

CLASS 169, FIRE EXTINGUISHERS**SECTION I - CLASS DEFINITION**

This class includes patents for apparatus and methods designed specifically for extinguishing fire and elements of such apparatus not classifiable in border existing classes; also apparatus capable of performing this function if designed to prevent fire by operating in anticipation of fire conditions.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Devices whose sole function is the extinguishing of fire by smothering are included in this class (169); but devices for smothering fire by closing doors, windows, shutters, and the like are excluded. For the latter see Class 49, Movable or Removable Closures, and Class 160, Flexible or Portable Closure, Partition, or Panel, especially subclass 1 and indented subclasses. Where the smothering and extinguishing actions are combined, the patent is classified in the appropriate subclass of this class (169).

Apparatus for the general purpose of distributing fluids is found in Class 137, Fluid Handling.

See Class 239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses for apparatus used for sprinkling and spraying of fluids.

SECTION III - REFERENCES TO OTHER CLASSES**SEE OR SEARCH CLASS:**

- 102, Ammunition and Explosives, subclass 370 for projectiles carrying fire extinguishing gases.
 131, Tobacco, subclasses 235.1+, 236, 237, and 256 for cigar and cigarette extinguishers.
 252, Compositions, for compositions for use in extinguishing fires.

SUBCLASSES

- 5 FLUID SYSTEMS:**
 This subclass is indented under the class definition. The general type of complete extinguishing apparatus under the ... involving a source of extinguishing fluid, distributing-pipes for

conveying the fluid, to distant points of application, discharge outlets for delivering the fluid, and means for causing the propulsion of the fluid through the system when desired, the latter means including the force of gravity.

- (1) Note. This subclass includes systems in which the distributing-pipes have combined functions, such as serving for both extinguishing and heating or ventilating.

- 6 Chemical pressure generating:**
 This subclass is indented under subclass 5. Systems, in which a liquid is discharged from its supply-tank by pressure generated by the reaction of chemicals mixed at the time discharge is to occur.
- 7 Automatic:**
 This subclass is indented under subclass 6. Systems, in which the operation occurs automatically in response to fire conditions, such as an abnormal increase of temperature in the region to be protected.
- 8 Pressure controlled:**
 This subclass is indented under subclass 7. Systems, wherein the operation occurs automatically in direct response to a variation of pressure of the fluid which normally fills the distributing-pipes. This pressure change usually results from the opening of a thermally-controlled sprinkler-head, permitting flow of gas or liquid from the pipes.
- 9 Gas-pressure discharge:**
 This subclass is indented under subclass 5. Fluid systems, in which an agent is discharged from its container by the pressure of a gas normally confined in the same or in a separate container.
- 10 Gravity:**
 This subclass is indented under subclass 5. Systems, wherein the source is essentially a liquid-tank not under pressure, but elevated above the distributing-pipes so that discharge will occur by gravity.
- 11 Gas:**
 This subclass is indented under subclass 5. Systems, wherein extinguishing agent is gaseous or is delivered in the form of a gas and by its own energy or by mechanical blowers.

