Aug. 21, 1934. H. L. SCOTT 1,970,629

GASOLINE VENDING NOZZLE

Filed Nov. 17, 1930

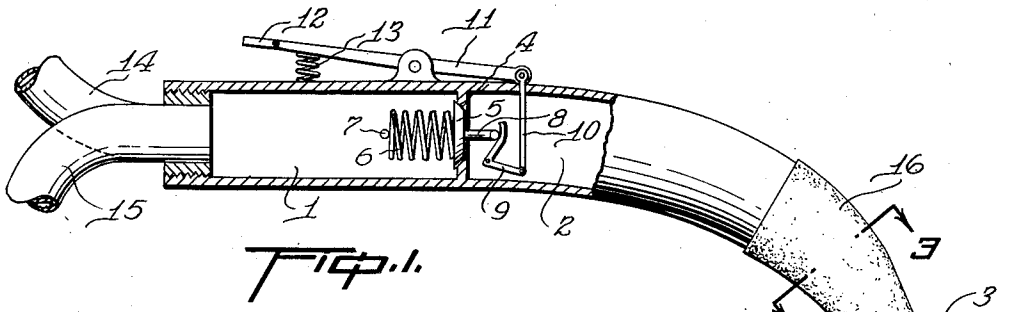


Fig. 1.

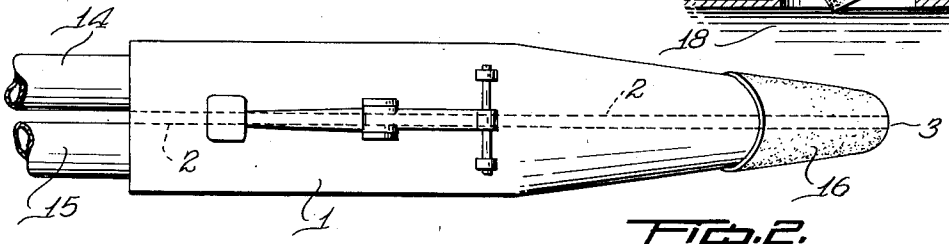


Fig. 2.

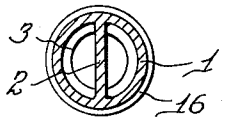


Fig. 3.

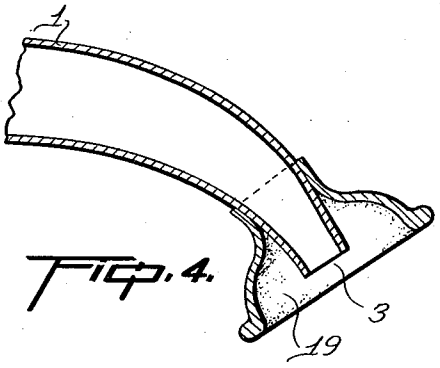


Fig. 4.

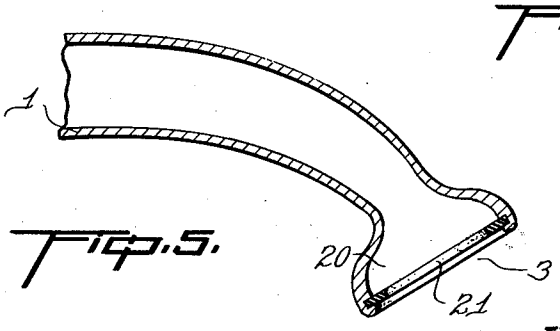


Fig. 5.

INVENTOR

Henarie L. Scott

BY

ATTORNEYS

Patented Aug. 21, 1934 1,970,629

UNITED STATES PATENT OFFICE

1,970,629

GASOLINE VENDING NOZZLE

Henarie L. Scott, San Antonio, Tex.

Application November 17, 1930, Serial No. 496,200

3 Claims. (Cl. 221—100)

The present invention pertains to a nozzle of a type particularly adapted for delivering gasoline to automobiles that are parked within buildings.

Owing to the highly inflammable nature of the fumes and gases which become mixed with air in a partially filled gasoline tank of an automobile it is forbidden by insurance regulations in certain localities and prohibited by ventilation facilities in practically all garages to fill the gas tank while the automobile is within a building for it is obvious that the fumes which are expelled from the tank as the gasoline enters present a great fire hazard. The present invention therefore has as its primary object to devise a nozzle for delivering gasoline to the tanks of automobiles in a manner whereby no fumes from the tank are expelled into the interior of the building and whereby it is impossible to overflow the tank.

Another object of the present invention is to devise a nozzle for delivering gasoline which is provided with two valve controlled passages and with a portion which engages the tank opening in a manner to prevent gases or liquid from escaping through the tank opening around the nozzle when gasoline is discharged from the nozzle. A pair of separate passages are provided in the nozzle and have synchronized valves so that when the gasoline enters the tank through one of the passages the gas fumes pass out of the tank through the other passage. The gasoline passage is connected to a suitable source of supply and the other passage is connected to a vent pipe which is preferably constructed so that the top of the pipe discharges the fumes outside the building and the bottom of the pipe is connected to an overflow tank for it is obvious that if the tank were completely filled and gasoline continued to discharge from the nozzle that the additional gasoline instead of flowing onto the floor would flow out the passage that is provided as an outlet for the gases or fumes.

