June 6, 1939. P. H. RICHERT 2,161,090

DISPENSING APPARATUS

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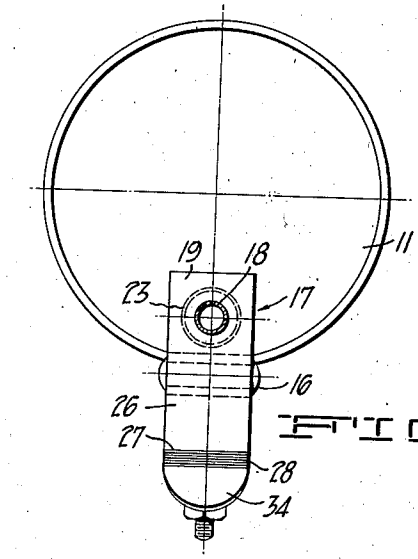


FIG. 2.

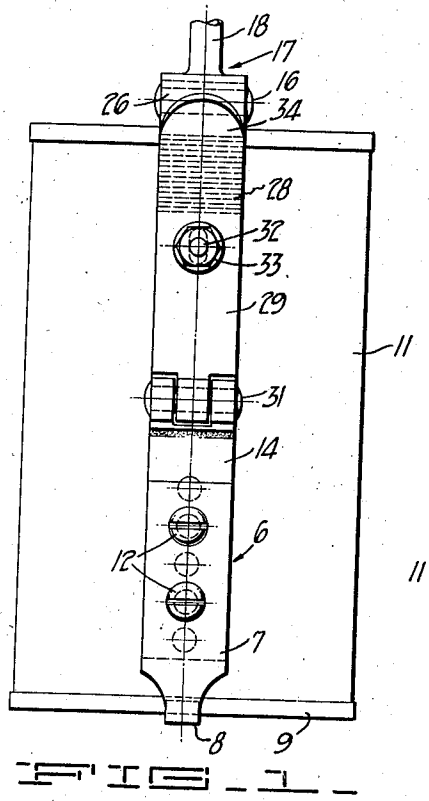


FIG. 1.

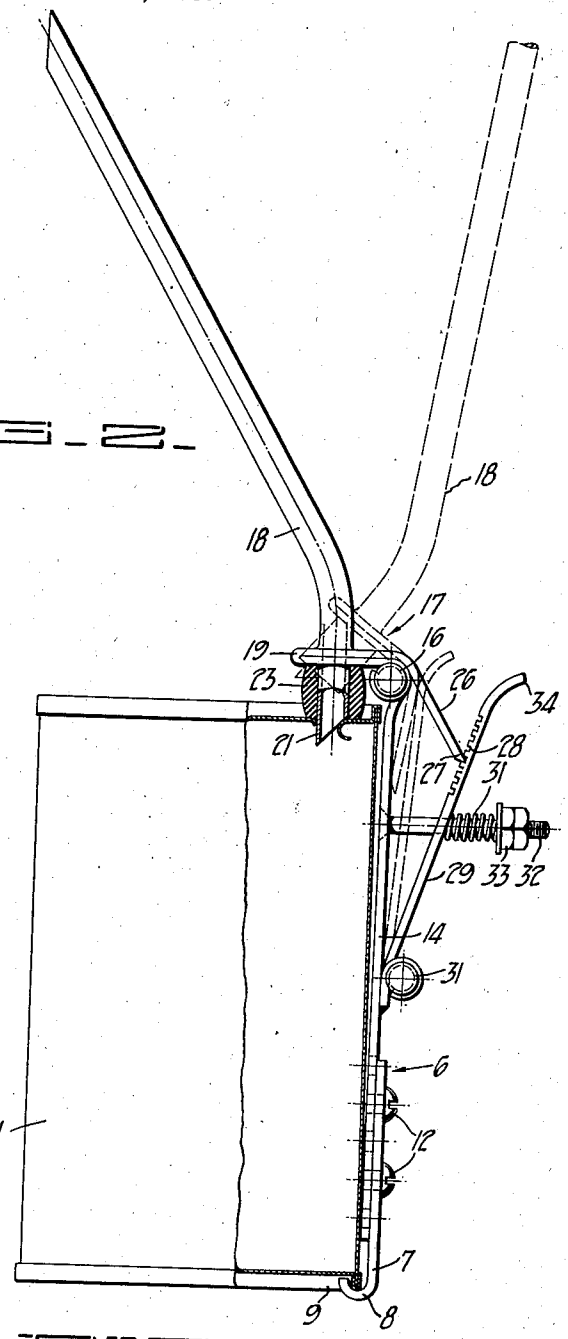


FIG. 3.

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DISPENSING APPARATUS

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3 Claims. (Cl. 221—23)

This invention relates to an apparatus for facilitating the dispensing of a fluid retained in a can. Particularly, the invention relates to provision of an apparatus for dispensing a fluid under pressure from the can. Such a fluid may be methyl bromide, or other material, having a relatively high vapor pressure at usual atmospheric temperatures, or a fluid having a low vapor pressure at a usual atmospheric temperature but placed under pressure in the can by means of carbon dioxide, ammonia, or other gas or high vapor pressure material.