- SEE OR SEARCH CLASS:
62, Refrigeration, subclasses 45.1+ for process and apparatus for handling solidified or liquefied gas (e.g., CO²) as a commodity requiring steps or means special to liquefied gas and more than required for other liquids.
- 12 Combustion products:**
This subclass is indented under subclass 11. The extinguishing agent consisting of flue or furnace gases or like products of combustion and is forced into the fire area usually after being cooled and purified.
- 13 Pump supply:**
This subclass is indented under subclass 5. Systems, in which a pump is the essential element for propelling a liquid agent from a low-pressure or pressureless source to the point of application.
- 14 Plural source, mixing in transit:**
This subclass is indented under subclass 5. Systems, wherein two or more substances, one or more in liquid form, are caused to unite or mix in passing from their sources to a common discharge-point.
- (1) Note. This group includes those "foam" systems in which two liquids are mixed near the discharge point to form a fire-extinguishing foam.
- 15 Stream impregnating:**
This subclass is indented under subclass 14. Systems, in which a main liquid stream in passing to the discharge point is modified by adding or injecting another substance, such as a gas, dissolved solid, or solid matter in suspension.
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 87.01+ for self proportioning or correlating systems, especially subclasses 111+ for plural inflows, and subclass 268 for a fluid handling system with a holder for solid material to be entrained in a flow. See the search notes thereunder.
- 16 Distributing systems:**
This subclass is indented under subclass 5. Patents, relating to the control of the distribution of fluid through the pipes or branches of the system to the discharge-points and the arrangement of the pipes or outlets.
- 17 Dry pipe:**
This subclass is indented under subclass 16. Systems, in which the pipes are normally closed and filled with gas, which is displaced by extinguishing liquid when the system is active. Operation results from the pressure change following the opening of a thermally controlled outlet.
- 18 Hand controls:**
This subclass is indented under subclass 16. Hand-operated means for operating valves which control the flow through the pipes, usually arranged to permit control from a distant point.
- 19 AUTOMATIC VALVES:**
This subclass is indented under the class definition. Valves for normally restraining flow through a fluid system and opening automatically to permit flow upon the occurrence of fire conditions. Usually an increase of temperature in the protected area is the ultimate condition which governs the operation of the valve.
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 65+, 72+, 79+, 457, and 468 for other valve actuation responsive to increased temperature.
- 20 Pressure controlled:**
This subclass is indented under subclass 19. Valves, which operate as a direct result of a pressure change in the fluid normally filling the distributing pipes or an auxiliary system of pipes extended into the area to be protected. These valves are used principally in dry pipe distributing systems and usually include a "water-valve", which is held closed against the pressure of the source by force transmitted from an "air-valve" exposed to the pressure of the fluid normally filling the distributing-pipes.

- 21 Lever system:**
This subclass is indented under subclass 20. Apparatus, wherein the pressure on the air-valve is transmitted to the water-valve through a system of levers or like mechanical elements and usually in increased amount.
- 22 Differential area:**
This subclass is indented under subclass 20. Apparatus, wherein the pressure of the fluid in the distributing-pipes is transmitted directly from the air-valve to the water-valve to maintain the latter closed, the effective area of the air-valve being greater than that of the water-valve. The air-valve may be integral with the water-valve or may have a bearing upon it without the interposition of levers, toggles, or the like.
- 23 ALARMS:**
This subclass is indented under the class definition. Alarm or signal devices peculiarly adapted for use in connection with extinguishing systems for signaling the abnormal position of a valve or abnormal flow through the pipes.
- SEE OR SEARCH CLASS:
116, Signals and Indicators, subclass 227.
340, Communications: Electrical, subclasses 577 through 599 for electric fire alarm systems which are automatically responsive to fire or temperature. See the class definition of Class 340 for the line between Classes 169 and 340.
- 24 Fire engines:**
This subclass is indented under subclass 52. Apparatus, of the type used by city fire companies which includes the combination of pumping apparatus with a vehicle and is especially adapted for extinguishing fire.
- (1) Note. Inventions in the pump or power plant, per se, are excluded.
- 25 Water towers:**
This subclass is indented under subclass 52. Extinguishing apparatus, involving a portable discharge pipe or structure having an inlet connection and a discharge-nozzle and means for elevating the nozzle and controlling the direction of the discharge.
- SEE OR SEARCH CLASS:
182, Fire Escape, Ladder, or Scaffold, subclasses 51+ for similar structure wherein the hose or nozzle support is a vehicle mounted ladder or scaffold.
239, Fluid Sprinkling, Spraying, and Diffusing subclasses 146+ for mobile spray systems.
- 26 AUTOMATIC RECEPTACLES:**
This subclass is indented under the class definition. Fire extinguishing devices which includes a container for an extinguishing agent adapted to be placed in the space to be protected and means automatic in operation for causing the agent to be discharged into the space around the container.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
30, and indented subclasses, for portable vessels.
- SEE OR SEARCH CLASS:
206, Special Receptacle or Package, subclasses 219+ for a container with plural distinct contents which contents can be mixed by rupture, manipulation or agitation of the container or container portions.
- 27 Chemical mixing:**
This subclass is indented under subclass 26. Devices, wherein the discharge of the extinguishing agent is due to pressure generated by the reaction of normally separated chemicals, which are mixed at the time of operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
32,
- 28 Explosive:**
This subclass is indented under subclass 26. Devices, in which an explosive substance is provided which upon detonation bursts the container and scatters the contents.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
35, 36.

