Jan. 22, 1924. 1,481,359

C. T. DYE

LIQUID DISPENSING CAN

Filed July 8, 1922

Fig. 1.

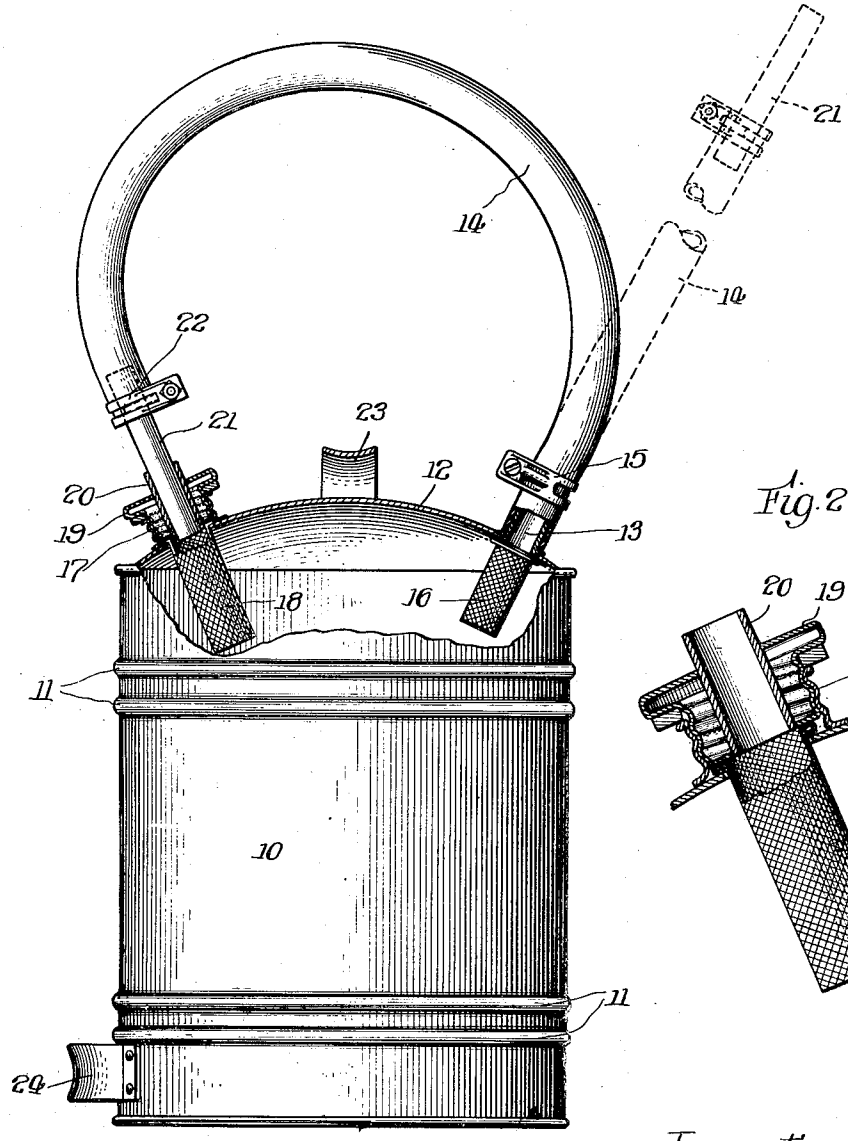


Fig. 2

Witness:
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UNITED STATES PATENT OFFICE.

CHARLES T. DYE, OF LA FAYETTE, INDIANA.

LIQUID-DISPENSING CAN.

Application filed July 8, 1922. Serial No. 573,719.

To all whom it may concern:

Be it known that I, CHARLES T. DYE, a citizen of the United States, residing at La Fayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Liquid-Dispensing Cans, of which the following is a specification.

My invention concerns liquid dispensing appliances but relates more particularly to what is known in the automobile and garage trade as a service can designed for employment in and about garages, by individual car and truck owners, and in connection with tractors and motor-boats.

The tank or can is intended to act as a container or receptacle for gasoline, kerosene, or other liquid fuel or engine or motor lubricating oils, and can be used for storing, transporting, or dispensing such or other liquids, the can being of such size to render it readily portable.

The can is designed and constructed to make it of particular service and especially useful for transporting liquid fuel in the service car of a garage to automobiles which have run out of fuel and thus become stranded on the road, and for delivering the contents of the can into the supply tanks of such automobiles, or into the similar tanks of tractors in the field, or into the corresponding containers of motor-boats.