It is in general the object of the present invention to provide a simple but inexpensive dispensing apparatus for a fluid under pressure in a can.

Another object of the present invention is to provide an effective apparatus for facilitating the dispensing of fluid under pressure from a can.

In fumigation, for example, methyl bromide has recently come into wide application. This material has some toxicity to humans and it is therefore desirable to avoid contact or breathing of the material as much as possible. Utilizing the apparatus of this invention, one can readily distribute methyl bromide from a can. Thus the apparatus makes possible the release of methyl bromide from a can and discharge through a restricted hole or aperture in the door or wall of a space to be fumigated without the operator having to come into contact with the methyl bromide.

In fire fighting, particularly in the home or around an automobile, a motor boat, and in other like locations, carbon tetrachloride is widely used. However, if the fire is very hot one cannot get close to it. For most effective operation the carbon tetrachloride should be so placed at the base of the fire that it smothers the flames and cuts off air. The present invention enables the stream of carbon tetrachloride to be directed most effectively.

The invention includes other objects and features of advantage, some of which, together with the foregoing, will appear hereinafter wherein the present preferred form of apparatus of this invention is disclosed.

In the drawing accompanying and forming a part hereof Figure 1 is a side elevation of the invention through an apparatus embodying the present invention.

Figure 2 is the plan view of the apparatus of the present invention, while Figure 3 is an end view showing the apparatus in place on a can.

It appears in the drawing that I provide a frame, generally indicated at 6, which is adapted to be attached readily to the can or other receptacle. This frame includes a first strap member 7 having a hook 8 formed thereon which is engaged with rim 9 on the can 11. The first frame member 7 is adjustably attached by screws 12 to a second frame member 14 so that the length of the can may be readily taken into consideration and so the apparatus is suitable to various height cans.

Mounted on a hinge 16 on member 14 is a can end piercing element generally indicated at 17. This element includes a conduit 18 for leading off the fluid under pressure. The conduit extends through a suitable support member 19 attached to the hinge 16. In the form of apparatus shown the can piercing element is formed as at 21 by sharpening the edge of the conduit. Instead of utilizing the conduit as a can piercing element, a suitable cutting element such as a knife or other can piercing device can be employed in conjunction with the conduit 18.

Mounted cooperatively adjacent the conduit and adapted to be compressed upon positioning of the can piercing element is a gasket 23. This gasket engages the end of the can and seals the space about the can piercing element so that fluid from the can is forced into the conduit and does not leak out.

To ensure that the can piercing element is retained at the position in which the gasket 23 is compressed I provide an extension 26 on member 19 which extension has its end formed as a pawl 27, in engagement with a ratchet 28 on a plate 29, the plate 29 being hingedly mounted as at 31 on member 14. Plate 29 is forced to engage the pawl 27 by a spring 31 positioned on a rod 32. The end of the rod is inserted through and is held by member 14 while the tension of the spring is suitably adjusted by nuts 33.

In use, the can piercing element and the conduit are normally in that position in which they appear in Figure 1. The hook 8 is engaged with can rim, the can piercing element is moved to the left, or counter clockwise, in Figure 1 whereby the can piercing element is forced through the can at the same time that the gasket 23 is compressed to seal the opening made in the can end. The ratchet and pawl engage and retain the gasket compressed.

The can is held in an inverted position during the opening so that liquid covers the opening made in the can and the gas pressure in the can is not immediately released.

When the dispensing operation is completed the ratchet plate 29 is moved against the bias of the spring by pulling on handle portion 34. At the same time the conduit is swung back in a clockwise direction in Figure 1 to disengage the can. The can can then be removed and a new can inserted. If desired, the conduit 18 can include a suitable valve or other discharge control means.

I claim:

1. A device for dispensing a fluid under pressure in a can having opposite ends comprising a first means for engaging one can end, a second means engaging the other can end, including a pawl and a ratchet retaining said second engaging means in engagement with said other can end, said second engaging means including a can end piercing means and a gasket surrounding said piercing means and forcibly retained against said can end by engagement of said pawl and said ratchet.

2. In a device of the character described, a frame adapted to be positioned on a can, a fluid conduit including a cooperating can piercing means mounted for a limited hinged movement on said frame, a gasket cooperatively mounted adjacent said piercing means to seal an opening in said can made by said piercing means and direct fluid in said can to said conduit, and means for retaining said gasket in sealing engagement with said can upon movement of said piercing means to pierce said can.

3. In a device of the character described, a frame adapted to be positioned on a can, a fluid conduit including a cooperating can piercing means mounted for a limited hinged movement on said frame, a gasket cooperatively mounted adjacent said piercing means to seal an opening in said can made by said piercing means and direct fluid in said can to said conduit, and a pawl and a ratchet for retaining said gasket in sealing engagement with said can upon movement of said piercing means to pierce said can.

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