

CPC COOPERATIVE PATENT CLASSIFICATION

A62C FIRE-FIGHTING (fire-extinguishing compositions, use of chemical substances in extinguishing fires [A62D 1/00](#); spraying, applying liquids or other fluent materials to surfaces in general [B05](#); alarm arrangements [G08B](#), e.g. fire alarms actuated by smoke or gases [G08B 17/10](#))

- 2/00 Fire prevention or containment** ([A62C 3/00](#) takes precedence; flame traps [A62C 4/00](#))
 - 2/04 . Removing or cutting-off the supply of inflammable material
 - 2/06 . Physical fire-barriers
 - 2/065 . . {having as the main closure device materials, whose characteristics undergo an irreversible change under high temperatures, e.g. intumescent (intumescent materials forming part of the mechanism of another main closure device, [see the relevant class](#))}
 - 2/08 . . Water curtains ([nozzles A62C 31/02](#))
 - 2/10 . . Fire-proof curtains
 - 2/12 . . Hinged dampers
 - 2/14 . . . with two or more blades
 - 2/16 multi-vane roll or fold-up type
 - 2/18 . . Sliding dampers
 - 2/20 . . . at 90 degrees to the plane of the opening
 - 2/22 . . Fire-dampers with provision for the removal of an obstacle, e.g. rails, conveyors, before closing the opening
 - 2/24 . . Operating or controlling mechanisms {[\(emergency operation of doors and windows E05F 1/002, E05F 15/72\)](#)}
 - 2/241 . . . {having mechanical actuators and heat sensitive parts}
 - 2/242 {with fusible links}
 - 2/243 {with frangible elements}
 - 2/245 {with thermostatic elements, e.g. bimetallic, resettable actuators}
 - 2/246 . . . {having non-mechanical actuators}
 - 2/247 {electric}
 - 2/248 {pneumatic}
- 3/00 Fire prevention, containment or extinguishing specially adapted for particular objects or places** ([in oil wells E21B 29/08, A62C 35/00](#); [in mines or tunnels E21F 5/00](#); [for nuclear reactors G21C 9/04](#))
 - 3/002 . {for warehouses, storage areas or other installations for storing goods}
 - 3/004 . . {for freezing warehouses and storages}
 - 3/006 . {for kitchens or stoves}
 - 3/008 . {for decorations, e.g. Christmas trees ([Christmas tree decorations incorporating fire extinguishing or fire prevention means A47G 33/0872](#); [blowing or snuffing out candle-flames F23Q 25/00](#))}
 - 3/02 . for area conflagrations, e.g. forest fires, subterranean fires
 - 3/0207 . . {by blowing air or gas currents with or without dispersion of fire extinguishing agents; Apparatus therefor, e.g. fans}
 - 3/0214 . . {for buildings or installations in fire storms}
 - 3/0221 . . {for tunnels}
 - 3/0228 . . {with delivery of fire extinguishing material by air or aircraft ([fire-fighting aircraft B64D 1/16](#))}
 - 3/0235 . . . {by means of containers, e.g. buckets}
 - 3/0242 . . . {by spraying extinguishants from the aircraft ([spraying from aircraft in general B64D 1/16](#))}
 - 3/025 . . . {Fire extinguishing bombs; Projectiles and launchers therefor ([launching apparatus for projectiles, missiles or torpedoes in general F41F 1/00, F41F 3/00, F41F 7/00](#))}
 - 3/0257 . . {Fire curtains, blankets, walls, fences}
 - 3/0264 . . . {by creating water curtains}
 - 3/0271 . . {Detection of area conflagration fires ([fire alarms for forest fires G08B 17/005](#))}
 - 3/0278 . . {by creating zones devoid of flammable material}
 - 3/0285 . . . {with creation of a fire zone by an explosion or a counter-fire}
 - 3/0292 . . {by spraying extinguishants directly into the fire ([A62C 3/0242](#) takes precedence)}
 - 3/04 . for dust or loosely-baled or loosely-piled materials, e.g. in silos, in chimneys ([flame traps A62C 4/00](#))
 - 3/06 . of highly inflammable material, e.g. light metals, petroleum products
 - 3/065 . . {for containers filled with inflammable liquids}
 - 3/07 . in vehicles, e.g. in road vehicles
 - 3/08 . . in aircraft {([A62C 3/0207](#) takes precedence)}
 - 3/10 . . in ships {([A62C 3/0207](#) takes precedence)}
 - 3/14 . {in connection with doors, windows, ventilators, partitions, or shutters, e.g. automatic closing}
 - 3/16 . in electrical installations, e.g. cableways
- 4/00 Flame traps allowing passage of gas but not of flame or explosion wave**
 - 4/02 . in gas-pipes ([safety valves F16K 17/00](#))
 - 4/04 . in flues or chimneys
- 5/00 Making of fire-extinguishing materials immediately before use** ([nozzles A62C 31/02](#))
 - 5/002 . {Apparatus for mixing extinguishants with water}
 - 5/004 . {for producing carbon-dioxide snow, carbon-dioxide ice, carbon-dioxide gas, carbon-dioxide liquid, or mixtures thereof ([carbon-dioxide jet-pipes or snow jet-pipes A62C 31/03](#))}
 - 5/006 . {Extinguishants produced by combustion}
 - 5/008 . {for producing other mixtures of different gases or vapours, water and chemicals, e.g. water and wetting agents, water and gases}
 - 5/02 . of foam
 - 5/022 . . {with air or gas present as such}
 - 5/024 . . . {Apparatus in the form of pipes ([jet-pipes for foam A62C 31/12](#))}
 - 5/027 . . Heavy foam
 - 5/033 . of gel