In the planning of such a can or portable tank, it has been aimed to provide one which is air-tight, thus assuring the prevention of evaporation, contamination, or spilling at the same time giving the appliance such structural characteristics as will permit its contents to be delivered into the proper receptacle without the use of a funnel and even though the filling opening of such vehicle receptacle is comparatively inacessible.

A further object of the invention is the production of such a container that it will not spill its contents even though it is accidentally upset and one which is safe from having its contents set on fire from an external flame.

Still another purpose of the invention is the provision of such a can which will be properly vented both when it is being filled and also when it is delivering its contents.

An additional aim of the invention is to supply the trade with a service can of this character which is convenient to use, which is comparatively inexpensive to manufacture, which is durable and unlikely to become injured in ordinary service, which is easily maintained clean, and which handles the liquid fuel or oil without waste.

With these and other desirable objects in view, I have produced the service can, representing a preferred embodiment of the invention, illustrated in the accompanying drawing forming a part of this specificaton and to which reference should be had in connection with the following detailed description, like reference characters being employed in association with the same parts or elements in the two views of such drawing.

In this drawing—

Figure 1 is an elevation of the new service can with parts broken away to more clearly show the construction; and

Figure 2 is an enlarged, vertical section through the filler cap of the can showing the sleeve adapted to receive the nozzle of the flexible hose or tube when the latter is not in use delivering the contents of the can.

By reference to this drawing, it will be seen that the novel appliance comprises an uprght, cylindrical, sheet-metal can or tank 10, ribbed or corrugated at 11, 11 for strengthening and stiffening purposes, having a flat bottom adapted to rest on the floor, and having an upwardly-arched or dome-shaped top wall 12.

Such curved top wall, near the round side-wall of the container, is provided with a discharge-aperture fitted with an outstanding delivery-pipe 13 over which one end of a flexible, resilient, delivery hose or tube 14 is fastened by a split-clamp 15 of the usual and customary type.

As is clearly depicted in the drawing, this pipe or tube is normal to the curvature of the dome-shaped top of the can, or, in other words, it is radial or substantially so to the center of the circle of which such top wall forms a section.

Stated still differently, the axis of such pipe is oblique or at an acute angle to the vertical axis of the can, whereby to facilitate the delivery of the contents of the can by the outwardly-directed position of the associated hose.

To prevent any foreign substance from passing through the discharge hose, such pipe or aperture internally of the can is fitted with a suitable, preferably detachable, screen 16 which also acts as a safety element

to prevent an outside flame entering or setting fire to the internal gases or liquids on the same principle as is involved in the employment of the encasing screens around miners' lamps.

Diametrically opposite such pipe and hose attachment, the curved top of the can has a filling aperture equipped with a surrounding, external, screw-threaded socket 17 and an associated, internal, demountable screen 18 performing safety and straining functions similar to those of the companion or complementary element 16.

A hollow, screw-threaded cap 19, having a round, central, straight or possibly slightly internally tapered sleeve 20 extended therethrough and open at both ends, is adapted to be screwed into the socket and to be removed or unscrewed therefrom for can filling purposes.

As is clearly shown, this sleeve or tube is disposed at the same outward oblique or acute angle to the vertical axis of the can that the pipe 13 is but in the opposite direction for a purpose hereinafter indicated.

Hose 14 at its free end has a tubular nozzle 21 fixedly attached thereto by a suitable clamp or contractible fastener 22, the nozzle being of such size and shape that it will fit snugly and in a practically air-tight manner in the sleeve 20.

In addition, the can has a top handle 23 located at the center of and rigid with the top of the container and near its lower end the can is equipped with a second handle 24 fixed to the can, both handles being in the plane of the pipe 13 and sleeve 20 and located at right-angles to such plane, whereby they may be conveniently used in tipping or tilting the receptacle to discharge its liquid.

When the can is not being used to pour out its contents, the nozzle 21 is inserted and retained in the sleeve 20 which it accurately fits, thus maintaining the can in air-tight condition and hence preventing evaporation and loss of the volatile liquid which it holds, assuming, for example, that the can contains gasoline or similar liquid subject to ready vaporization.

The flexible resilient hose or tube has a natural or inherent tendency to straighten itself out and owing to the location and arrangement of the elements which hold it in its bowed or curved condition, the hose causes adequate friction between the sleeve and the nozzle to prevent the latter from being jarred or otherwise unintentionally dislodged out of the former and will ordinarily prevent separation of these parts even if the can is accidentally tipped over.