- 29 Mechanical discharge:**
This subclass is indented under subclass 26. Devices, in which the contents of the container are discharged or scattered by mechanical means, such as a spring-motor or electric motor.
- 30 PORTABLE VESSELS:**
This subclass is indented under the class definition. Fire extinguishing devices adapted to be carried or transported by an operator to the fire area, comprising a container for an extinguishing agent and means for causing the discharge of the agent at the will of the operator.
- SEE OR SEARCH CLASS:
116, Signals and Indicators, subclass 215 for indicators to show a fire extinguisher has been used.
206, Special Receptacle or Package, subclasses 219+ for a container with plural distinct contents which contents can be mixed by rupture, manipulation or agitation of the container or container portions.
- 33 Piston discharge:**
This subclass is indented under subclass 30. Devices wherein the discharge is caused by a pump or a mechanically operated piston acting on the contents.
- (1) Note. This group includes vessels provided with rotary or rectilinear pumps operated by hand or motor, and extinguishers of the piston syringe type.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 372+ for dispensing containers with pumps, subclasses 386+ for follower type dispensers.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 320+ and 329+ for pump or follower type discharge for projecting material from the receptacle.
- 34 Buckets:**
This subclass is indented under subclass 30. Containers of the bucket adapted to store a quantity of extinguishing agent which is to be directly dashed or thrown upon a fire.
- 35 Tubes:**
This subclass is indented under subclass 30. Vessels for containing an extinguishing agent, usually a powder, which is discharged from one end of the vessel either by so shaking it as to throw the contents on the fire or by means of small explosive charges buried in the contents.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
28, for devices of the latter type designed for both automatic operation and hand use.
- 36 Grenades:**
This subclass is indented under subclass 30. Vessels comprising a fragile container filled with an extinguishing agent, which is discharged by throwing the container into the fire area, so as to break it and liberate the contents.
- SEE OR SEARCH CLASS:
206, Special Receptacle or Package, subclasses 219+ for a container with plural distinct contents which contents can be mixed by rupture, manipulation or agitation of the container or container portions.
- 37 SPRINKLER HEADS:**
This subclass is indented under the class definition. Thermally-controlled discharge elements or outlets for extinguishing fluid, comprising a nozzle, a valve or closure member therefor, and means for normally holding the valve in closing position and automatically releasing or opening it upon an increase of temperature.
- SEE OR SEARCH CLASS:
239, Fluid Sprinkling, Spraying, and Diffusing, especially in the deflector subclasses (498, etc.), for spray nozzle or discharge members not automatically controlled. The patents in Class 239 may disclose but do not claim the fusible link.
- 38 Collapsible strut:**
This subclass is indented under subclass 37. The valve is supported by means of a strut or compression device arranged between the valve and a part of the frame, the strut being designed to fall or collapse upon an increase of

its temperature. This includes struts consisting of a single or simple element which falls by fusion, combustion, or bursting.

39 Compound:

This subclass is indented under subclass 38. The strut, comprises a plurality of articulated elements whose holding relationship is destroyed on the failure of the strut. The elements of the strut may include levers or other mechanical forms, but the strut as a whole is a compression resisting device.

40 Lever:

This subclass is indented under subclass 37. The valve, is supported by a lever or system of levers which communicate the thrust of the valve to the frame at two or more separated points.

41 Direct support:

This subclass is indented under subclass 37. , the valve or a member connected to and moving with the valve is supported by a fusible connection directly with the frame.

42 FUSIBLE CONNECTIONS:

This subclass is indented under the class definition. Thermally-controlled devices adapted for use in fire-extinguishing apparatus for resisting tension and comprising a plurality of interengaging elements held in normal position by a fusible substance and adapted to release or fail upon an increase of temperature.

