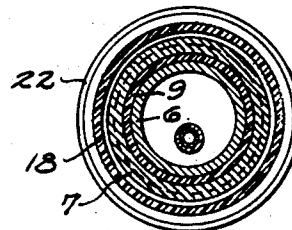
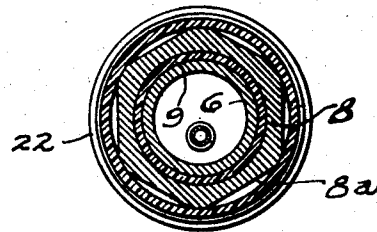
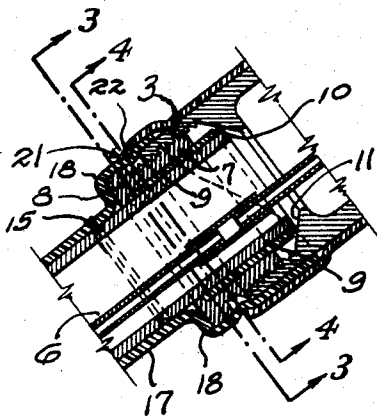
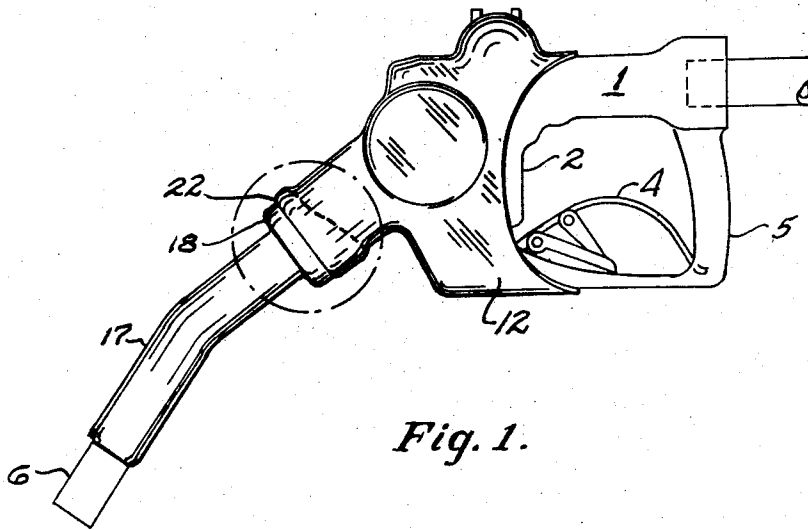


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DISPENSING NOZZLE AND GUARD

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1

3,474,837

DISPENSING NOZZLE AND GUARD

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3 Claims

ABSTRACT OF THE DISCLOSURE

A gasoline dispensing nozzle of familiar type provided with a two-part guard or shield of plastic material. One part is applied to the nozzle spout which is inserted into the vehicle tank to be filled and the other part is applied to the nozzle body which remains outside of the tank. Adjacent ends of the two parts overlap and include integral elements which interengage to maintain their assembly and to present the appearance of a single guard, but are readily separated for initial production, for assembly or disassociation. Preferably the adjacent portions of the nozzle body and spout are shaped to contribute to effective assembly and functioning of the guard parts.

The invention relates to liquid dispensing nozzles such as are commonly used on gasoline pumps in filling stations and the invention comprises novel guard structure of plastic or other suitable material and its assembly with the metallic nozzle valve body and spout.

Among the objects of the invention are to facilitate the application of the guard to the nozzle and protect the nozzle spout from indentation by sharp contact with automobile tank inlets; to protect auto finish from scarring by a nozzle; to enable a nozzle spout broken off by premature departure of an automobile from the pump to separate readily from the nozzle body and avoid damage to the pump and to prevent accidental removal of the spout portion of the guard from the nozzle independently of the nozzle spout. In attaining these objects the guard is made in two parts, and it is a further object of the invention to present a unitary appearance of the assembly irrespective of the separate parts structure.

In the accompanying drawings illustrating a selected embodiment of the invention:

FIG. 1 is a side elevation of a nozzle of the type described with a two-part guard assembled therewith.

