Nov. 5, 1940. P. A. STOVER 2,220,299

FIRE EXTINGUISHING APPARATUS

Filed Aug. 29, 1938

FIG_1_

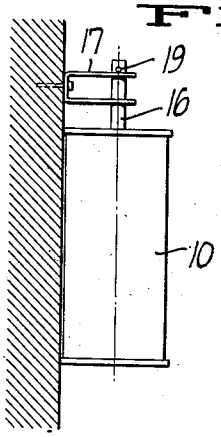


FIG_4_

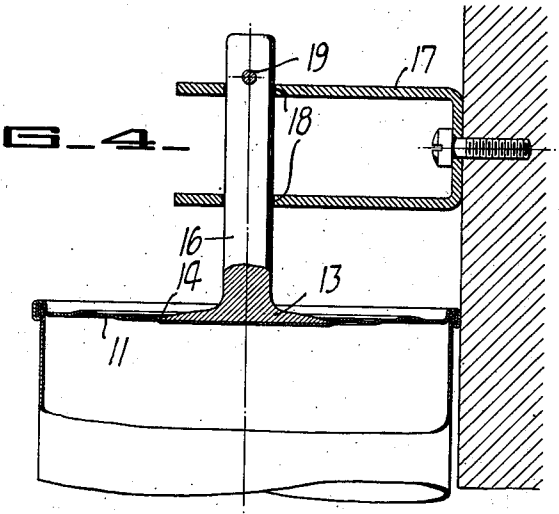
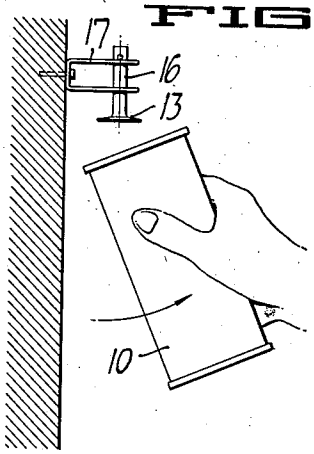


FIG_2_



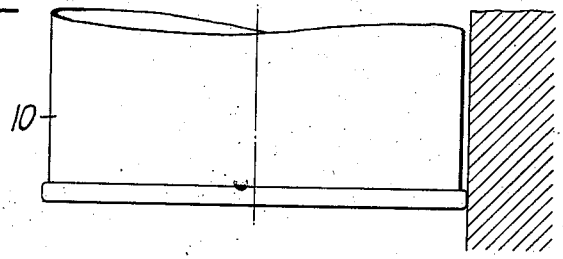


FIG_5_

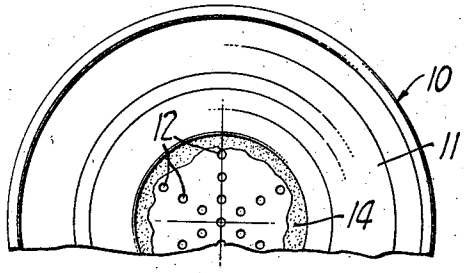
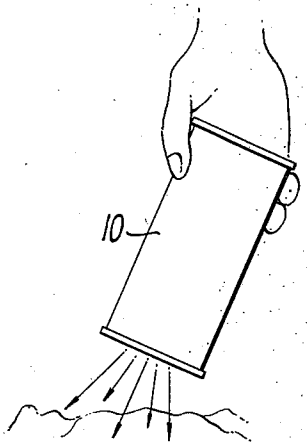


FIG_3_



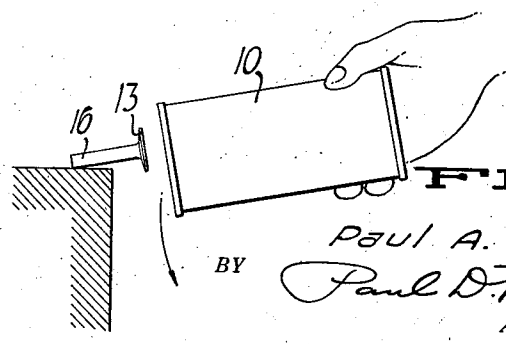


FIG_6_

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FIRE EXTINGUISHING APPARATUS

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Application August 29, 1938, Serial No. 227,352

3 Claims. (Cl. 169—26)

This invention relates generally to fire extinguisher apparatus of the hand operated type, making use of fire extinguisher fluid such as carbon tetrachloride.

It is an object of the invention to provide fire extinguisher apparatus of the above character which will be of utmost simplicity, both as to operation and mechanical construction. More particularly the present invention eliminates use of mechanically moving parts requiring manipulation when in use, and it embodies a structure of such simplicity as to enable manufacture at minimum cost.

A further object of the invention is to provide a fire extinguisher apparatus available for operation by hand, and which will also automatically discharge the fire extinguisher liquid, in the event it is subjected to the heat of a fire.

Additional objects of the invention will appear from the following description, in which the preferred embodiment of the invention has been set forth in detail in conjunction with the accompanying drawing.

