May 11, 1948. G. T. HARKINS 2,441,242

FLARE

Filed June 20, 1945 2 Sheets-Sheet 1

Fig. 1.

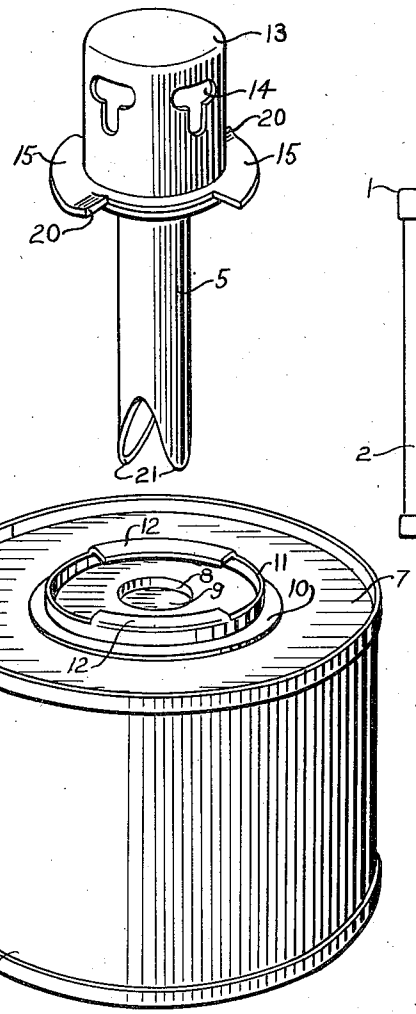


Fig. 3.

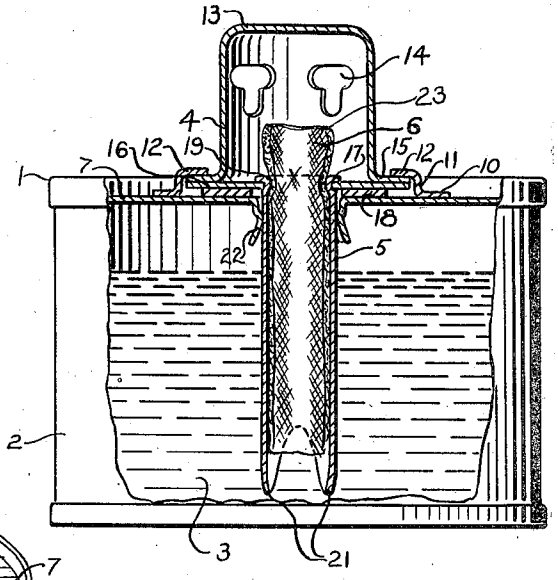


Fig. 4.

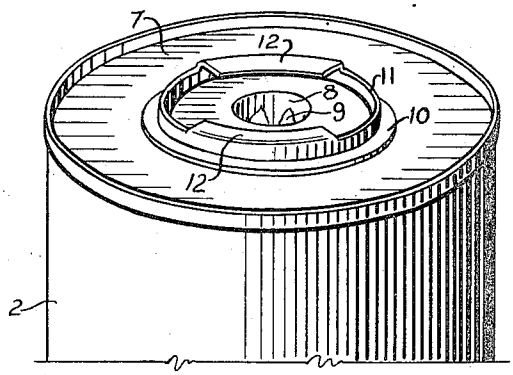
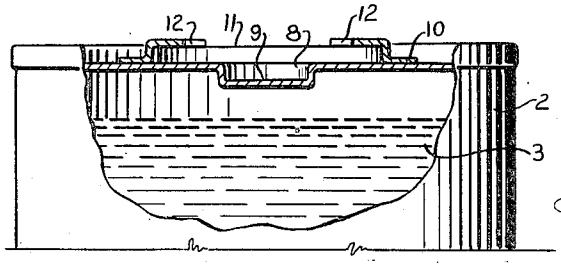


Fig. 2.



INVENTOR
George T. Harkins
BY
Fishburn & Mullendore
ATTORNEYS.

May 11, 1948. G. T. HARKINS 2,441,242

FLARE

Filed June 20, 1945 2 Sheets-Sheet 2

Fig. 5.

