Jan. 27, 1931. L. J. DUGAS 1,790,231

FIRE EXTINGUISHER CONTAINER

Filed Sept. 20, 1928

Fig. 1

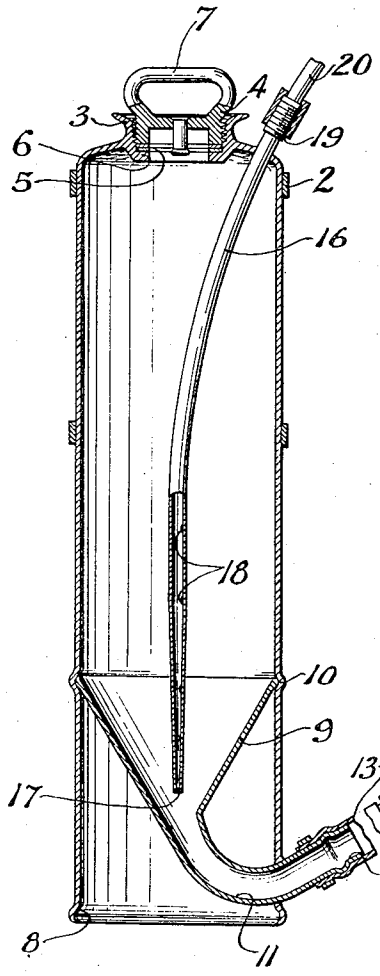
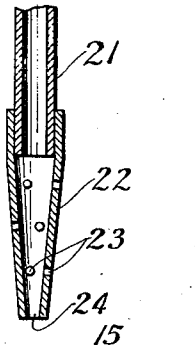


Fig. 2



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by Charles W. Fells Attys.

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UNITED STATES PATENT OFFICE

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FIRE-EXTINGUISHER CONTAINER

Application filed September 20, 1928. Serial No. 307,131.

This invention relates to a fire extinguisher container and more particularly to a container for dry extinguishing powders.

It is therefore an object of this invention to provide a tank or container for dry powdered chemicals having fire extinguishing properties and further to provide means for introducing a gas under pressure into the container to discharge the chemical in a high pressure stream of the gas.

It is a further object of this invention to provide means for distributing the gas introduced into the fire extinguisher container so as to prevent the extinguishing powder from caking and hanging up in the container.

Other and further objects of this invention will become apparent from the disclosures in the specification and accompanying drawings.

The invention (in a preferred form) is illustrated on the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a sectional view of a container embodying the principles of my invention, with parts broken away and in section.

Figure 2 is a detail sectional view of a modified form.

The reference numeral 1 indicates a tank or container of the desired capacity and preferably formed of semiannealed seamless copper, brass protector bands 2 being arranged therearound and welded thereto to reinforce said tank. The top of the tank 1 is provided with an upstanding and outwardly turned flange 3 internally threaded to receive a removable top or cap member 4. Gaskets 5 are provided for forming a tight joint between said cap 4 and an inner shoulder 6 formed around the opening of said tank 1. Said cap 4 is provided with a handle 7 to facilitate manual operation of the same and furthermore to provide means for carrying the tank 1.

The lower end of said tank 1 is open as at 8. A funnel-shaped bottom 9, however, is disposed a suitable distance above said open lower end 8 and secured to the walls of said tank 1 by any suitable means, as by forming a bead 10 to receive the upper edge of said bottom 9. Said funnel-shaped bottom 9 merges into a curved spout 11, which passes through the tank wall adjacent to said lower end 8 and is welded or otherwise secured thereto. Said spout 11 extends beyond the wall of said tank 1 in an upwardly and outwardly projecting end portion 12, to which is adapted to be attached a flexible hose 13 provided with a discharge nozzle 14. The nozzle 14 is controlled by means of a valve or pet cock 15 positioned near the end thereof.

A tube 16 enters the top of said tank 1 and extends downwardly to a point adjacent the constriction of said funnel shaped bottom 9. Said tube 16 is curved for a part of its length but its lower end is straight and positioned centrally of the tank 1 so that a gas, such as nitrogen or air passing through said tube 16 will be directed into the curved spout 11. The lower end of said tube 16 is tapered as at 17 to effect a high velocity of gas. Perforations 18 are provided at different points along the length of the tube 16 in order that the gas may be directed against the walls of the container or tank 1. The upper end of said tube 16 is threaded as at 19 for connection to a hose 20 leading from a high-pressure gas cylinder (not shown).

The tank 1 is adapted to be filled with a fire extinguishing powder and the gas under pressure directed through the tube 16 to force the powder out through the spout 11, the hose 13 and nozzle 14. Due to the high pressure of the gas employed, the stream of gas discharging from the tube nozzle 17 will act as an injector to draw the powder along with it as it passes out through the spout 11.

The gas issuing from the perforations 18 serves to stir up the powder in the container and prevent it from caking and hanging up. Consequently a high pressure stream of gas carrying the fire extinguishing powder is produced and it is possible to direct this stream against a fire with such velocity and in such volume that the blaze may be quickly and readily extinguished.

In Figure 2 there is illustrated a gas tube 21 similar to the tube 16 but provided with a separable tapered nozzle or nipple 22 having

a reduced end 24. Perforations 23 are formed in the nozzle 22 to permit gas to be discharged to the sides as well as out of the reduced end 24. The distribution of the gas in this manner prevents the powder from lumping up in the funnel-shaped bottom 9 and blocking the tube 11.

I am aware that numerous details of the process may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. A fire extinguisher, comprising a container adapted to be filled with a dry extinguishing powder, having a funnel shaped bottom, the side wall of said container being extended downwardly to form a supporting base, a tube leading from the constricted portion of said bottom outwardly through said continued wall and a second tube extending into said container and terminating adjacent the constricted portion of said funnel shaped bottom for directing a gas under pressure into said first tube.

2. A fire extinguisher, comprising a container adapted to be filled with a dry extinguishing powder, having a funnel shaped bottom, the side wall of said container being extended downwardly to form a supporting base, a tube leading from the constricted portion of said bottom outwardly through said continued wall and a second tube extending into said container and terminating adjacent the constricted portion of said funnel shaped bottom for directing a gas under pressure into said first tube, said second tube being provided with spaced perforations along its length within said container.

3. A fire extinguisher, comprising a container adapted to be filled with a dry extinguishing powder, having a funnel shaped bottom, the side wall of said container being extended downwardly to form a supporting base, a tube leading from the constricted portion of said bottom outwardly through said continued wall and a second tube extending into said container and terminating in a straight reduced nozzle adjacent the constricted portion of said funnel shaped bottom for directing a gas under pressure into said first tube.

4. A fire extinguisher, comprising a container adapted to be filled with a dry extinguishing powder, having a funnel shaped bottom, the side wall of said container being extended downwardly to form a supporting base, a tube leading from the constricted portion of said botton outwardly through said continued wall and a second tube extending into said container and terminating adjacent the constricted portion of said funnel shaped bottom for directing a gas under pressure into said first tube, said second tube being provided with spaced perforations along its length within said container in a straight reduced nozzle.

5. A fire extinguisher, comprising a cylindrical container having its side wall extended downwardly to form a supporting base and a funnel bottom spaced above the lower end of said base, a conduit leading from said funnel bottom through the extended wall of said container and a gas conduit within said container extending to a point slightly above the opening in said funnel bottom.

In testimony whereof I have hereunto subscribed my name.

LODIAS J. DUGAS.