

**CPC****COOPERATIVE PATENT CLASSIFICATION****F41H****ARMOUR; ARMoured TURRETS; ARMoured OR ARMED VEHICLES; MEANS OF ATTACK OR DEFENCE, e.g. CAMOUFLAGE, IN GENERAL****F41H 1/00**

**Personal protection gear** (shields for personal use [F41H 5/08](#); {footwear for use in minefields [A43B 3/0026](#)}; for protection against chemical warfare [A62B](#))

**F41H 1/02**

- Armoured or projectile- or missile-resistant garments; Composite protection fabrics ({[F41H 5/04](#) takes precedence})

**F41H 1/04**

- Protection helmets (crash helmets [A42B 3/00](#))

**F41H 1/06**

- .. of steel; Steel head-shields

**F41H 1/08**

- .. of plastics; Plastic head-shields

**F41H 3/00**

**Camouflage, i.e. means or methods for concealment or disguise** (for vessels [B63G 8/34](#), [B63G 13/02](#); {sound camouflage, i.e. simulating gun fire noise, **F41A 33/00B**; dummy or decoy targets [F41J](#); chaff per se [F41J 2/00](#); ammunition for dispensing chaff [F42B 5/15](#), [F42B 12/70](#); radar absorbing fabrics [H01Q 17/005](#)})

**F41H 3/02**

- {Flexible, e.g. fabric} covers, e.g. screens, nets {characterised by their material or structure}(making thereof, see the relevant classes, e.g. [D04](#))

**F41H 5/00**

**Armour; Armour plates**(processes for manufacturing or treating [B21](#),[C21](#),{ heat treatment [C21D 9/42](#); wall or panel structure for safes [E05G 1/024](#)})

**F41H 5/007**

- Reactive armour; Dynamic armour

**F41H 5/013**

- Mounting or securing armour plates

**F41H 5/02**

- Plate construction

**F41H 5/023**

- .. { Armour plate, or auxiliary armour plate mounted at a distance of the main armour plate, having cavities at its outer impact surface, or holes, for deflecting the projectile}

**F41H 5/026**

- ... { Slat armour; Nets}

**F41H 5/04**

- .. composed of more than one layer ({outerwear resistant to mechanical aggressions [A41D 31/0055](#); layered products [B32B](#); shaping reinforced articles [B29C 67/00](#)})

**F41H 5/0407**

- ... { Transparent bullet-proof laminates}{ informative reference: layered products essentially comprising glass in general [B32B 17/06](#), e.g. [B32B 17/10009](#); manufacture or composition of glass, e.g. joining glass to glass [C03](#); permanent multiple-glazing windows, e.g. with spacing therebetween, [E06B 3/66](#)}

**F41H 5/0414**

- ... {Layered armour containing ceramic material}

**F41H 5/0421**

- .... {Ceramic layers in combination with metal layers}

**F41H 5/0428**

- .... {Ceramic layers in combination with additional layers made of fibres, fabrics}

- or plastics}
- F41H 5/0435 . . . . . {the additional layers being only fibre- or fabric-reinforced layers}
- F41H 5/0442 . . . { Layered armour containing metal (in combination with ceramic layers [F41H 5/0421](#); heat treatment of armour plate [C21D 9/42](#))}
- F41H 5/045 . . . . {all the layers being metal layers}
- F41H 5/0457 . . . . {Metal layers in combination with additional layers made of fibres, fabrics or plastics}
- F41H 5/0464 . . . . . {the additional layers being only fibre- or fabric-reinforced layers}
- F41H 5/0471 . . . {Layered armour containing fibre- or fabric-reinforced layers (in combination with ceramic layers [F41H 5/0428](#), with metal layers [F41H 5/0457](#))}
- F41H 5/0478 . . . . {Fibre- or fabric-reinforced layers in combination with plastics layers}
- F41H 5/0485 . . . . {all the layers being only fibre- or fabric-reinforced layers}
- F41H 5/0492 . . . {Layered armour containing hard elements, e.g. plates, spheres, rods, separated from each other, the elements being connected to a further flexible layer or being embedded in a plastics or an elastomer matrix}
  
- F41H 5/06 . Shields (in ships [B63G 9/00](#); in aircraft [B64D 7/00](#)){blasting mats **F42D 5/04B2**}
- F41H 5/08 . . for personal use, { i.e. hand held shields}
- F41H 5/10 . . . Spade bayonets, i.e. usable as a spade, bayonet or cover against rifle fire {(not used; see [F41C 27/04](#))}
- F41H 5/12 . . for smallarms; for light-rocket launchers {(shields attached to smallarms [F41C 27/04](#))}
- F41H 5/14 . . . Wheeled armoured shields
- F41H 5/16 . . for ordnance {or tanks ([F41H 5/18](#) takes precedence)}
- F41H 5/18 . . Rotating shields
  
