April 15, 1941. P. A. STOVER 2,238,349

FIRE EXTINGUISHING APPARATUS

Filed Aug. 29, 1938

FIG_2_

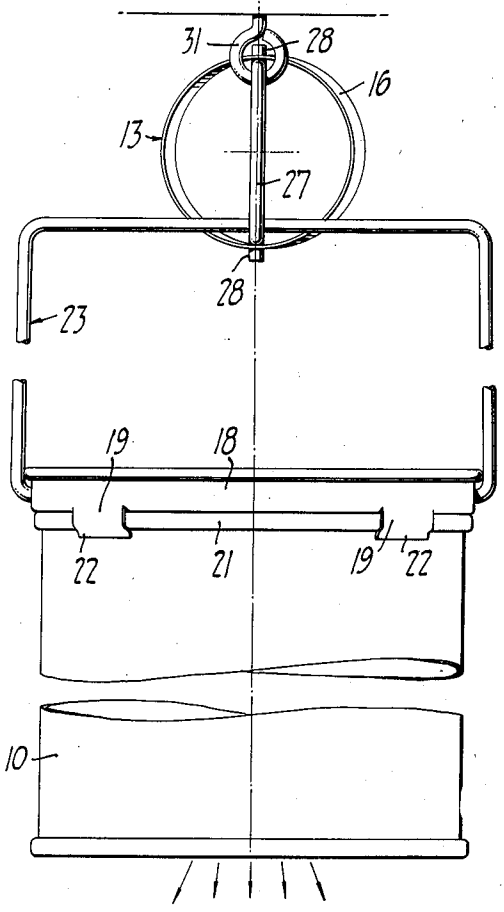


FIG_1_

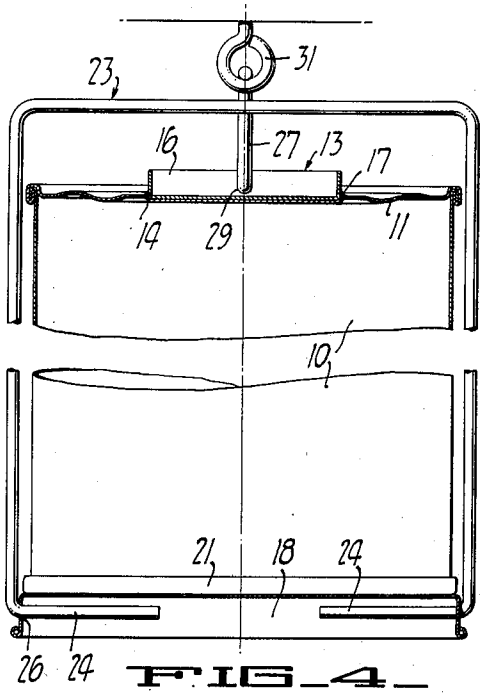


FIG_4_

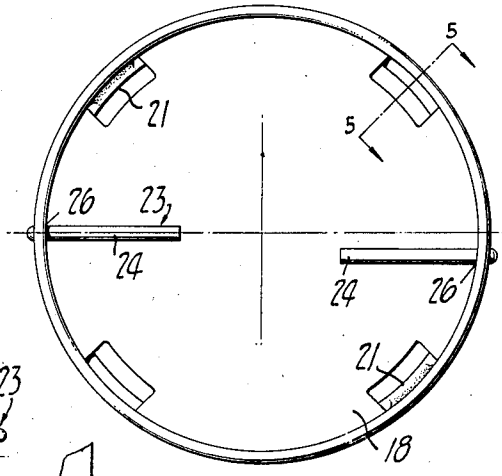


FIG_5_

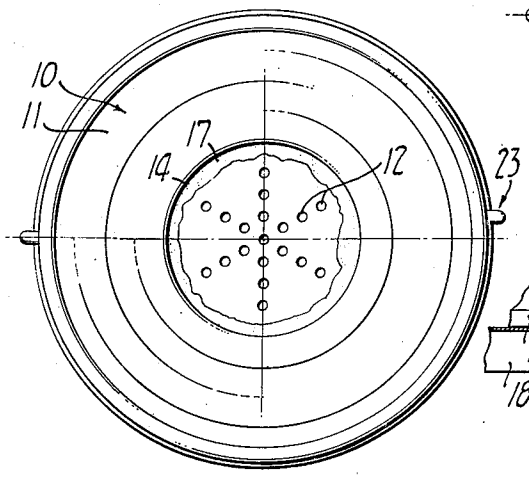
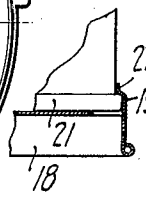


FIG_3_



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Patented Apr. 15, 1941 2,238,349

UNITED STATES PATENT OFFICE

2,238,349

FIRE EXTINGUISHING APPARATUS

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Application August 29, 1938, Serial No. 227,351

2 Claims. (Cl. 169—26)

This invention relates generally to fire extinguishing apparatus of the type making use of a quantity of fire extinguisher fluid like carbon tetrachloride, which is automatically released when certain parts of the apparatus are heated beyond a predetermined temperature. More particularly the invention relates to apparatus of the type in which the fire extinguisher fluid is carried within a sealed container, with provision, for causing inversion of this can upon dislodgement of a closure or seal.

