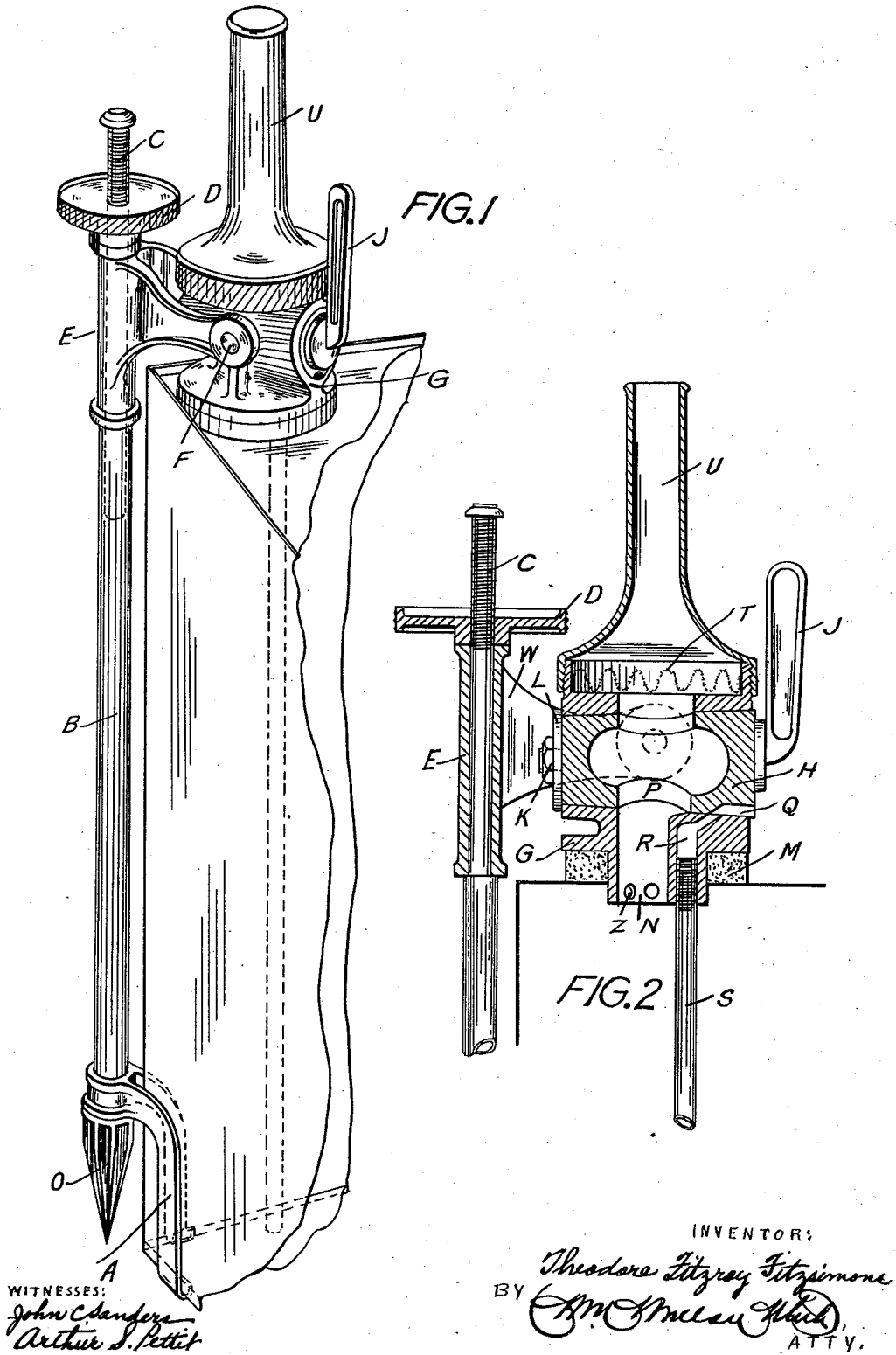


T. F. FITZSIMONS.
VENTING AND DISCHARGING VALVE FOR VESSELS CONTAINING LIQUIDS.
APPLICATION FILED APR. 12, 1911.

1,011,936.

Patented Dec. 19, 1911.



UNITED STATES PATENT OFFICE.

THEODORE FITZROY FITZSIMONS, OF EDGECLIFFE, NEAR SYDNEY, NEW SOUTH WALES, AUSTRALIA.

VENTING AND DISCHARGING VALVE FOR VESSELS CONTAINING LIQUIDS.

1,011,936.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed April 12, 1911. Serial No. 620,536.

To all whom it may concern:

Be it known that I, THEODORE FITZROY FITZSIMONS, a subject of the King of Great Britain and Ireland, residing at 256 Ocean street, Edgecliffe, near Sydney, New South Wales, Australia, have invented a new and useful Venting and Discharging Valve for Vessels Containing Liquids, of which the following is a specification.