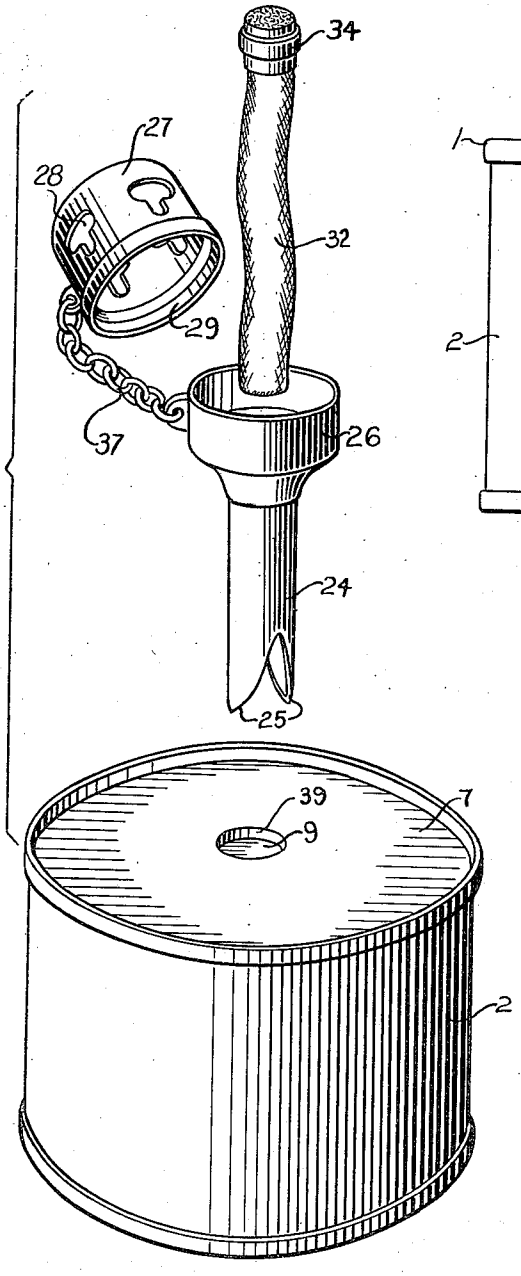


Fig. 6.

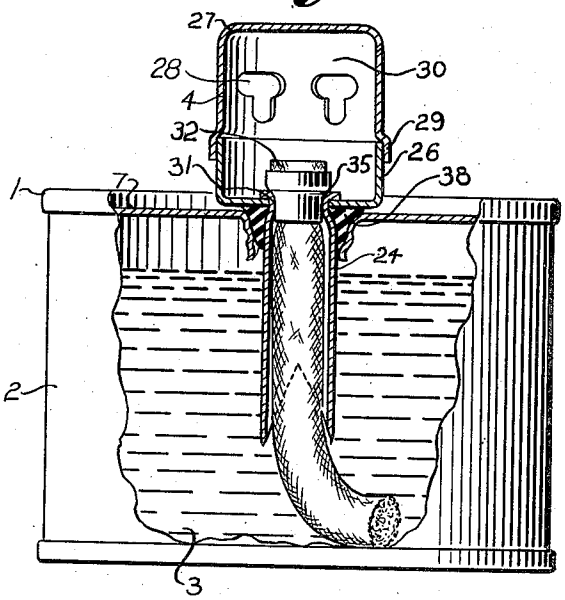
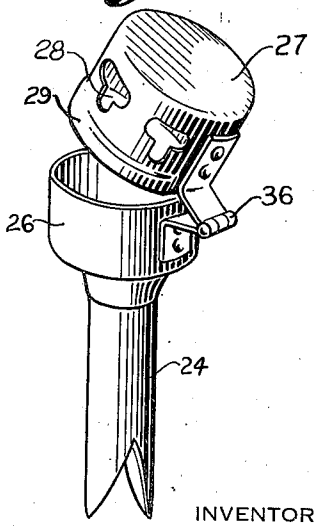


Fig. 7.



INVENTOR

George T. Harkins

BY

Fishburn & Mullendore,

ATTORNEYS.

Patented May 11, 1948

2,441,242

UNITED STATES PATENT OFFICE

2,441,242

FLARE

George T. Harkins, Wichita, Kans.

Application June 20, 1945, Serial No. 600,599

5 Claims. (Cl. 67—55)

1

This invention relates to improvements in flares, and more particularly to flares especially adapted for use by operators of automotive vehicles to mark at night the location of a vehicle stopped for a protracted period of time along a highway in a position jeopardizing the safety of other vehicles.

Heretofore it has been the usual practice to provide a flare consisting of a pot with a spout or the like in which the fluid is contained in the bottom or container portion or a container having the burner portion rigidly and permanently attached to such container, making it necessary for the operator of a vehicle such as trucks or the like to carry a number of complete containers and burners at all times when traveling at night.

