

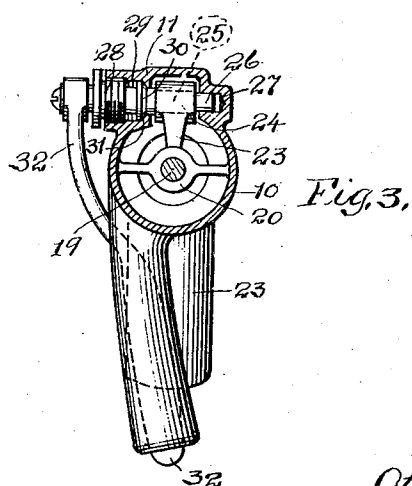
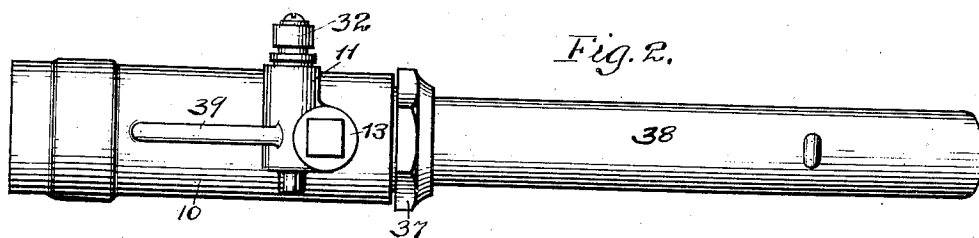
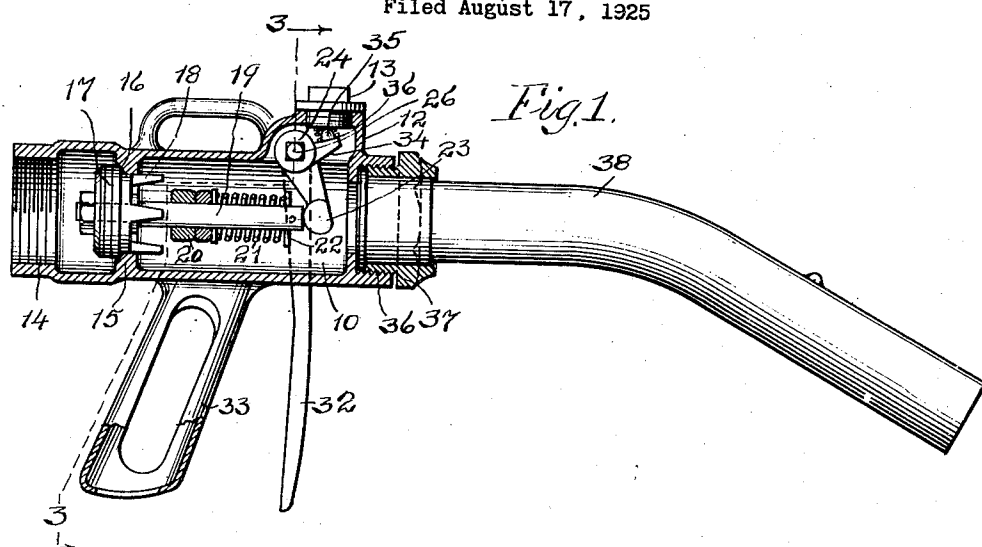
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O. E. SZEKELY

SELF CLOSING HOSE NOZZLE

Filed August 17, 1925



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UNITED STATES PATENT OFFICE.

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SELF-CLOSING HOSE NOZZLE.

Application filed August 17, 1925. Serial No. 50,550.

To all whom it may concern:

Be it known that I, OTTO E. SZEKELY, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Self-Closing Hose Nozzles, of which the following is a specification.

This nozzle is intended primarily for use in connection with the dispensing of gasoline from filling stations, and is of the self-closing type which is coming into extensive use at the present time. In the use of nozzles of this type, the valve for controlling the ultimate discharge of the gasoline is located in the nozzle rather than at a point distant therefrom, so that the flow of gasoline is under the immediate control of the operator standing in close proximity to the gasoline tank on the car being charged, at which point he can readily observe the inflow of gasoline and cut off the supply when the tank has been filled. In such case the hose to which the nozzle is secured remains full in contradistinction to the so-called dry hose apparatus controlled by a nozzle at the upper end, which ordinarily necessitates the services of two men in order to avoid spilling and waste of gasoline.

The nozzle of the present invention is designed to afford an easy and convenient pistol grip for the hand of the operator in conjunction with a trigger-like lever for controlling the supply of gasoline, these parts being so arranged that the supply hose will occupy a natural and convenient relation to the arm of the operator, thereby enabling the hose and nozzle to be easily controlled by a single hand.

The invention also relates to the means provided for the prevention of lost motion in the contact between the lever finger and the valve stem, and to the general arrangement of the device as a whole.

Further objects and details will appear from the description contained in the specification in conjunction with the drawing wherein—

Figure 1 is a sectional elevation of the nozzle;

Fig. 2 is a top or plan view thereof; and Fig. 3 is an offset cross sectional view taken on line 3—3 of Fig. 1, looking in the direction of the arrows.