Hand fire-extinguishers

- 8/00 Hand tools or accessories specially adapted for fire-fighting, e.g. tool boxes**
- 8/005 . {Receptacles or other utensils for water carrying; Bombs filled with extinguishing agents}
 - 8/02 . Buckets or pails
 - 8/04 . Rakes or beaters
 - 8/06 . Fire-blankets
 - 8/08 . Shields
- 11/00 Portable extinguishers with manually-operated pumps**
- 11/005 . {Receptacles of extinguishing agent with manually operable pump}
- 13/00 Portable extinguishers which are permanently pressurised or pressurised immediately before use (A62C 11/00 takes precedence)**
- 13/003 . {Extinguishers with spraying and projection of extinguishing agents by pressurised gas}
 - 13/006 . {for the propulsion of extinguishing powder}
 - 13/02 . with pressure gas produced by chemicals
 - 13/04 . . with separate acid container
 - 13/06 . . . with acid container without closure device
 - 13/08 . . . with acid container with closure device
 - 13/10 with loose-lid closure device (loosely-engaging lids or covers for containers for liquids without means for effecting sealing of container in general B65D 51/02)
 - 13/12 with valve closure device
 - 13/14 . . . with acid container the shell of which is ruptured by pin, screw-pin, or similar device
 - 13/16 . . . with movable acid container ruptured by falling when operated
 - 13/18 . . . with acid container ruptured by a striking weight, e.g. by a falling weight
 - 13/20 . . with the chemicals in a single case, e.g. in a cartridge
 - 13/22 . . with incendiary substances producing pressure gas
 - 13/62 . with a single permanently pressurised container
 - 13/64 . . the extinguishing material being released by means of a valve
 - 13/66 . with extinguishing material and pressure gas being stored in separate containers
 - 13/68 . . characterised by means for releasing the extinguishing material
 - 13/70 . . characterised by means for releasing the pressure gas
 - 13/72 . . characterised by releasing means operating essentially simultaneously on both containers
 - 13/74 . . . the pressure gas container being pierced or broken
 - 13/76 . Details or accessories
 - 13/78 . . Suspending or supporting devices
- 15/00 Extinguishers essentially of the knapsack type (knapsacks, carrying-frames, pack-frames carried on the body A45F 3/00)**
- 17/00 Hand fire-extinguishers essentially in the form of pistols or rifles**

19/00 Hand fire-extinguishers in which the extinguishing substance is expelled by an explosion; Exploding containers thrown into the fire

25/00 Portable extinguishers with power-driven pumps
 25/005 . {Accessories}

Fire-fighting vehicles (A62C 31/00, A62C 33/00, A62C 37/00 take precedence; vehicle aspects, see the appropriate subclasses of B60 - B64, e.g. fire-fighting aircraft B64D 1/16)

27/00 Fire-fighting land vehicles

29/00 Fire-fighting vessels or like floating structures

31/00 Delivery of fire-extinguishing material (pumps F04; {suction or pressure} hoses, {joints or couplings therefor} F16L)

31/005 . {using nozzles}

WARNING

see warning after subclass title

- 31/02 . Nozzles specially adapted for fire-extinguishing
- 31/03 . . adjustable, e.g. from spray to jet or vice versa
- 31/05 . . with two or more outlets
- 31/07 . . . for different media
- 31/12 . . for delivering foam or atomised foam
- 31/22 . . specially adapted for piercing walls, heaped materials, or the like
- 31/24 . . attached to ladders, poles, towers, or other structures with or without rotary heads
- 31/28 . Accessories for delivery devices, e.g. supports