My invention relates to a device for venting vessels containing liquids and for discharging the liquid contents thereof. It has been devised specially for facilitating the discharging of portable rectangular cans containing benzin, kerosene, spirits, and like liquids, but it is usable in whole or in part for the discharging of other liquids and for use in connection with vessels of other forms and dimensions.

The said device consists of a plug valve with air by-pass, fitted in a valve casing which terminates at one end in a delivering nozzle, and at the other in a washered neck adapted to set into a hole in the can head and a venting pipe in communication with the air by-pass port; this valve is carried by trunnion pins on a forked bracket which springs from a collar slidable on a rod; the lower end of the rod is fitted with a piercing tool and with claws which are engageable with the rim on the can bottom, and the upper end of it is fitted with a clamping nut which acts against the slidable collar to force the valve foot firmly down onto the can head.

Referring to the accompanying drawings:—Figure 1 is a perspective view, and Fig. 2 a vertical section through the upper part of the device.

As illustrated in the drawings the invention is shown as applied to a can such as is ordinarily used for containing benzin or mineral oil or spirits. The detail of construction is susceptible of variation.

A double claw A carried on the end of a rod B, preferably tubular to obtain stiffness with limited weight, is provided to grasp the "bottom" of the can, the nibs on the ends of said claws being adapted to grasp the rolled seam around the bottom edge of the can. The rod B terminates in a solid end C which is screwed, a milled edge nut D being provided to work on said screw.

E is a long collar slidable over the rod B and its solid end C, and carrying a pair of

wings or brackets W between which the valve is hung by means of trunnion pins F.

G is the casing of a plug cock H, said cock being operatable by a hand lever J attached to it. The plug H is fitted in the casing G by grinding in in the usual way and is secured by a back nut K taking against a packing washer L.

M is a thick rubber or other elastic washer for making a joint against the top of the can. The tubular foot N of the valve is perforated at the sides as shown at Z to permit discharge of the last of the contents of the can. The conical star section piercing tool O is fitted in the lower end of the rod B, and is used for punching a round aperture in the top of the can, when a screw-off cap is not fitted thereto. The plug H is vented through as at P to provide a main passage for the liquid, and it is also cored at Q to provide a spile or air inlet to connect with the cored hole R in the casing G into which leads the vent tube S which is made of sufficient length to reach almost to the bottom of the can.

T is a strainer of crimped gauze wire, contained in a pocket under the base of the neck U of the delivery nozzle, to the end of which a flexible pipe may be attached. When the valve lever J is set in alinement with the neck cap U, the air inlet and liquid deliveries are both open; when it is reversed only the liquid delivery is open; when it is turned square on, both the liquid and the air passages are closed.

The mode of using the said attachment or fitting on a benzin can is as follows: A circular aperture is first punched through the top of the can near one corner thereof by means of the star tool O, or when the can is made with a removable cap the same is removed. The vent tube being inserted into the aperture, the claw A is set so as to grip on the lower seam of the can, the tail N of the valve is inserted squarely in the aperture, and the fitting fastened down by screwing down the nut D, whereby the washer M is compressed and a liquid tight joint made. The valve being closed, the can is inverted and the delivery nozzle inserted in the benzin reservoir or other vessel into which the contents of the can are to be run. The cock H is now turned so as to allow liquid to pass but not sufficiently to open the port R leading to the air tube S. When some of

the liquid has escaped, the attenuation of the atmosphere within the can will tend to siphon back any liquid contained in the air pipe S. The valve H being now fully
 5 opened, a full bore of liquid will pass out through the delivery nozzle U and air will pass inward through the valve by-pass Q, and very little if any of the liquid will fall back to the port Q and escape therefrom.
 10 The valve should be closed when the fitting is being inserted in the can, though it is not essential that it should be closed.

What I claim as my invention and desire to secure by Letters Patent is:—

15 1. A venting and discharging device for liquids contained in cans, consisting of a rod carrying a claw at one end and a slidable collar at the other end, with nut tightener, and, supported by trunnions or brackets in
 20 said collar, a valve fitted with an air by-pass leading to an air tube of sufficient length to extend near the end of the can.

2. In a device for venting and discharg-

ing liquids from cans, the combination of an air vent and discharge valve, and a grip 25 rod upon which said valve is supported by trunnions carried by brackets branched from a slidable collar; said rod having claws adapted to grasp the can at its bottom end, and having also a nut for pressing down said 30 slidable collar.

3. In a device for the purpose described, the combination with a carrier rod hooked to the can bottom, of a valve pivotally supported thereon, said valve consisting of a 35 casing G, plug H, and handpiece J, a strainer T, nozzle U, perforated neck N, washer M, air port R, air by-pass Q and air pipe S.

In testimony whereof I have signed my 40 name to this specification in the presence of two subscribing witnesses.

THEODORE FITZROY FITZSIMONS.

Witnesses:

R. RILEY,

W. I. DAVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."