trigger mountings **[5, 2006.01]**
19/11 • • Trigger guards; Trigger-guard mountings (F41A 19/15 takes precedence) **[5, 2006.01]**
19/12 • • Sears; Sear mountings **[5, 2006.01]**
19/13 • • Percussion or firing pins, i.e. fixed or slidably-mounted striker elements; Mountings therefor **[5, 2006.01]**
19/14 • • Hammers, i.e. pivotably-mounted striker elements; Hammer mountings **[5, 2006.01]**
19/15 • • Modular firing mechanism units **[5, 2006.01]**
19/16 • • Adjustable firing mechanisms; Trigger mechanisms with adjustable trigger pull (F41A 19/17 takes precedence) **[5, 2006.01]**
19/17 • • Hair-trigger mechanisms **[5, 2006.01]**
19/18 • • for multibarrel guns (F41A 19/68 takes precedence) **[5, 2006.01]**
19/19 • • • with single-trigger firing possibility **[5, 2006.01]**
19/20 • • • • Double-trigger arrangements having the possibility of single-trigger actuation **[5, 2006.01]**
19/21 • • • • having only one trigger **[5, 2006.01]**
19/22 • • • • • and only one striker element **[5, 2006.01]**
19/23 • • • • • • rotatable about an axis parallel to the barrel axis for firing subsequent barrels **[5, 2006.01]**
19/24 • • Release-trigger mechanisms, i.e. the striker element being released during the return movement of the trigger subsequent to trigger pull **[5, 2006.01]**
19/25 • • having only slidably-mounted striker elements, i.e. percussion or firing pins **[5, 2006.01]**
19/26 • • • the percussion or firing pin and the breech-block or bolt forming one piece **[5, 2006.01]**
19/27 • • • the percussion or firing pin being movable relative to the breech-block **[5, 2006.01]**
19/28 • • • • propelled by a cam or lever when the breech-block or bolt arrives at a closing position **[5, 2006.01]**
19/29 • • • • propelled by a spring under tension **[5, 2006.01]**
19/30 • • • • • in bolt-action guns **[5, 2006.01]**
19/31 • • • • • • Sear arrangements therefor (F41A 19/33 takes precedence) **[5, 2006.01]**
19/32 • • • • • • • for catching the percussion or firing pin after each shot, i.e. in single-shot or semi-automatic firing mode **[5, 2006.01]**
19/33 • • • • • • Arrangements for the selection of automatic or semi-automatic fire **[5, 2006.01]**
19/34 • • • • • • Cocking mechanisms **[5, 2006.01]**
19/35 • • • • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**

19/36 • • • • • in block-action guns **[5, 2006.01]**
19/37 • • • • • • Cocking mechanisms **[5, 2006.01]**
19/38 • • • • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**
19/39 • • • • • Cocking mechanisms for other types of guns, e.g. fixed breech-block types, forwardly-slidable barrel types **[5, 2006.01]**
19/40 • • • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**
19/41 • • • • • • for breakdown guns **[5, 2006.01]**
19/42 • • having at least one hammer **[5, 2006.01]**
19/43 • • • in bolt-action guns **[5, 2006.01]**
19/44 • • • • Sear arrangements therefor (F41A 19/46 takes precedence) **[5, 2006.01]**
19/45 • • • • • for catching the hammer after each shot, i.e. in single-shot or semi- automatic firing mode **[5, 2006.01]**
19/46 • • • • Arrangements for the selection of automatic or semi-automatic fire **[5, 2006.01]**
19/47 • • • • Cocking mechanisms **[5, 2006.01]**
19/48 • • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**
19/49 • • • in block-action guns **[5, 2006.01]**
19/50 • • • • Cocking mechanisms **[5, 2006.01]**
19/51 • • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**
19/52 • • • Cocking mechanisms for other types of guns, e.g. fixed breech-block types, revolvers **[5, 2006.01]**
19/53 • • • • Double-action mechanisms, i.e. the cocking being effected during the first part of the trigger pull movement **[5, 2006.01]**
19/54 • • • • for breakdown guns **[5, 2006.01]**
19/55 • Fluid-operated firing mechanisms **[5, 2006.01]**
19/56 • • Ignition of the propellant charge by contact with air heated by adiabatic compression **[5, 2006.01]**
19/57 • Firing mechanisms operating with primer cartridge **[5, 2006.01]**
19/58 • Electric firing mechanisms (F41A 17/10, F41A 17/12 take precedence) **[5, 2006.01]**
19/59 • • Electromechanical firing mechanisms, i.e. the mechanical striker element being propelled or released by electric means **[5, 2006.01]**
19/60 • • characterised by the means for generating electric energy **[5, 2006.01]**
19/61 • • • Inductive generators **[5, 2006.01]**
19/62 • • • Piezo-electric generators **[5, 2006.01]**
19/63 • • having means for contactless transmission of electric energy, e.g. by induction, by sparking gap **[5, 2006.01]**
19/64 • • for automatic or burst-firing mode **[5, 2006.01]**
19/65 • • • for giving ripple fire, i.e. using electric sequencer switches for timed multiple-charge launching, e.g. for rocket launchers **[5, 2006.01]**
19/66 • • • Electronic shot-velocity control (F41A 19/65 takes precedence) **[5, 2006.01]**
19/67 • • • Burst limiters **[5, 2006.01]**
19/68 • • for multibarrel guns (F41A 19/65 takes precedence) **[5, 2006.01]**
19/69 • • Electric contacts or switches peculiar thereto (F41A 19/65 takes precedence) **[5, 2006.01]**
19/70 • • • Electric firing pins; Mountings therefor **[5, 2006.01]**

