

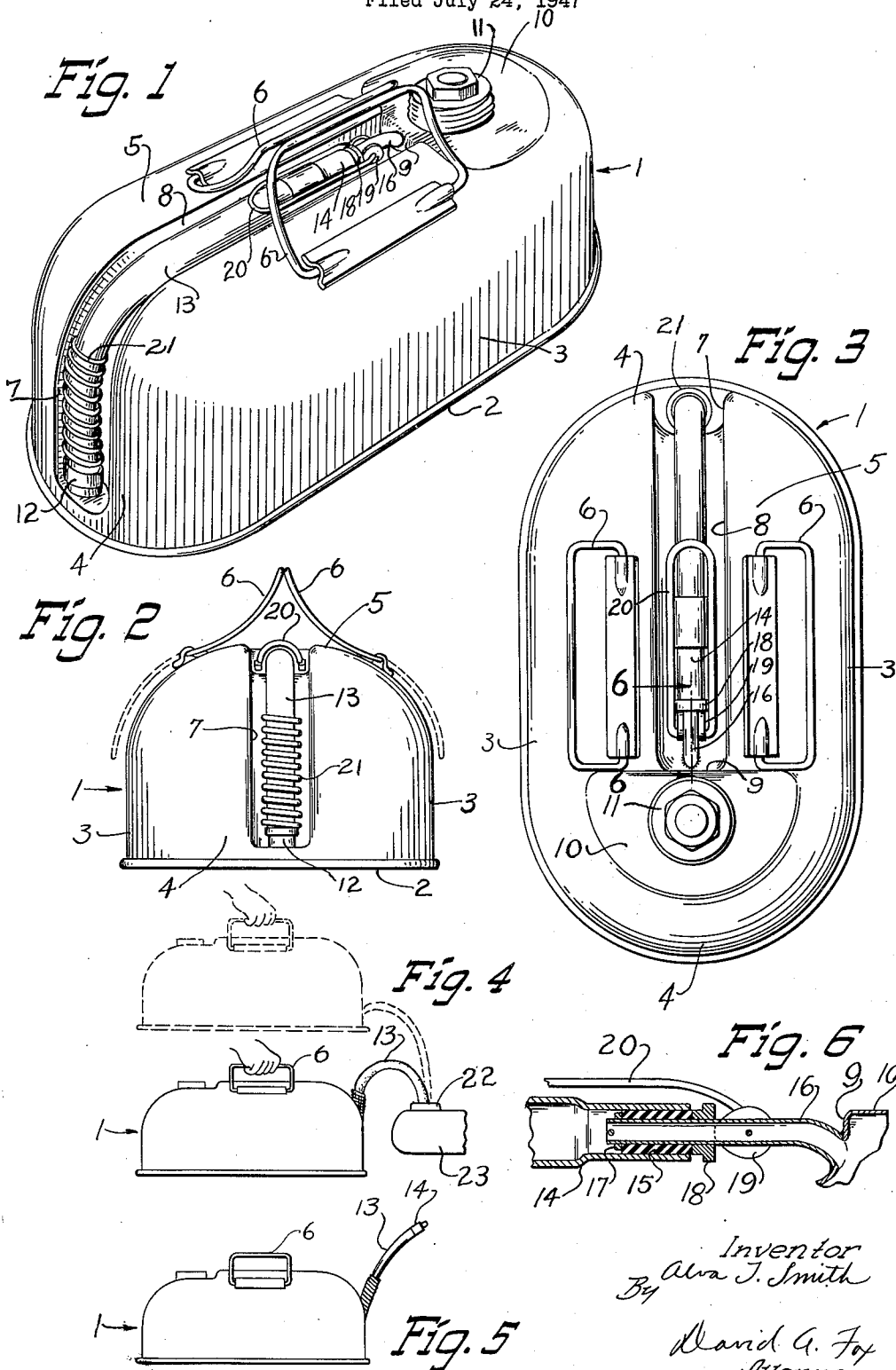
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FUEL CAN WITH SELF-ERECTING FLEXIBLE SPOUT

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## UNITED STATES PATENT OFFICE

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## FUEL CAN WITH SELF-ERECTING FLEXIBLE SPOUT

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4 Claims. (Cl. 222-108)

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This invention relates to fuel cans, more particularly of the ready pouring type, and resides in a fuel can comprising a vessel to which there is joined in communicating relationship a flexible pouring spout attached to the vessel in vertical position near its bottom, said pouring spout having the inherent tendency to assume an upright position when free so as to preclude accidental escape of fluid, the can being provided with a drainage trough adapted to minimize accumulations of fuel residues on the exterior of the can and to accommodate the pouring spout when not in use and joined in sealing engagement with an air vent.