SEE OR SEARCH CLASS:

- 49, Movable or Removable Closures, subclasses 1+.
- 126, Stoves and Furnaces, subclass 287.5, and
- 428, Stock Material or Miscellaneous Articles, subclass 608 for a metallic composite embodying interengaged fibers.

43 PROCESSES:

This subclass is indented under the class definition. Methods practiced to prevent or extinguish fires.

44 With mixing of extinguishing compounds:

This subclass is indented under subclass 43. Method, wherein a plurality of components are mixed on site to produce a fire extinguishing or fire preventing compound, said compound

being formed upstream or downstream of the discharge element, or by separately applying the components.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 14+, for apparatus for mixing extinguishing compounds.

SEE OR SEARCH CLASS:

- 516, Colloid Systems and Wetting Agents; Subcombinations Thereof; Processes of Making, Stabilizing, Breaking, or Inhibiting, subclasses 1+ for continuous gas or vapor phase colloid system (e.g., smoke, fog, aerosol, cloud, mist) or agents for such systems or making or stabilizing such systems or agents, subclasses 10+ for foam colloid systems or agents for such systems or making or stabilizing such systems or agents; in each instance, when generically claimed or when there is no hierarchically superior provision in the USPC for the specifically claimed art.

45 Of preventing fire:

This subclass is indented under subclass 43. Methods, practiced to prevent a flammable object from burning as a consequence of being in the vicinity of an existing fire, or to prevent the initial outbreak of fire.

46 Of extinguishing fire:

This subclass is indented under subclass 43. Methods for putting out a fire which has already started.

- (1) Note. This subclass takes a process where the extinguishant is introduced to the area surrounding the fire or a subsurface of the matter on fire after which the extinguishant seeks out the seat of the fire.
- (2) Note. This subclass takes a process where the extinguishing material is present at the fire but in not active until it is acted upon by fire.

47 By projecting extinguishant directly onto seat of fire:

This subclass is indented under subclass 46. Method, involving the projection of a fire extinguishing material directly from its discharge element onto the seat of the fire.

- (1) Note. The extinguishing material must be of a nature to extinguish a fire by itself.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 1+ for methods of spraying a fluid.

48 APPARATUS WHICH ISOLATES FLAMES FROM NON-BURNING AREA:

This subclass is indented under the class definition. Apparatus comprising apparatus designed to separate a burning area or a portion of a burning area from a second burnable area to prevent burning interaction between the two areas.

- (1) Note. The second area may include a person or article to be protected, or it may simply be an extension of the area which is on fire.
- (2) Note. Apparatus included herein is in the form of a solid or fluid cover or shield, e.g., nonfluid or gas.

49 With means to isolate fire from atmosphere and extinguish:

This subclass is indented under subclass 48. Apparatus, which separates a fire area from the atmosphere.

- (1) Note. Apparatus placed in this subclass has the capability of extinguishing the separated fire by smothering, however a means may be included with the apparatus to discharge an extinguishant onto the fire.

50 Acted upon by operator in use:

This subclass is indented under subclass 49. Apparatus, which separates the fire from the atmosphere upon manipulation of the means by an operator to accomplish the isolation.

- (1) Note. The manipulation includes rolling, dragging, wrapping, or beating.

- (2) Note. This subclass includes extinguishers of the blanket type which conform to the shape of the object to be treated.

51 MOUNT, CABINET OR GUARD:

This subclass is indented under the class definition. Apparatus comprising means to support or protect an extinguishant source and/or an outlet therefor.

52 Movable relative to fire:

This subclass is indented under subclass 51. Apparatus, comprising fire extinguishing or preventing means mounted on a structure designed to provide movement of the means relative to the fire.

- (1) Note. Apparatus herein includes (1) a mounting means which is movable to a fire, or (2) a mounting means which imparts movement to an extinguisher thereon during use thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30+, for portable vessels.

48+, for portable fire shields and fire fighter's apparel.

53 On air-borne vehicle:

This subclass is indented under subclass 52. Apparatus, mounted on an aeronautical vehicle, e.g., a helicopter.

SEE OR SEARCH CLASS:

244, Aeronautics and Astronautics, subclass 136 for aerial fire fighting apparatus in combination with aircraft structure.