21/00 Barrels; Gun tubes; Muzzle attachments; Barrel mounting means (F41A 25/00 takes precedence; barrel attachments for firing grenades or riot-control ammunition from smallarms F41C 27/06; sighting devices F41G 1/00) **[5, 2006.01]**
21/02 • Composite barrels, i.e. barrels having multiple layers, e.g. of different materials **[5, 2006.01]**
21/04 • • Barrel liners **[5, 2006.01]**
21/06 • Plural barrels **[5, 2006.01]**
21/08 • • Barrel junctions **[5, 2006.01]**
21/10 • Insert barrels, i.e. barrels for firing reduced calibre ammunition and being mounted within the normal barrels **[5, 2006.01]**
21/12 • Cartridge chambers; Chamber liners (F41A 3/74, F41A 9/46, F41A 21/04 take precedence) **[5, 2006.01]**
21/14 • • Arrangement of cartridge chambers lateral to the barrel axis **[5, 2006.01]**
21/16 • Barrels or gun tubes characterised by the shape of the bore **[5, 2006.01]**
21/18 • • Grooves; Rifling **[5, 2006.01]**
21/20 • Barrels or gun tubes characterised by the material (F41A 21/02 takes precedence) **[5, 2006.01]**
21/22 • Barrels which have undergone surface treatment, e.g. phosphating **[5, 2006.01]**
21/24 • Barrels or gun tubes with fins or ribs, e.g. for cooling **[5, 2006.01]**
21/26 • specially adapted for recoil reinforcement, e.g. for training purposes **[5, 2006.01]**
21/28 • Gas-expansion chambers; Barrels provided with gas-relieving ports (F41A 1/06, F41A 13/08 take precedence) **[5, 2006.01]**
21/30 • Silencers **[5, 2006.01]**
21/32 • Muzzle attachments or glands (F41A 21/26, F41A 21/30, F41A 21/46 take precedence) **[5, 2006.01]**
21/34 • • Flash dampers **[5, 2006.01]**
21/36 • • for recoil reduction (recoil reduction arrangements in general F41A 25/00) **[5, 2006.01]**
21/38 • • • adjustable **[5, 2006.01]**
21/40 • • Chokes for shotguns **[5, 2006.01]**
21/42 • • • adjustable **[5, 2006.01]**
21/44 • Insulation jackets; Protective jackets **[5, 2006.01]**
21/46 • Barrels having means for separating sabots from projectiles **[5, 2006.01]**
21/48 • Barrel mounting means, e.g. releasable mountings for replaceable barrels **[5, 2006.01]**

23/00 Gun mountings, e.g. on vehicles; Disposition of guns on vehicles (F41A 25/00, F41A 27/00 take precedence) **[5, 2006.01]**
23/02 • Mountings without wheels **[5, 2006.01]**
23/04 • • Unipods **[5, 2006.01]**
23/06 • • • adjustable **[5, 2006.01]**
23/08 • • Bipods **[5, 2006.01]**
23/10 • • • adjustable **[5, 2006.01]**
23/12 • • Tripods **[5, 2006.01]**
23/14 • • • adjustable **[5, 2006.01]**
23/16 • • Testing mounts **[5, 2006.01]**

23/18 • • Rests for supporting smallarms in non-shooting position (racks for storage A47B 81/00; racks in vehicles B60R 11/00) **[5, 2006.01]**
23/20 • for disappearing guns **[5, 2006.01]**
23/22 • • on board of submarines **[5, 2006.01]**
23/24 • Turret gun mountings (feeding, loading or guiding ammunition F41A 9/00; mechanical elevating or traversing systems for turret guns F41A 27/18) **[5, 2006.01]**
23/26 • Mountings for transport only; Loading or unloading arrangements for guns for use with carrier vehicles (F41A 23/50 takes precedence) **[5, 2006.01]**
23/28 • Wheeled-gun mountings; Endless-track gun mountings **[5, 2006.01]**
23/30 • • the wheels being liftable from the ground for firing **[5, 2006.01]**
23/32 • • with split trails (F41A 23/30, F41A 23/46 take precedence) **[5, 2006.01]**
23/34 • on wheeled or endless-track vehicles **[5, 2006.01]**
23/36 • • on trailers (F41A 23/42 takes precedence) **[5, 2006.01]**
23/38 • • on motorcycles **[5, 2006.01]**
23/40 • • on rail vehicles **[5, 2006.01]**
23/42 • • for rocket throwers **[5, 2006.01]**
23/44 • on sledges **[5, 2006.01]**
23/46 • Trail spades **[5, 2006.01]**
23/48 • • elastic **[5, 2006.01]**
23/50 • Travelling locks; Brakes for holding the gun platform in a fixed position during transport **[5, 2006.01]**
23/52 • Base plates for gun mountings **[5, 2006.01]**
23/54 • • for mortars **[5, 2006.01]**
23/56 • Arrangements for adjusting the gun platform in the vertical or horizontal position (F41A 17/10, F41A 17/12 take precedence) **[5, 2006.01]**
23/58 • • Hydraulic jacks **[5, 2006.01]**
23/60 • • Screw-operated jacks **[5, 2006.01]**