- F41H 5/20 . Turrets {(on vehicles [F41H 7/04](#))}
  
- F41H 5/22 . Manhole covers, e.g. on tanks; { Doors on armoured vehicles or structures}
- F41H 5/223 . . { Manhole covers specially adapted for armoured or fighting vehicles}
- F41H 5/226 . . { Doors on armoured vehicles or structures ([F41H 5/263](#) takes precedence)}
  
- F41H 5/24 . for stationary use, e.g. fortifications {Shelters, Guard Booths (air-raid shelters [E04H 9/04](#))}
  
- F41H 5/26 . Peepholes; Windows; { Loopholes}{manufacture or composition of glass [C03](#); Covers therefor}{ informative reference: transparent bullet-proof laminates [F41H 5/04B](#); layered products essentially comprising glass [B32B 17/06](#)}
- F41H 5/263 . . { Mounting of transparent armoured panels, e.g. bulletproof windows on vehicles}
- F41H 5/266 . . { Periscopes for fighting or armoured vehicles}
  
- F41H 7/00** **Armoured or armed vehicles** (general vehicle aspects [B60](#); armoured or armed ships [B63G](#); armoured or armed aircraft [B64D](#); mounting guns, e.g. machine guns, on vehicles [F41A 23/00](#))
  
- F41H 7/005 . { Unmanned ground vehicles, i.e. robotic, remote controlled or autonomous, mobile platforms carrying equipment for performing a military or police role, e.g. weapon systems or reconnaissance sensors ([F41H 11/16](#) takes precedence)}

- F41H 7/02
  - Land vehicles with enclosing armour, e.g. tanks ([endless-track vehicles](#), [steering thereof B62D](#); {vehicles for placing portable or sectional bridges [E01D 15/127](#); vehicles carrying floating bridges [E01D 15/22](#)})
- F41H 7/03
  - Air-pressurised compartments for crew; Means for preventing admission of noxious substances, e.g. combustion gas from gun barrels, in crew compartments; Sealing arrangements
- F41H 7/035
  - {Gratings for ventilation openings}
- F41H 7/04
  - Armour construction ([in general F41H 5/00](#))
- F41H 7/042
  - {Floors or base plates for increased land mine protection}
- F41H 7/044
  - {Hull or cab construction other than floors or base plates for increased land mine protection ([mounting of armoured plates F41H 5/013](#))}
- F41H 7/046
  - {Shock resilient mounted seats for armoured or fighting vehicles}
- F41H 7/048
  - {Vehicles having separate armoured compartments, e.g. modular armoured vehicles}
- F41H 7/10
  - Minelaying land vehicles
- F41H 9/00**

**Equipment for attack or defence by spreading flame, gas or smoke {or leurrees}; Chemical warfare equipment ([protection against chemicals A62B](#))**
- F41H 9/02
  - Flame-throwing apparatus ([for destroying vegetation A01M 15/00](#))
- F41H 9/04
  - Gas-blowing apparatus, e.g. for tear gas ([F41H 9/10 takes precedence](#))
- F41H 9/06
  - Apparatus for generating artificial fog or smoke screens ({[for producing special effects on stages A63J 5/00](#)}; [smoke-pot projectors](#), e.g. [arranged on vehicles, F42B 5/155](#))
- F41H 9/08
  - Smoke-pots without propulsive charge, i.e. stationary
- F41H 9/10
  - Hand-held or body-worn self-defence devices using repellant gases or chemicals
- F41H 11/00**

**Defence installations; Defence devices ([constructional aspects see Section E](#), e.g. {[air-raid shelters E04H 9/04](#); {[protective arrangements for buildings E04B 1/92](#); [extinguishing or preventing the spread of fire from, incendiary bombs A62C 3/06](#) ; [dynamic armour F41H 5/007](#); [ballistically deployed systems for restraining persons or animals F41H 13/0006](#); [electronic countermeasures G01S](#)})**
- F41H 11/02
  - Anti-aircraft or anti-guided missile { or anti-torpedo} defence installations or systems ([cartridges or missiles for producing smoke or for dispensing radar chaff or infra-red material F42B 5/15, F42B 12/48, F42B 12/70](#); { [informative reference: details of radar or sonar systems G01S 7/00](#); [jamming or electronic countermeasures G01S 7/38, G01S 7/495, H04K 3/00](#)})
- F41H 11/04
  - Aerial barrages
- F41H 11/05
  - Net barriers for harbour defence ({[arrangement of mines F42B 22/24](#); [protective nets used with ships B63G 9/04](#)})
- F41H 11/06
  - Guntraps ({[devices specially adapted for the protection against criminal attack in airplanes B64D 45/0015](#); [burglar traps or the like, on safes E05G 5/02](#); [identifying, scaring or incapacitating burglars, thieves, or intruders G08B 15/00](#)})