When the whole or a portion of the liquid contents of the can are to be poured out into a suitable receptacle, such as the fuel tank of an automobile, tractor, motor-boat, or the like, the operator withdraws the nozzle from the sleeve temporarily straightening out that part of the hose directly fastened thereto if desirable or necessary to reduce the friction and facilitate the separation of the nozzle from its encasing sleeve.

As soon as the nozzle is thus released, the hose is free to straighten out, as shown in dotted lines in Figure 1, and by tilting or inclining the can by means of the handles, the liquid can be poured out through the hose into the filling opening of the receptacle without the use of a funnel or similar device, the employment of which is likely to collect dirt and insects therein which not infrequently find their way into and choke the feed pipes.

During such pouring operation, the open sleeve acts as a vent for the entrance of air as is required to permit the desired liquid flow.

Upon completion of the liquid discharging action, the can is righted and the nozzle again inserted in the sleeve, whereby all drippings from the hose are thus led back into the can.

When the supply of liquid in the container requires replenishment, the nozzle is withdrawn and the cap 19 removed, whereupon the additional fuel or oil may be poured into the opening, the passage through the hose then acting as a vent, and the screen operating as a filter or sieve to prevent the entrance of any foreign substances.

The filling having been accomplished, the plug or cap is reinserted and the nozzle applied thereto.

Under all circumstances the two screens act not only as means to prevent foreign substances from being poured into the fuel tank of the automobile, but they also operate as safety screens insuring against fire or explosion, that is, they prevent ignition of the gases in the can.

Thus a reserve supply of combustible fuel can be safely kept on hand ready for instant use and without a waste of valuable time in procuring it from some other possible more inaccessible source.

This particular embodiment of the invention having been described in detail, those skilled in this art will readily understand that the invention is not limited and restricted to the precise and exact details of structure shown and described since these are subject to substantial modifications without departure from the heart and essence of the invention and without the sacrifice of any of its substantial benefits and advantages.

Stated somewhat differently, the invention is susceptible of a variety of satisfactory embodiments differing more or less in mechanical details.

I claim:

1. In an appliance of the character described, the combination of a can, a flexible resilient tube fastened at one end to and in communication with the interior of said can, a sleeve communicating with the interior of said can, and a nozzle on the other end of said tube designed to have a detachable telescopic connection with said sleeve, the tube being of such length that when said nozzle is telescopically associated with said sleeve the friction between said nozzle and sleeve is increased by the tendency of the tube to straighten itself out.

2. In an appliance of the character described, the combination of a can having a filling aperture, a removable closure for said aperture having a sleeve extended therethrough, a flexible resilient hose fastened at one end to and in communication with the interior of said can, and a nozzle secured to the other end of said hose and adapted to detachably telescopically fit said sleeve, the hose being of such length that when said nozzle is associated with said sleeve the friction between them is increased by the tendency of the hose to straighten itself out.

3. In an appliance of the character described, the combination of a can, a flexible resilient tube fastened at one end to and in communication with the interior of said can, the axis of said fastened end of the tube being outwardly directed obliquely from the vertical axis of the can, a sleeve also communicating with the interior of said can and disposed outwardly obliquely from said axis of the can in the opposite direction from said fastened end of said tube, and a nozzle on the other end of said tube adapted to detachably telescopically fit said sleeve, said tube being of such length that when the nozzle is associated with the sleeve the friction between them is increased by the tendency of the tube to straighten itself out.

4. In an appliance of the character described, the combination of a can having a filling aperture, a flexible resilient tube fastened at one end to and in communication with the interior of said can, the axis of said fastened end of the tube being outwardly directed obliquely from the vertical axis of the can, a closure for said filling aperture, a sleeve extended through said closure and communicating with the interior of said can and disposed outwardly obliquely from said axis of the can in the opposite direction from said fastened end of the tube, and a nozzle on the other end of said tube adapted to detachably telescopically fit said sleeve, said tube being of such length that when the nozzle is associated with the sleeve the friction between them is increased by the tendency of the tube to straighten itself out.

5. In an appliance of the character described, the combination of a can having a filling aperture and a discharge aperture, a screen covering said filling aperture, a screen covering said discharge aperture, a removable closure for said filling aperture, a flexible tube associated at one end with said discharge aperture, a nozzle for the other end of said tube, and means on said filler closure to detachably telescopically receive said nozzle.

In witness whereof I have hereunto set my hand and seal.

CHARLES T. DYE. [L. S.]