25/00 Gun mountings permitting recoil or return to battery, e.g. gun cradles; Barrel buffers or brakes (recoilless guns F41A 1/08) **[5, 2006.01]**
25/02 • Fluid-operated systems **[5, 2006.01]**
25/04 • • adjustable **[5, 2006.01]**
25/06 • Friction-operated systems **[5, 2006.01]**
25/08 • • adjustable **[5, 2006.01]**
25/10 • Spring-operated systems **[5, 2006.01]**
25/12 • • using coil springs **[5, 2006.01]**
25/14 • • • adjustable **[5, 2006.01]**
25/16 • Hybrid systems **[5, 2006.01]**
25/18 • • Hydroelastic systems **[5, 2006.01]**
25/20 • • Hydropneumatic systems **[5, 2006.01]**
25/22 • Bearing arrangements for the reciprocating gun-mount or barrel movement **[5, 2006.01]**
25/24 • • using ball or roller bearings **[5, 2006.01]**
25/26 • Assembling or dismounting recoil elements or systems **[5, 2006.01]**

27/00 Gun mountings permitting traversing or elevating movement, e.g. gun carriages [5, 2006.01]
27/02 • Control systems for preventing interference between the moving gun and the adjacent structure **[5, 2006.01]**
27/04 • Scatter-fire arrangements, i.e. means for oscillating guns automatically during firing **[5, 2006.01]**
27/06 • Mechanical systems (F41A 27/02, F41A 27/04, F41A 27/30 take precedence) **[5, 2006.01]**
27/08 • • Bearings, e.g. trunnions; Brakes or blocking arrangements **[5, 2006.01]**
27/10 • • • Bearings for supporting a pivoting gun in a wall, e.g. a turret wall **[5, 2006.01]**
27/12 • • • Brakes or locks for blocking traversing or elevating gear in a fixed position **[5, 2006.01]**
27/14 • • • Central-pivot bearings **[5, 2006.01]**
27/16 • • • using raceway bearings, e.g. for supporting the turret **[5, 2006.01]**
27/18 • • for gun turrets (F41A 27/08 takes precedence) **[5, 2006.01]**
27/20 • • • Drives for turret movements **[5, 2006.01]**
27/22 • • Traversing gear (F41A 27/18 takes precedence) **[5, 2006.01]**
27/24 • • Elevating gear (F41A 27/18 takes precedence) **[5, 2006.01]**
27/26 • Fluid-operated systems (F41A 27/02, F41A 27/04, F41A 27/30 take precedence) **[5, 2006.01]**
27/28 • Electrically-operated systems (F41A 27/02, F41A 27/04, F41A 27/30 take precedence) **[5, 2006.01]**
27/30 • Stabilisation or compensation systems, e.g. compensating for barrel weight or wind force **[5, 2006.01]**

29/00 Cleaning or lubricating arrangements (injecting fluids into barrels or cartridge chambers F41A 13/04) **[5, 2006.01]**
29/02 • Scrapers or cleaning rods **[5, 2006.01]**
29/04 • Lubricating, oiling or greasing means, e.g. operating during use **[5, 2006.01]**

31/00 Testing arrangements (testing mounts F41A 23/16) **[5, 2006.01]**
31/02 • for checking gun barrels **[5, 2006.01]**

33/00 Adaptations for training (adaptations of barrels for recoil reinforcement F41A 21/26)**; Gun simulators** (teaching or practice apparatus for gun-aiming or gun-laying F41G 3/26) **[5, 2006.01]**
33/02 • Light- or radiation-emitting guns **[5, 2006.01]**
33/04 • Acoustical simulation of gun fire, e.g. by pyrotechnic means **[5, 2006.01]**
33/06 • Recoil simulators **[5, 2006.01]**

35/00 Accessories or details not otherwise provided for [5, 2006.01]
35/02 • Dust- or weather-protection caps or covers (protecting-caps for trigger guards F41A 17/54) **[5, 2006.01]**
35/04 • • Muzzle covers **[5, 2006.01]**
35/06 • Adaptation of guns to both right and left hand use **[5, 2006.01]**

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