Fuel cans for servicing small gasoline engines and particularly gasoline engines of the 2 cycle variety as heretofore furnished have been open to certain serious drawbacks. The usual container employed for servicing outboard motors, for example, is handled only with difficulty in a moving boat and spillage of fuel frequently results. Also, where the fuel contains oil mixed with it as is necessary in the case of 2 cycle engines small amounts of spillage result in the formation of an oil coating on the exterior of the can rendering the same likely to soil the user's clothes and disagreeable to handle.

One object of this invention is to provide a fuel container having a flexible pouring spout which facilitates the transfer of fuel into a small engine tank which flexible pouring spout will not cause accidental drainage of the container.

Another object of this invention is to provide a fuel can having a flexible pouring spout which may be housed in a position where the same is protected from damage when the container is not in use.

Another object of this invention is to provide a fuel can in which all points of possible small spillage are disposed within areas which will drain in a manner preventing formation of a coating of fuel residues on the exposed side surfaces of the can.

Another object of this invention is to provide a fuel can which may be readily and completely sealed but which when placed in use in pouring condition automatically opens a vent to facilitate pouring.

The above and other objects and advantages of this invention will become apparent from the description which follows which is set forth in conjunction with the drawing which forms a part hereof and in which there is set forth by way of illustration and not of limitation one form in

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which the fuel container of this invention may be embodied.

In the drawing:

Fig. 1 is a view in perspective of one form of fuel can constructed in accordance with this invention,

Fig. 2 is an end view in elevation of the can shown in Fig. 1,

Fig. 3 is a top plan view of the fuel can shown in Fig. 1,

Fig. 4 is a reduced side view in elevation illustrating the manner in which pouring may be accomplished,

Fig. 5 is a reduced side view in elevation of the fuel can shown in Fig. 1 showing the flexible pouring spout in a position which precludes accidental drainage of fuel, and

Fig. 6 is an enlarged detail fragmentary view in side elevation and in section of the vent sealing and pouring spout closing means of the fuel can shown in Fig. 1 viewed through the plane 6-6 indicated in Fig. 3.

The form of the fuel can of this invention shown in the drawing is made up of a vessel designated generally by the numeral 1 having a flat bottom 2, vertical side walls 3, curved vertical end walls 4 and a curved top wall 5. The container 1 is preferably made in the elongated, flattened form shown so as to hold a reasonable quantity of fuel and at the same time be conveniently housed beneath the thwarts of a small, open boat. To further facilitate housing within a space of restricted height the container 1 is provided with a pair of hinged handles 6 attached as shown to the top 5. The handles 6, as appears more clearly in Fig. 2, may be hingedly swung from the position there shown in full lines to the position shown in dotted lines, thus limiting the effective height of the container 1 when not in use to the actual height of the top wall 5.

Commencing near the bottom of one of the end walls 4 is an inward deflection indentation or trough 7 which extends vertically until it merges with the top wall 5 at which point it joins with a horizontal indentation or trough 8 which extends longitudinally across the top wall 5. The indentation 8 terminates at its end opposite the indentation 7 in a small vertical rise 9 which joins in turn with a slightly dished horizontal drainage area 10 surrounding a screw type filler cap 11. The pitch of the drainage area 10 is such that in conjunction with the trough 8 any small spillage escaping from the filler cap 11 will be carried to the bottom of the trough 7 so as to

preclude the formation of a coating of fuel residues on the exterior side surfaces of the container 1.

Securely fastened to the container 1 in vertical position and in manner to communicate freely with the interior of the container 1 is the lower end 12 of a flexible pouring spout 13. The flexible pouring spout 13 is preferably made of hydrocarbon resisting synthetic rubber composition and is of a length approximating the combined lengths of the troughs 7 and 8. The flexible pouring spout 13 thus may be housed within the troughs 7 and 8 without projecting therefrom when not in use and thus is protected against accidental damage. The pouring spout 13 is provided at its free end with a spigot or pouring end in the form of a securely attached metallic sleeve 14 as appears more clearly in Fig. 6.