It is the principal object of the present invention to provide a container for an inflammable fluid separate from the burner portion of the flare so that an operator may carry one burner for a number of containers and the container with the inflammable fluid therein will be sealed until required for use. Usually a number of flares are carried by the operator of a motor truck and with my invention a number of containers may be carried with only the necessary number of burners required to be placed along the front and rear of the vehicle when stopped along a highway. Usually not over three of the flares are used at one time, in which case three burners could be carried but any number of containers of fluid could be available. Such containers may be packed in cartons of any desired number.

Other objects of the invention are to provide a burner portion for the flare having a depending tube with its lower end pointed and sharpened so that the top of the container may be punctured by the tube when desired for use; to provide a burner having a tube adapted to receive a wick for extending into the inflammable fluid in the container; to provide for easily and quickly attaching and detaching the burner from the container; to provide for sealing the tube in the container so that the inflammable fluid will not escape therefrom should the flare become upset; to provide the container with a weakened recess portion for receiving the pointed tube of the burner; to provide a burner having perforations above the flame of the wick so as to prevent wind from extinguishing said flame during use; and to provide a device of that character simple, economical and efficient in operation.

In accomplishing these and other objects of the present invention, I have provided an improved structure, the preferred forms of which are illustrated in the accompanying drawings wherein:

2

Fig. 1 is a perspective view of my invention showing the burner and tube in disassembled relation to the container.

Fig. 2 is a side elevation of the top of the container with parts broken away to illustrate the recess portion and the ears for fastening the burner to the container.

Fig. 3 is a fragmentary side view of the flare showing the burner and tube in cross-section.

Fig. 4 is an elevational view of the top of the container after it has been pierced by the pointed tube.

Fig. 5 is a perspective view of a modified form of my invention showing the parts thereof in disassembled relation.

Fig. 6 is a fragmentary side view of the container showing the burner and tube in cross-section and particularly illustrating the rubber gasket for sealing the tube to the container.

Fig. 7 is an elevational view of the burner and tube showing the cap of the burner hingedly connected thereto.

Referring more in detail to the drawings:

1 designates a flare embodying the features of my invention which comprises a container 2 for an inflammable liquid 3 and a burner 4 having a tube 5 rigidly secured thereto in any suitable manner, and having a wick 6 extending through the tube into the inflammable liquid.

The top 7 of the container is provided with a depressed portion 8 forming a recess 9. The container is preferably made of metal, although any suitable material may be used and the recess portion may be weakened if desired. Secured to the top 7 of the container by welding or otherwise is a ring member 10 having an upstanding flange 11 and inwardly turned ears 12 for a purpose later described.

The burner 4 comprises a dome 13 having a plurality of openings 14 and is outwardly flanged as indicated at 15 (Fig. 3). Rigidly secured to the circular flange 15 by welding or otherwise is a ring 16 extending inwardly of the dome and adapted to engage the outwardly turned flanged end 17 of the tube, also as illustrated in Fig. 3. I also provide a circular ring 18 which is welded or otherwise suitably secured to the ring 16 to engage the top of the container when the burner is attached thereto. The tube 5 may be dented slightly inwardly as indicated at 19 so as to form a neck portion for the wick 6 to prevent the wick from slipping through the tube when in use.

It will be noted (Fig. 1) that the flanged portions 15 on the dome 13 extend only part way around the dome to provide fastening devices for engaging with the ears 12 of the container to hold the burner on the container. One end of the flanges or lugs 15 is turned slightly upwardly, as indicated at 20 (Fig. 1), so that when the burner is inserted in the container, turning of the burner so that the lugs will engage the ears will tighten the burner in the container so as to rigidly secure the same thereto.

Operation of a device constructed as described is as follows.

When it is desired to place a flare along the highway near a vehicle parked thereon, the container of inflammable fluid may be taken from its usual place of carriage and the burner attached thereto by inserting the sharp points 21 in the depressed portion 9 of the container. Turning of the dome will cause the flanges or lugs 15 to engage under the ears 12 of the container top, and continued turning of the burner will cause the burner to tighten itself to the container through the upwardly extending portion 20 of the lugs. The pierced portion 22 of the can will be turned downwardly, as indicated in Fig. 3, and the ring 18 will fit tightly against the top of the container within the flanged portion 11 to prevent the fluid from escaping from the container. It will be noted that the perforations 14 in the dome of the burner are located above the head 23 of the wick 6, also as illustrated in Fig. 3, so that air may enter the dome to cause the wick to produce a flame and at the same time prevent wind from extinguishing the flare of the wick.