The nozzle comprises a cylindrical barrel 10 provided near its forward end on its upper side with a transversely extending protuberance 11 which, on its forward side, merges into a half cylindrical boss 12 which is closed by a screw plug 13. The rear end of the barrel is provided with interior threads 14 adapted to engage with the discharge end of a hose, not shown, and within the barrel, near its rear end is an annular flange 15 beveled on its rear edge 16 to afford a seat for a valve 17 which is provided with a plurality of inwardly extending circumferentially arranged fingers 18 which serve to center the valve.

The valve is provided with a valve stem 19 entered through a transversely extending bridge plate 20 which furnishes a guide for the stem. The valve stem is surrounded by a coiled spring 21 which abuts against a washer 22, the arrangement being such as to permit opening of the valve upon compression of the spring.

The valve stem is operated by means of a swinging finger 23 depending from a hub 24 mounted upon a squared shaft 25 terminating at its inner end in a cylindrical journal 26 mounted within a journal recess 27 in the end wall of the protuberance 11. The shaft 25 at its opposite end is entered through a gland 28 adapted to compress a packing 29 bearing against a collar 30 which fits against an inturned flange 31, the arrangement being such as to afford a tight closure against the escape of gasoline.

The protruding outer end of the shaft carries a trigger-like lever or handle 32 which extends downwardly and inwardly below the barrel to a point immediately in advance of a pistol grip handle 33 depending from the under side of the barrel. This arrangement permits the operator to grasp the pistol grip between the thumb and palm of the hand and to grasp the trigger with the fingers, thus opening the valve by a retraction of the fingers. The arrangement is

also one which rests the rear or butt end of the nozzle upon the hand immediately behind the base of the thumb, with the attached hose leading up along the forearm so that the entire nozzle will be conveniently supported and easily manipulated, and can be readily turned by movement of the wrist into any position desired.

In order to hold the finger 23 into tight engagement with the valve stem, and to prevent lost motion at this point, the hub 24 is provided on its forward side and at right angles to the finger 23 with a lug 34 provided on its upper face with a small boss 35 which centers a light coiled spring 36, the upper end of which bears against the plug 13, so that a constant tendency of the spring 36 will be to force the finger 23 into contact with the valve stem, thereby preventing any lost movement due to wear or improper adjustment.

The barrel at its forward end is provided with interior threads 36 for a coupling 37 which carries a spout 38 which may be either rigid or flexible as is desired and of any suitable material, metallic or otherwise, commonly employed in the construction of spouts intended for like purpose. The barrel is also provided on its upper side with an upstanding loop which affords a convenient means for suspending the nozzle.

In use, the nozzle will be engaged and grasped by the hand in the manner described and manipulated to bring the spout into desired position, after which the compression of the fingers will effect a retraction of the valve stem and an opening of the valve which will remain open until the trigger is released. Although the nozzle is intended primarily for dispensing gasoline, it is obvious that it might be employed for other purposes in which facility of manipulation and ease of control are desired.

I claim:

1. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the barrel, a trigger in proximate relation to the pistol grip, a valve within the barrel, an inlet aligned with the valve stem and connections between the trigger and the valve for manipulating the valve by movements of the trigger, substantially as described.

2. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the barrel, a trigger in proximate relation to the pistol grip, a valve within the barrel, a valve stem connected with the valve, a rock shaft upon which the trigger is mounted, and a member carried by the rock shaft in engagement

with the valve stem, substantially as described.

3. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the barrel, a trigger in proximate relation to the pistol grip, a valve within the barrel, a valve stem connected with the valve, a rock shaft upon which the trigger is mounted, a member carried by the rock shaft in engagement with the valve stem for opening the valve, and a spring for returning the valve into closed position, substantially as described.

4. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the barrel, a trigger in proximate relation to the piston grip, a valve within the barrel, a valve stem connected with the valve, a rock shaft upon which the trigger is mounted, a member carried by the rock shaft in engagement with the valve stem for opening the valve, a spring for returning the valve into closed position, and a secondary spring arranged to exert pressure upon the rock shaft to hold said member in contact with the valve stem, substantially as described.

5. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the under side of the barrel, means for connecting a hose to the rear end of the barrel, a valve within the barrel provided with a valve stem, a rock shaft extending transversely of the barrel in proximate relation to the valve stem, a finger carried by the rock shaft and bearing against the valve stem, and a trigger carried by the rock shaft and extending externally of the barrel to a point in front of the pistol grip, substantially as described.

6. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the under side of the barrel, means for connecting a hose to the rear end of the barrel, a valve within the barrel provided with a valve stem, a rock shaft extending transversely of the barrel in proximate relation to the valve stem, a finger carried by the rock shaft and bearing against the valve stem, a trigger carried by the rock shaft and extending externally of the barrel to a point in front of the pistol grip, and a coiled spring surrounding and engaging the valve stem to hold the same in advanced relation, substantially as described.

7. In a self-closing hose nozzle, the combination of a barrel, a tubular spout forwardly extending from the barrel, a pistol grip depending from the under side of the barrel, means for connecting a hose to the

rear end of the barrel, a valve within the barrel provided with a valve stem, a rock shaft extending transversely of the barrel in proximate relation to the valve stem, a finger carried by the rock shaft and bearing against the valve stem, a trigger carried by the rock shaft and extending externally of the barrel to a point in front of the pistol

grip, a coiled spring surrounding and engaging the valve stem to hold the same in advanced relation, and a secondary spring exerting pressure upon the rock shaft to hold the finger into engagement with the valve stem, substantially as described. 10

OTTO E. SZEKELY.