Referring to the drawing:

Fig. 1 is a side elevational view, illustrating an apparatus in accordance with the present invention.

Fig. 2 is a view similar to Fig. 1 but showing the manner in which the container can be disrupted with respect to its seal, for manual use.

Fig. 3 is a side elevational view illustrating manual use of the container, after removal of the seal.

Fig. 4 is an enlarged view in cross section illustrating the detailed construction of the embodiment shown in Figs. 1 and 2.

Fig. 5 is a partial plan view of the top of the container, illustrating a suitable arrangement of perforations.

Fig. 6 is a side elevational view illustrating another manner in which the apparatus can be employed without a supporting bracket.

The apparatus as illustrated in the drawing includes a can 10, which can be of inexpensive and generally conventional construction. The sheet metal end wall 11 of the container is shown provided with a plurality of perforations 12, for discharge of the fire extinguisher fluid. A metal closure wall 13 normally extends over the openings 12, and the peripheral edge portion of this closure wall is normally sealed to the adjacent sheet metal end wall by means of suitable fusible alloy 14. This alloy is such that in the event the closure wall 13 is heated to an elevated temperature by a fire, as for example a temperature of the order of 180° F., the alloy melts. The closure wall 13 can be formed of any suitable metal, such as mild steel, and its thickness is preferably such that it is rigid compared to the sheet metal end wall 11.

The closure wall 13 is formed integral with an upstanding rigid pin 16, which is preferably formed in some suitable manner to facilitate its attachment to a fixed support. The type of support illustrated consists of a U-shaped bracket 17, which provides spaced upper and lower holes 18 for accommodating the pin 16. The upper end of the pin 16 is provided with an opening to accommodate a cotter pin 19.

In order to use the apparatus as described above, one grasps the can 10 and with a single pull which may be outwardly and downwardly, the seal between the closure wall 13 and the end wall 11 is disrupted. The container can now be used substantially as shown in Fig. 3, to spray or sprinkle the fire extinguisher liquid upon a fire which it is desired to distinguish. Should the fire reach the location where the apparatus is mounted, heating of the closure wall 13 to an elevated temperature causes melting of the fusible alloy, and this is accompanied by automatic disruption of the seal with the result that the can drops to the floor or other surface below the same, where discharge of the fire extinguisher fluid will occur.

A supporting means attached to the pin 16 is desirable, particularly in that it facilitates quick manual use of the apparatus. It is also possible to use the apparatus without supporting means such as a bracket 17. As shown in Fig. 6 an operator may disrupt the seal merely by striking the end of the pin 16 upon a ledge or other convenient surface. Thereafter the container can be used in the same manner as previously described, to spray or sprinkle the contents of the container upon a fire.

It will be evident from the foregoing that I have provided a fire extinguisher apparatus capable of manual operation, which is of utmost simplicity, both as to mechanical construction and operation. It can be operated by any one without previous experience, and no particular manipulation is required after its removal from the bracket, in order to apply the liquid to the zone of fire. Before its use it is subjected to no deterioration or evaporation of fluid, because the container is hermetically sealed.

I claim:

1. In fire extinguisher apparatus, a container adapted to contain fire extinguisher fluid like car-

bon tetrachloride, said container having a sheet metal end wall provided with openings for discharge of fluid, a metal closure wall disposed over said opening, said closure wall having greater rigidity against bending than the sheet metal of the end wall, solder forming a disruptable connection and seal between the peripheral portion of the closure and the adjacent end wall, and a rigid member having a rigid attachment to said closure wall and serving to transmit disrupting force to the closure wall to disrupt said seal.

2. In a fire extinguisher apparatus, a container adapted to contain fire extinguisher fluid like carbon tetrachloride, said container having one end wall of sheet metal provided with openings for discharge of fluid, a metal closure wall disposed over said openings, said closure wall having greater rigidity against bending than the sheet metal of the end wall, solder forming a connection and seal between the peripheral edge portion of the closure wall and the adjacent end wall of the container, a rigid member extending from said closure wall and having a rigid connection to the same, and support means forming a rigid mounting for said member, whereby manual force can be applied to the container to disrupt the seal between the closure wall and said end wall.

3. In fire extinguisher apparatus, a container adapted to contain fire extinguisher fluid like carbon tetrachloride, said container having a normally uppermost sheet metal end wall provided with openings for discharge of fluid, a metal closure wall disposed over said openings, fusible alloy forming a disruptable connection and seal between the peripheral edge portion of the closure wall and adjacent end wall of the container, said closure wall having a greater degree of rigidity against bending than the sheet metal of the end wall, a rigid pin having one end of the same rigidly attached to said closure wall, said pin extending upwardly from the container, a supporting bracket, and means forming a rigid connection between said pin and the supporting bracket, whereby the container can drop free from the closure wall when the closure wall is heated to an elevated temperature to fuse the alloy, and whereby the can can be moved laterally by manually applied force to disrupt the seal between the closure wall and the end wall of the container, thereby enabling manual use of the container to extinguish a fire.

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