Referring to the form of invention shown in Figs. 5, 6, and 7, the top 7 of the container 2 is provided with the recess portion 9. The burner and tube arrangement consists of a tube 24 having pointed sharpened ends 25. The tube 24 is adapted to engage a burner 4 comprising a lower cylindrical portion 26 and a cap portion 27 having perforations 28. The lower end of the cap 27 is enlarged slightly, forming a cylindrical flange 29 adapted to fit over and engage the lower part 26 of the burner, forming a burner chamber 30. The top 24 engages an opening in the lower part of the burner portion 26 in the same manner as shown in Fig. 3, as indicated at 31 (Fig. 6). A wick 32 is adapted to engage in the tube 24 and is provided at its outer end with a sleeve 34 adapted to fit in the reduced portion 35 of the neck of the tube to retain the wick in said tube, as illustrated in Fig. 6. The lower end of the wick extends through the tube into the fluid in the container. The cap 27 may be hinged to the lower portion of the burner 26, as indicated at 36 (Fig. 7), or fastened thereto by a chain 37 or other suitable means, as shown in Fig. 5.

Operation of the form of invention shown in Figs. 5 and 6 is substantially the same as in Figs. 1 to 4 inclusive, i. e., the sharpened points of the tube 24 are inserted in the recess portion 9 and I preferably provide a cylindrical rubber gasket or the like 38 around the upper portion of the tube which may be moulded or otherwise secured to the tube so that when the tube is inserted in the recess 9, the rubber gasket will engage the sides 39 of the recess portion to seal the liquid in the container.

It will be obvious from the foregoing that I have provided an improved torch or flare comprising a sealed container for an inflammable fluid, a number of which containers may be packed in a box and carried with a vehicle along a highway, necessitating only a limited number of burners instead of the usual custom of having a burner for every container and having to carry a large number of such containers. The containers and fluid are inexpensive and should the contents of a container not be entirely used up, it may be disposed of and a new container used when desired, thus eliminating spilling of the contents of a partly used container and in carrying a large number of flares and retaining them for reuse.

What I claim and desire to secure by Letters Patent is:

1. A device of the character described comprising, a container body having a weakened recessed portion in one end thereof, a wick, a wick receiving tube extending inside of said body having its lower end sharpened to pierce the weakened recessed portion and adapted to extend through the recessed portion, the upper end of said tube having a reduced portion forming an annular flange around the upper end of said tube, a cylindrical combustion chamber having an opening in its lower end adapted to engage under said annular flange on the tube, a perforated cap for said combustion chamber, a sleeve adapted to engage in the upper end of said tube to retain the wick in said tube, and means for sealing said tube in said container body.

2. A device of the character described comprising, a container body having a weakened recessed portion in one end thereof, a wick, a wick receiving tube adapted to extend through the recessed portion and having its lower end sharpened to pierce the weakened recess portion, an annular flange on the upper end of said tube having a ring secured to said annular flange, a cap member secured to said ring and forming a combustion chamber for the wick, said cap having flame openings to allow air to enter said chamber above said wick so as to not directly contact the flame thereof, and means for sealing said tube in said container body.

3. A device of the character described comprising, a container for an inflammable liquid having a weakened recess portion in one end thereof and having an upstanding circular flange around said recess portion, said flange having laterally turned ears, a burner having a tube secured thereto, said tube adapted to engage in said recessed portion and having its lower end sharpened for piercing said recess portion in said container, a wick in said tube, said tube having a reduced neck portion for retaining said wick therein, perforations in said burner, the top of said wick being below said perforations in the burner to prevent wind from extinguishing the flame of said wick, and means on said burner for engaging said ears on the container to hold said burner on said container.

4. In combination with a container for an inflammable liquid having a weakened recessed portion in one end thereof, a tube having a pointed end adapted to pierce and engage in said weakened recessed portion of the container, a wick in said tube, the upper end of said tube having a combustion chamber of larger diameter than said wick and extending above the upper end of the wick, means for sealing said tube in said recessed portion, and a cover for said combustion chamber, said cover having openings to allow air to enter said combustion chamber above said wick.

5. In a flare of the character described including a container for an inflammable liquid having a weakened recessed portion in one end thereof and a combustion chamber surrounding said recessed portion, a tube having its lower end sharpened to pierce said weakened recessed portion and adapted to engage therein, means for sealing said tube in said recessed portion, a wick in said tube, means for retaining the wick in said tube, the upper end of said wick extending into said combustion chamber, and a cover for said chamber, said cover having openings so that air will enter said combustion chamber to cause the wick to burn.

GEORGE T. HARKINS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,102,696	Gilmore	Dec. 21, 1937
2,121,903	Currie	June 28, 1938

FOREIGN PATENTS

Number	Country	Date
10,826	Great Britain	1912