Sleeve 14 is adapted to slidably engage the exterior of an expansive synthetic rubber gasket 15 carried upon the end of an air vent tube 16 secured in the vertical rise 9 at the end of the trough 8. The air vent tube 16 at its outer end is furnished with a retaining washer 17 pinned in place as shown in Fig. 6 and on the opposite side of the gasket 15 with an endwise slidable washer 18. Pivotaly mounted upon the air vent tube 16 is a pair of closing cams 19 adapted to bear, when in closed position, upon the washer 18 as shown in Fig. 6 thus causing the gasket 15 to expand and sealingly engage the sleeve 14. The cams 19 are rigidly joined to an actuating handle in the form of a hairpin shaped bail 20 which may be raised to release the cams 19 thus freeing the sleeve 14.

The flexible pouring spout 13 includes as an integral part thereof or as a separate member, a spring or other suitable resilient means 21 rigidly secured at its lower end to the container 1 and adapted to compel the pouring spout 13 to assume an upright position as indicated in Fig. 5 when the spout is released from all deflecting force other than its own weight. The fuel can of this invention when in use may be manipulated as indicated in Fig. 4 in which case the handles 6 are grasped as shown, with the container 1 in substantially horizontal position. The sleeve 14 of the flexible pouring spout 13 is then inserted into the filling opening 22 of a fuel tank 23 which is to be filled. The container 1 then need only be raised in horizontal position as is shown in dotted lines in Fig. 4 in order to cause fuel to flow into the tank 23. If the container 1 is nearly empty the same, of course, may be tipped from horizontal position and in this manner substantially the entire contents of the container 1 may be discharged.

In filling a small tank such as tank 23 it is usually difficult to transfer fuel at a conveniently rapid rate and at the same time to stop the flow without causing overflow of the tank 23. In the case of the can of this invention flow may be regulated with great nicety by a simple choice of the degree of elevation of the container 1. Thus fuel may be transferred at a rapid rate until the tank 23 approaches the full condition and then the rate of flow may be reduced as desired and stopped almost instantaneously by simply lowering the can so that avoidance of spillage is easily accomplished. When a filling operation is being performed in a small boat it is very convenient to be able to immediately dispose of the fuel can and attend to the closing of the tank which has been filled. When this is done with the fuel can of this invention the pour-

ing spout 13 of its own accord assumes a position such as is indicated in Fig. 5 thus preventing unintended escape of liquid from the can since the spout is of a length greater than the height of the container. In order to close the can tightly all that is necessary is to slide the sleeve 14 around the expandable gasket 15 while the bail 20 is raised and then depress the bail 20 to the position shown in the drawings, whereupon the can becomes completely sealed.

I claim:

1. In a ready pouring can the combination comprising a container having sides, top and bottom, a rigid permanently open outlet passage emerging from said container at a point near the bottom of the same, and a flexible resilient tubular pouring spout deflectable to facilitate pouring but having sufficient resilient stiffness to assume a normal configuration when freed of forces other than its own weight, said pouring spout having a length substantially greater than the height of said container and having a free open pouring end and a connection end, the connection end of said spout being immovably secured to said outlet passage in permanently open fluid communicating relationship between said spout and the interior of said container with said spout when in normal configuration extending upwardly to normally maintain the pouring end thereof at a level above the top of said container, whereby said container when idle is precluded from discharging its contents.

2. A ready pouring can in accordance with claim 1 of enhanced stability against tipping when idle wherein the minimum horizontal dimension of the bottom of the container exceeds the maximum vertical dimension of the container.

3. A ready pouring can in accordance with claim 1 wherein an air vent is provided in the top of said container, and a groove is provided extending upwardly in one of the container sides from a point near the bottom adjacent the outlet passage to the top of the container and thence across the top of the container to said air vent, means associated with said air vent adapted to sealingly engage the pouring end of said spout when said spout is housed in said groove, said groove being adapted to drain spillage from said air vent to the bottom of said container without distribution of the same upon the side walls of said container.

4. In a ready pouring can the combination comprising a container having sides, top and bottom, a rigid permanently open outlet passage emerging from said container at a point near the bottom of the same, and a flexible resilient tubular pouring spout deflectable to facilitate pouring, spring means engaging said spout adapted to impart thereto sufficient resilient stiffness to cause the same to assume a normal configuration when freed of forces other than the weight of said spout, said pouring spout having a length substantially greater than the height of said container and having a free open pouring end and a connection end, the connection end of said spout being immovably secured to said outlet passage in permanently open fluid communicating relationship between said spout and the interior of said container with said spout when in normal configuration extending upwardly to normally maintain the pouring end thereof at a level above the top of said container, whereby said container when idle is precluded from discharging its contents.

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