54 SPECIAL APPLICATIONS:

This subclass is indented under the class definition. Subject matter comprising means for preventing or minimizing damage due to fire in or about a structure or device by treating the fire condition, said means being particularly adapted for use with that specifically named structure or device.

- (1) Note. Fire extinguishers claimed in combination with structure or apparatus classifiable elsewhere is found in the class accepting that apparatus.

55 For railway car heaters:

This subclass is indented under subclass 54. Apparatus, especially adapted for extinguishing fire in or about a stove on a railway car.

- (1) Note. These extinguishers are usually set in operation by an abnormal movement of the car, as by collision, derailment, or overturning.

56 Condition responsive control:

This subclass is indented under subclass 54. Apparatus, having a device which operates in response to a sensed condition relative to a fire in or about the particular structure with which it is to be associated to control a means which may extinguish a fire or prevent the spreading thereof in or about said particular structure.

- (1) Note. Conditions which may be sensed relative to a fire may include heat, pressure, light, smoke, impact, deceleration, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

19, for valve which control the flow of fire extinguishing fluid in a fire extinguishing system not associated with a specific structure and wherein said valve is responsive to a sensed condition.

26+, for containers having an extinguishant therein which are for general use and which will discharge the contents thereof in response to a predetermined condition.

SEE OR SEARCH CLASS:

52, Static Structures (e.g., Buildings), appropriate subclass, for condition responsive components not claimed with fire extinguishing systems or for the purpose of fire extinguishing. Note particularly subclasses 1, 98, 168, and 232.

57 Having fusible plug, support, or holder:

This subclass is indented under subclass 54. Apparatus in which a fire extinguishing material is directly restrained against discharge by a plug, support or other device which is in contact with said material until said device is fused, melted or deformed when a predetermined condition is sensed, or in which such a plug, support, etc., operates similarly in another cooperative relation with the extinguishing means.

SEE OR SEARCH CLASS:

52, Static Structures (e.g., Buildings), subclass 232 for thermally responsive ceiling structure not claimed as cooperating with a fire extinguishing system.

58 Having frangible extinguishant holder:

This subclass is indented under subclass 56. Apparatus wherein a fire extinguishing material is directly restrained against discharge by a device in contact with said material which fractures or breaks when a predetermined fire condition is sensed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

26+, and 28, for a frangible container for fire extinguishing material in a receptacle for general use.

SEE OR SEARCH CLASS:

52, Static Structures (e.g., Buildings), subclass 98 for frangible components not claimed as being for fire extinguishing.

59 Fusible cable:

This subclass is indented under subclass 56. Apparatus having a flexible elongated means extending into the area to be protected, a sensing means in said elongated means which senses the fire and releases the elongated means, causing a fire extinguishing system to actuate.

SEE OR SEARCH THIS CLASS, SUBCLASS:

42, for fusible links, per se.

SEE OR SEARCH CLASS:

340, Communications: Electrical, subclass 596 for electric alarm systems having cable sensors.

60**Sensor, control and actuator:**

This subclass is indented under subclass 56. Apparatus having (1) means to sense a fire condition, (2) means to transmit a signal from the sensing means in response to a fire sensed by said sensing means and (3) means receiving said transmission and responding to release material to extinguish the sensed fire.

61**Electrical control:**

This subclass is indented under subclass 60. Apparatus, where the signal transmitting means is an electrical circuit.

- (1) Note. The line between this class and Class 340, Communications: Electrical, is that Class 169, requires that the sensor act directly upon the extinguishing systems; systems wherein the sensor acts first on an alarm and then on a fire extinguishing system are found in Class 340.

SEE OR SEARCH CLASS:

340, Communication: Electrical, subclasses 577+ for electrical flame alarms; subclasses 584+ for electrical temperature alarms; and subclasses 628+ for electrical smoke alarms.

62**For vehicles:**

This subclass is indented under subclass 54. Apparatus, for extinguishing fires on or inside a conveyance for people and/or articles; e.g., airplanes, ships, automobiles etc.

63**For motion picture apparatus:**

This subclass is indented under subclass 54. Apparatus for extinguishing fires in or about devices which manipulate moving picture film.