It is an object of the invention to provide improved apparatus of the above character which will be positive and reliable in its automatic operation, and which will be cheap to manufacture and simple to install.

Further 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, partly in cross section, illustrating apparatus incorporating the present invention.

Fig. 2 is a side elevational view of the apparatus shown in Fig. 1, after automatic operation.

Fig. 3 is an end view of the can incorporated with the apparatus, looking at the lower end of the container as positioned in Fig. 2.

Fig. 4 is a bottom view of the apparatus as illustrated in Fig. 1.

Fig. 5 is a cross sectional detail taken along the line 5—5 of Fig. 4.

The apparatus as illustrated in the drawing consits of a container or can 10, which can be formed of ordinary sheet metal. The end wall 11 which is normally uppermost, is provided with a plurality of fluid discharge openings 12. Extending over the area occupied by openings 12 there is a closure member 13, which can also be formed of ordinary sheet metal, and which for convenience is circular in contour. To facilitate manufacture the end wall 11 can be provided with an integral annular shoulder 14 within which the closure wall 13 is seated. The periphery of member 13 is shown provided with an integral upturned annular flange 16. In order to afford a seal which will automatically break when the closure is heated to a given elevated temperature, as for example temperature of the order of 180° F., a peripheral portion of the closure 13 is sealed with respect to the wall 11 by means of suitable fusible alloy or solder 17. Such solders or alloys are well known in the art and may be selected to have a melting point at a temperature desired for automatic operation.

Attached to the lower end of the container there is a simple form of base 18, formed of pressed sheet metal, and preferably of slightly larger diameter than the diameter of the container 10. This base is shown provided with integral struck-out tabs 19 which extend over the crimped edge 21 of the container and which are bent as indicated at 22 in order to grip and form a firm attachment to the container.

In conjunction with the parts described above, there is a bail 23, formed of wire of suitable stiffness. The lower ends of this bail as shown in Fig. 1 are bent inwardly to form portions 24, which extend through apertures 26 in the base 18. The bail is dimensioned so that both inside and upper portions clear the sides and top of the container. Therefore the can can swing to the discharge position illustrated in Fig. 2, without possibility of friction or jamming. There is also a second bail 27 which normally embraces the intermediate portion of the bail 23, as shown in Fig. 1. This bail has bent portions 28 which extend through diametrically opposed openings 29 in the flange 16. As the apparatus is normally used bail 27 is attached to some suitable fixed support, as for example a supporting eyelet 31.

The apparatus is normally as illustrated in Fig. 1, that is with the entire container and its contents being supported by the bail 27, and with this bail embracing the intermediate portion of the bail 23. The container 10 contains a suitable fire extinguisher liquid, such as carbon tetrachloride. In the event of a fire in the proximity of the apparatus, the end wall 11 of the container and also the closure 13 become heated, and when a predetermined temperature is reached corresponding to the melting point of the fusible alloy 17, the seal between the closure 13 and the container is suddenly disrupted, with the result that the container drops down to a lower position in which the bail 23 is supported by bail 27, somewhat as illustrated in Fig. 2. Since there is nothing to retain the container in an upright position, the container immediately pivots about its lower end and swings to a discharge position as shown in Fig. 2. Preceding the instant when the closure 13 becomes decomes detached, the contents of the container are heated with the result that considerable internal pressure is developed. Thus vapor pressure aids in securing abrupt removal of closure

13, and in addition it aids in discharging the fluid from the openings 12.

I claim:

1. In fire extinguisher apparatus, a container adapted to contain a quantity of fire extinguisher fluid like carbon tetrachloride, said container being provided with opposite end walls, one end wall which is normally uppermost being provided with opening for discharge of fire extinguisher fluid, a closure disposed over said openings and having a peripheral portion sealed to the adjacent end wall by a fusible metal alloy, a flanged base, means to detachably secure said base to the lower end of the container, a bail having points of pivotal connection to said base, said bail being of sufficient size to extend over the upper end of the container, and a member attached to said closure and embracing said bail, said last member being adapted for connection to a fixed support.

2. In fire extinguisher apparatus, a container adapted to contain a quantity of fire extinguisher fluid like carbon tetrachloride, said container being provided with opposite end walls, the end wall which is normally uppermost having openings for discharge of the fluid, a closure disposed over said opening and having a peripheral portion of the same sealed to the adjacent end wall by a fusible metal alloy, an annular base secured to the lower end of the container, said base forming a depending annular flange and being also provided with integral tabs bent to engage and form an attachment to the lower end of the container, a bail having points of pivotal connection to said base, said bail being of sufficient size to extend over the upper end of the container, and a member attached to said closure member and embracing an intermediate portion of the bail, said last named member being adapted for connection to a fixed support.

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