

# CPC COOPERATIVE PATENT CLASSIFICATION

## A HUMAN NECESSITIES

### HEALTH; AMUSEMENT

### A62 LIFE-SAVING; FIRE-FIGHTING

**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](#))

#### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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

- 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
- 33/00 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
- 35/60 . . wet, i.e. containing extinguishing material even when not in use
- 35/605 . . . {operating and sounding alarm automatically}

**WARNING**

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}

**WARNING**

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
- 37/36 . 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

**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}
- 99/009 . {Methods or equipment not provided for in groups [A62C 99/0009](#) - [A62C 99/0081](#)}