- (1) Note. This subclass includes the combination of nominally recited film handling means with a fire extinguishing apparatus.

SEE OR SEARCH CLASS:

352, Optics: Motion Pictures, for fire prevention and isolation structure for

film strips in combination with motion picture apparatus structure.

64**For mine:**

This subclass is indented under subclass 54. Apparatus, designed for use in extinguishing or in the prevention of fires in a subterranean environment of solid natural material.

- (1) Note. This subclass includes apparatus for dusting the walls of mines as a preventive measure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

45, for methods of preventing mine fires and explosions.

SEE OR SEARCH CLASS:

299, Mining or In Situ Disintegration of Hard Material, subclass 1.05 for signaling or indicating means for fire conditions as part of mine structure and subclass 12 for mine safety methods.

65**For cooking installation:**

This subclass is indented under subclass 54. Apparatus for extinguishing or preventing fires in stoves or ovens used in food preparation, and the area surrounding said stoves or ovens.

66**For storage tank:**

This subclass is indented under subclass 54. Apparatus for extinguishing or preventing fires in a surface-mounted receptacle which may contain a supply of inflammable fluid.

SEE OR SEARCH THIS CLASS, SUBCLASS:

62, for extinguisher protecting fuel tank of vehicle.

SEE OR SEARCH CLASS:

220, Receptacles, subclasses 88.1 through 89.4 for the prevention of fire in oil tanks involving only tank structure without treating the contents.

222, Dispensing, subclasses 53, 54, 152 for fire prevention and extinguishing means combined with oil dispensers.

- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 22+ for use of a fluid blanket as preservative means other than fire protection purposes.
- 67 Extinguisher having transport or erection means:**
This subclass is indented under subclass 66. Apparatus, wherein the fire extinguishing means is designed for movement to and/or assembly at the receptacle.
- (1) Note. Apparatus classified here is external of a storage receptacle tank, and is structurally independent of the receptacle but it is designed especially for use with a receptacle.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
52+, for mobile extinguishers designed for general utility.
- 68 With specific extinguishant applying means:**
This subclass is indented under subclass 66. Apparatus, having means to particularly distribute the extinguishing material within the receptacle.
- 69 For oil or gas well:**
This subclass is indented under subclass 54. Apparatus for extinguishing or preventing fires at the outlet of a subterranean source of an inflammable fluid.
- SEE OR SEARCH CLASS:
166, Wells, subclasses 75.11+ especially subclasses 79.1 and 90.1 for well apparatus combined with fire extinguishers where the fire extinguishing feature goes no further than a mere cap or head, means for diverting flow from the well or means for inserting a fluid into the well, or where more of the well is claimed than cooperates with the fire extinguishing means.
- 70 With specific extinguishant applying means, or means for providing access to fire:**
This subclass is indented under subclass 54. Apparatus, having means to particularly distribute the extinguishing material with respect to the fire to be extinguished and the structure
- to be protected, or means enabling the extinguisher to surpass obstacles encountered in reaching the fire.
- 71 Gas pressure:**
This subclass is indented under subclass 30. Apparatus, wherein a pressurized gas means is provided and means whereby the pressurized gas may be applied to said agent to expel the same from a container so that said agent may be applied to a fire.
- (1) Note. The pressurized gas may be stored ready for use or it may be developed by a pump or other means.
- (2) Note. The pressurized gas may be stored with the agent, or it may be stored separately.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 394+ for dispensers using fluid pressure to cause discharge.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 307, 308 and 337+ for sprayers having supply holders and in which the materials are discharged therefrom by the pressure of a gas.
- 72 With means facilitating total discharge:**
This subclass is indented under subclass 71. Apparatus, wherein said container is provided with specific means designed to insure that the agent will discharge from the container in its entirety, regardless of the orientation of the vessel when in use.
- 73 By collapsing chamber holding agent:**
This subclass is indented under subclass 72. Apparatus, having variable volume means provided to store agent within said container whereby the volumetric capacity of the variable volume means may be reduced substantially to zero and thus insure discharge of the agent in its entirety.
- (1) Note. The variable volume means may be a cylinder with a piston movable therein or a collapsible wall chamber.