With the above and other ends in view the invention consists in the matters hereinafter set forth and more particularly pointed out in the appended claims, reference being had to the accompanying drawing, in which

Figure 1 is a side elevation of the present nozzle, being partly broken away and in cross section;

Fig. 2 is a top plan view thereof;

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary longitudinal cross section of a nozzle having a modified form of sealing means; and

Fig. 5 is a fragmentary longitudinal cross sectional view of a further modification embodying the same principle.

Like characters of reference are employed throughout to designate corresponding parts.

The numeral 1 indicates the body of the present nozzle which has a central longitudinal partition 2 running the entire length thereof to divide the same into two passages. The discharge end 3 of the nozzle is tapered and curved for a purpose which will become apparent as the description progresses.

Each passage is provided with a bored partition forming a valve seat 4 and the valve 5 is ordinarily held against this seat by a compressed coiled spring 6 which is in turn held in place by a pin 7. Adjacent the valve stem 8 is mounted a bell crank lever 9 which butts against the end of the stem. The bell crank lever is connected by the link 10 to a pivoted lever 11 having a thumb piece 12 and a coiled spring 13 to normally force the end of the lever having the thumb piece upwardly and permit the spring 6 to force the valve 5 on its seat 4 without any resistance being offered thereto by the bell crank lever 9. When it is desired to open the valve 5 however the thumb piece 12 is depressed which raises the link 10 and causes the bell crank 9 to rock so that it forces against the stem 8 and thereby forces the valve off its seat and compresses the spring 6.

A hose 14 is connected to the nozzle on one side of the partition 2 and has its opposite end connected to a suitable source of supply. A second hose 15 is connected to the nozzle on the opposite side of the partition and has its opposite end connected to a vent pipe.

The tapered or discharge end 3 of the nozzle is equipped with a resilient sleeve-like gasket 16, preferably formed of such material as sponge rubber. When the nozzle is inserted in the opening 17 in the gasoline tank 18 the tapered portion will come into contact with the sides of the opening if it is shoved far enough therein and the resilient gasket permits the edges of the opening to so imbed themselves in the gasket that it is impossible for any gases or fumes to escape through the opening around the nozzle.

In Fig. 4, the nozzle is identical in construction with that above described and has a tapered end which permits it to be wedged into the tank opening. In this case however, there is provided a cup like gasket 19, also resilient and formed of sponge rubber or of material having the same characteristics. It is apparent that when the end of the nozzle has been inserted in the filling hole of the gasoline tank that the cup like gasket 19 will

completely surround the hole and by compressing this gasket against the wall of the tank a seal is provided that forces all the gases and fumes which are expelled from the tank by the entrance of gasoline to pass through the nozzle on one side of the partition 2 and out the hose 15 to the atmosphere outside of the building.

In Fig. 5 the discharge end of the nozzle is provided with a bell mouth 20 which receives a resilient washer or ring-like gasket 21 which is formed of resilient material such as sponge rubber. In this embodiment the bell-mouthed portion of the nozzle is forced over the spout of the gasoline tank and the resilient gasket 21 seals the nozzle around the spout so that the gasoline enters the tank and the gas or fumes pass through the passage provided therefor in the nozzle and out the pipe 15 to the atmosphere.

Although specific embodiments of the present invention have been illustrated and described it is to be understood that various changes may be made within the scope of the appended claims without departing from the spirit of the invention and such changes are contemplated.

What I claim is:

1. In a dispensing nozzle, a tubular nozzle member, a partition arranged therein and extending the entire length thereof to provide a pair of longitudinally extending unrestricted passages in the nozzle member, one of which being adapted to communicate with a source of liquid and the other being adapted to be connected with a vent pipe, valves in said passages, and synchronized controlling mechanism supported on said nozzle for operating said valves.

2. In a dispensing nozzle, a tubular nozzle member, a partition arranged therein and extending the entire length thereof to provide a pair of longitudinally extending unrestricted passages in the nozzle member, one of which being adapted to communicate with a source of liquid and the other being adapted to be connected with a vent pipe, a transverse partition also arranged in the nozzle member and provided with openings, normally seated valve element closing each of the openings, and a common operating mechanism supported on the nozzle member for simultaneously unseating the valves.

3. In combination, a dispensing nozzle having non-communicating longitudinally extending passageways therein, a valve seat in each of the passageways, a valve element normally engaged with each of the valve seats, a projection extending laterally from each of the valve elements, a bell crank lever pivotally supported in each of the passageways with one end contacting with one of the projections, an operating member pivotally mounted on the nozzle, and links connecting the operating member and bell crank lever whereby actuation of the latter will rock the bell crank levers in a direction to engage the projections and unseat the valve elements.

HENARIE L. SCOTT.