Hose accessories

- 33/02 . Apparatus for cleaning or drying hoses (drying shelves F26B)
- 33/04 . Supports or clamps for fire hoses
- 33/06 . Hose or pipe bridges

Permanently-installed equipment

- 35/00 Permanently-installed equipment (A62C 31/00, A62C 33/00, A62C 37/00 take precedence; for forming water curtains A62C 2/08)**
- 35/02 . with containers for delivering the extinguishing substance
 - 35/023 . . {the extinguishing material being expelled by compressed gas, taken from storage tanks, or by generating a pressure gas (for foam generation A62C 5/02)}
 - 35/026 . . {the extinguishing material being put under pressure by means other than pressure gas, e.g. pumps}
 - 35/04 . . Swingable or tiltable containers
 - 35/06 . . Containers destroyed or opened by falling
 - 35/08 . . Containers destroyed or opened by bursting charge
 - 35/10 . . Containers destroyed or opened by flames or heat
 - 35/11 . . controlled by a signal from the danger zone
 - 35/13 . . . with a finite supply of extinguishing material
 - 35/15 . . . with a system for topping-up the supply of extinguishing material automatically
 - 35/20 . Hydrants, e.g. wall-hoses, wall units, plug-in cabinets (hydrants in streets E03B 9/02)
 - 35/58 . Pipe-line systems

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|--------------|---|--------|--|
| 35/60 | . . wet, i.e. containing extinguishing material even when not in use | 99/009 | . {Methods or equipment not provided for in groups A62C 99/0009 - A62C 99/0081 } |
| 35/605 | . . . {operating and sounding alarm automatically} | | |
| | <u>WARNING</u> | | |
| | see warning after subclass title | | |
| 35/62 | . . dry, i.e. empty of extinguishing material when not in use | | |
| 35/64 | . . pressurised | | |
| 35/645 | . . . {with compressed gas in pipework} | | |
| | <u>WARNING</u> | | |
| | see warning after subclass title | | |
| 35/66 | . . . Accelerators | | |
| 35/68 | . . Details, e.g. of pipes or valve systems (valves in general F16K) | | |
| 37/00 | Control of fire-fighting equipment (heat-sensitive devices G01K) | | |
| 37/04 | . {with electrically-controlled release} | | |
| 37/08 | . comprising an outlet device containing a sensor, or itself being the sensor, i.e. self-contained sprinklers | | |
| 37/09 | . . telescopic or adjustable | | |
| 37/10 | . . Releasing means, e.g. electrically released | | |
| 37/11 | . . . heat-sensitive | | |
| 37/12 | with fusible links | | |
| 37/14 | with frangible vessels | | |
| 37/16 | with thermally-expansible links | | |
| 37/20 | . . Resetting after use; Tools therefor | | |
| 37/21 | . . . automatic | | |
| 37/28 | . . {with an explosive charge} | | |
| 37/36 | . an actuating signal being generated by a sensor separate from an outlet device | | |
| 37/38 | . . by both sensor and actuator, e.g. valve, being in the danger zone | | |
| 37/40 | . . . with electric connection between sensor and actuator | | |
| 37/42 | . . . with mechanical connection between sensor and actuator, e.g. rods, levers | | |
| 37/44 | . . only the sensor being in the danger zone | | |
| 37/46 | . . Construction of the actuator | | |
| 37/48 | . . . Thermally sensitive initiators | | |
| 37/50 | . Testing or indicating devices for determining the state of readiness of the equipment | | |
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| 99/00 | Subject matter not provided for in other groups of this subclass | | |
| 99/0009 | . {Methods of extinguishing or preventing the spread of fire by cooling down or suffocating the flames} | | |
| 99/0018 | . . {using gases or vapours that do not support combustion, e.g. steam, carbon dioxide} | | |
| 99/0027 | . . . {Carbon dioxide extinguishers} | | |
| 99/0036 | . . {using foam} | | |
| 99/0045 | . . {using solid substances, e.g. sand, ashes; using substances forming a crust} | | |
| 99/0054 | . . {using counter-fire} | | |
| 99/0063 | . . {with simultaneous removal of inflammable materials} | | |
| 99/0072 | . . {using sprayed or atomised water} | | |
| 99/0081 | . {Training methods or equipment for fire-fighting} | | |