- 74 With particular outlet structure:**
This subclass is indented under subclass 71. Apparatus, further comprising an outlet from the vessel or a terminal discharge element for said agent which imparts thereto particular characteristics.
- (1) Note. This subclass includes extinguishers whose outlet is modified by the operator in order to release the extinguishant.
- 75 With means preventing accidental discharge, relieving pressure, or indicating condition within vessel:**
This subclass is indented under subclass 71. Apparatus further comprising means to avoid accidental discharge of the agent from the container or excessive pressure build up in said container, or means to indicate any abnormal condition therein.
- 76 With means permitting repeated discharge:**
This subclass is indented under subclass 71. Apparatus having means, such as an on-off valve or plural agent sources, which allows the operator to discharge agent at will, more than once with an extinguisher.
- 77 Power extinguishant:**
This subclass is indented under subclass 71. Apparatus for containing and discharging a dry chemical agent.
- 78 Produced by chemical mixing:**
This subclass is indented under subclass 71. Apparatus, having a plurality of separately housed substances, which may be caused to be mixed when desired, and thus caused to react chemically to produce a gas with sufficient pressure to expel the agent from the container.
- 79 Upon inversion of internal container:**
This subclass is indented under subclass 78. Apparatus, wherein at least one of the reactant housings is turned over relative to a second reactant, thus releasing said reactant for mixing with a second reactant in the container.
- 80 Upon inversion of vessel:**
This subclass is indented under subclass 78. Apparatus wherein the mixing is initiated by turning the container end for end.
- 81 Breaks reactant container:**
This subclass is indented under subclass 80. Apparatus comprising an actuator which upon inversion of the container destroys a means by which the substances had been prevented from mixing, so that the substances may mix and produce the pressurized gas necessary to expel the agent from the container.
- 82 Reactant container closure released by gravity:**
This subclass is indented under subclass 80. Apparatus wherein the housing for at least one of the substances to be mixed is provided with a closure therefor which will be removed therefrom by gravitational force upon inversion of said housing whereby the substances may be mixed to produce the necessary gas pressure to expel the agent from the container.
- 83 Upon breaking internal container:**
This subclass is indented under subclass 78. Apparatus, wherein a reactant is stored in a container which must be fractured to release said reactant to mix with a second reactant to produce a fire extinguishant.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
81, for vessels having therein a reactant container which is broken upon inversion of the vessel.
- 84 Produced by combustion:**
This subclass is indented under subclass 71. Apparatus having a charge of combustible material contained therein which produces the gas pressure when ignited and means available to the operator for igniting the charge.
- 85 Pressurizing agent stored apart from agent:**
This subclass is indented under subclass 71. Apparatus wherein the pressurizing gas used to expel the fire extinguishing agent is stored in a container which is separate from that in which the agent is stored.
- 86 With means to prevent freezing of expanding gas:**
This subclass is indented under subclass 85. Apparatus having heat exchange or other means to prevent the temperature of the gas, due to expansion as it passes through an orifice

or the like, from decreasing to the point where gas passing therethrough will solidify.

87 Vessel inverted to release gas:

This subclass is indented under subclass 85. Apparatus having means whereby when the vessel is turned over the pressurized gas may be released to expel the agent from the vessel.

- (1) Note. The means releasing said pressurized gas may do so by puncturing the pressurized gas container because of the inversion thereof, or upon inversion thereof and the application of a force upon said releasing means.

88 Lever or trigger operated to release gas:

This subclass is indented under subclass 85. Apparatus wherein the means for releasing the pressurizing gas has a scissors grip, pistol-grip, or other squeeze type actuator, or a lever-type actuator.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 89, for a discharge head on a container for agent stored under pressure.

89 Discharge head:

This subclass is indented under subclass 71. Apparatus comprising a means on the container for the agent which has both a valve for releasing the pressurized material and an outlet communicating therewith for dispensing the released material from the container.

90 Shut off valve:

This subclass is indented under subclass 37. Apparatus further comprising a means for selectively terminating discharge from the sprinkler head.

91 MISCELLANEOUS: E.G., BLOWERS:

This subclass is indented under the class definition. Apparatus not herein before provided for.

END