- F41H 11/08 . Barbed-wire obstacles; Barricades; Stanchions; Tank traps; Vehicle-impeding devices; Caltrops {(making barbed wire [B21F 25/00](#); barbed-wire fencing [E04H 17/04](#); road barricades, obstructing passage of vehicles or pedestrians [E01F 13/00](#))}
- F41H 11/10 . . Dispensing-apparatus therefor, e.g. devices for dispensing or reeling barbed wire
- F41H 11/11 . . Clearing or neutralising barbed wire obstacles ({devices mounted on vehicles for cutting wire-type obstructions [B60R 19/545](#)}; smallarm attachments for wire cutting [F41C 27/20](#))
- F41H 11/12 . Means for clearing land minefields; Systems specially adapted for detection of landmines
- F41H 11/13 . . Systems specially adapted for detection of landmines
- F41H 11/132 . . . Biological systems, e.g. with detection by animals or plants
- F41H 11/134 . . . Chemical systems, e.g. with detection by vapour analysis
- F41H 11/136 . . . Magnetic, electromagnetic, acoustic or radiation systems, e.g. ground penetrating radars or metal-detectors
- F41H 11/138 . . . Mechanical systems, e.g. prodding sticks for manual detection
- F41H 11/14 . . Explosive line charges, e.g. snakes
- F41H 11/16 . . Self-propelled mine-clearing vehicles; Mine-clearing devices attachable to vehicles
- F41H 11/161 . . . {with ground impacting means, e.g. flails or stamping elements}
- F41H 11/162 . . . {with ground penetrating elements ([F41H 11/161](#) takes precedence)}
- F41H 11/164 . . . . {the elements being ploughs}
- F41H 11/165 . . . . {the elements being rotary ground penetrating elements}
- F41H 11/167 . . . {with surface dosering, brushing or sweeping means or with collecting means}
- F41H 11/168 . . . {with rollers}
- F41H 11/18 . . . with ground-impacting means for activating mines by the use of mechanical impulses, e.g. flails or stamping elements
- F41H 11/20 . . . with ground-penetrating elements, e.g. with means for removing buried landmines from the soil ([F41H 11/18](#) takes precedence)
- F41H 11/22 . . . . the elements being excavation buckets
- F41H 11/24 . . . . the elements being ploughs
- F41H 11/26 . . . . the elements being rotary ground-penetrating elements
- F41H 11/28 . . . using brushing or sweeping means or dozers to push mines lying on a surface aside; using means for removing mines intact from a surface
- F41H 11/30 . . . with rollers creating a surface load on the ground, e.g. steadily increasing surface load, for triggering purposes
- F41H 11/32 . . . Decoy or sacrificial vehicles; Decoy or sacrificial devices attachable to vehicles
- F41H 13/00 Means of attack or defence not otherwise provided for {(details of radar or sonar systems [G01S 7/00](#))}**
- F41H 13/0006 . {Ballistically deployed systems for restraining persons or animals, e.g. ballistically deployed nets}
- F41H 13/0012 . {Electrical discharge weapons, e.g. for stunning, such as tasers}
- F41H 13/0018 . . N: for nearby electrical discharge, i.e. the electrodes being positioned on the device and the device brought manually or otherwise into contact with a nearby

- target (batons with electric discharge capability [F41B 15/04](#); electric shock devices for animals [A01K 15/02](#)]
- F41H 13/0025 . . { for remote electrical discharge via conducting wires, e.g. via wire-tethered electrodes shot at a target}
  - F41H 13/0031 . . { for remote electrical discharge by means of a wireless projectile}
  - F41H 13/0037 . . { for remote electrical discharge via liquid jets (details of the gun for generating the liquid jets [F41B 9/00](#))}
  - F41H 13/0043 . { Directed energy weapons, i.e. devices that direct a beam of high energy content toward a target for incapacitating or destroying the target}
  - F41H 13/005 . . { the high-energy beam being a laser beam}
  - F41H 13/0056 . . . { for blinding or dazzling, i.e. by overstimulating the opponent's eyes or the enemy's sensor equipment}
  - F41H 13/0062 . . . { causing structural damage to the target}
  - F41H 13/0068 . . { the high-energy beam being of microwave type, e.g. for causing a heating effect in the target}
  - F41H 13/0075 . . { the high-energy beam being a radiofrequency beam}
  - F41H 13/0081 . . { the high-energy beam being acoustic, e.g. sonic, infrasonic or ultrasonic}
  - F41H 13/0087 . . { the high-energy beam being a bright light, e.g. for dazzling or blinding purposes ([F41H 13/0056](#) takes precedence)}
  - F41H 13/0093 . { Devices generating an electromagnetic pulse, e.g. for disrupting or destroying electronic devices}