FIG. 2 is a longitudinal section through a portion of the nozzle and guard, within the broken line circle shown in FIG. 1, and drawn to a larger scale.

FIGS. 3 and 4 are detail transverse sections on lines 3—3 and 3—4, respectively, of FIG. 2.

The metal nozzle comprises a hand-hold 1, a valve body 2 with an interiorly threaded outlet 3, a valve operating handle 4, an enclosure 5 therefor and a spout 6 provided with a rotatable exteriorly threaded sleeve 7 with an integral radially projecting collar 8 having a hexagonal outer countour 8^a and provided with a nonfriction liner 9 surrounding spout 6. The end of spout 6 and sleeve 7 is inserted in outlet 3 and sleeve 7 is rotated to feed it to the right in the outlet until the sleeve, through liner 9, thrusts a rib 10 on the end of the spout against a flared seat 11 in outlet 3, thus affixing the spout to the nozzle body.

It has been customary to apply a shield or guard 12 of rubber-like plastic to such a nozzle and to surround the spout with a coil spring tightly enclosing the spout and adapted to engage the rim of the inlet opening in a vehicle gasoline tank to hold the spout within the tank while the attendant is rendering other service. Such a guard and spring arrangement is shown in United States

2

Patent 2,800,931. If the vehicle moves away from the pump before the spout is intentionally withdrawn, the engagement intended to resist accidental withdrawal of the spout may result in the rupturing of the hose or overturning of the pump. As a safety measure it is established practice to cut a groove 15 in the spout (FIG. 2), which so weakens the spout that in the event of the vehicle pulling the spout without dislodging it from the tank, the spout will fracture at the groove without other damage to the equipment.

The same general result is attained, without using a coil spring, by the guard unit 17 disclosed herein comprising a plastic tube which encloses the spout and adheres tightly to the spout by friction because it is stretched as it is applied. Its inner end is increased in diameter at 18, to receive radially projecting collar 8 on sleeve 7, then is reduced to enter a recess between the rear face of the collar and the end of valve body outlet 3, and then is increased to fit over outlet 3 thus forming an outwardly facing groove 21 which receives an turned lip 22 on the end of guard unit 12. This arrangement results in overlapping margins on the two units 12 and 17 offset transversely of the spout axis to resist their relative movement lengthwise of the spout axis but fitting so closely that they present an integral appearance although it would be difficult and expensive to form such a guard in one piece, and if they were integral the frictional grip of guard unit 17 on the spout would prevent the latter separating from the valve body as explained above.

With the structure just described the frictional surface of spout guard unit 17 and the weight of the nozzle will keep the spout from slipping out of the vehicle tank during normal use, but if there is an abnormal situation resulting in an excessive pull on the spout sufficient to fracture it at recess 15, the two units of the guard may separate readily by the inner end of unit 17 slipping out from beneath lip 22 of unit 11 and the guard will not prevent separation of the spout from the valve body.

The details of the structure may be varied substantially without departing from the spirit of the invention and the exclusive use of those modifications coming within the scope of the claims is contemplated.

What is claimed is:

1. A guard of plastic material for a dispensing nozzle having a valve body and spout, comprising a unit for enclosing the nozzle valve body and a separate unit extending therefrom for enclosing the nozzle spout, said units overlapping at adjacent ends and having marginal portions offset transversely of the spout axis and interengaging lengthwise of the spout to position them relative to each other and to yieldingly resist separation, the interengaging marginal portions comprising an annular outwardly facing groove in one unit and an annular turned lip on the adjacent end of the other unit fitting tightly in said groove.

2. A guard according to claim 1 in which the spout-enclosing unit is tubular and has a diametrically enlarged end near the valve body-enclosing unit recessed inwardly of its end to provide the annular groove, the valve body-enclosing unit having a tubular forward end with an turned lip the inner diameter of which is less than the diameter of the bottom of said groove, and said lip is sufficiently elastic to permit its passage over the adjacent end of said spout-enclosing unit.

3. In combination, a liquid dispensing nozzle comprising a rigid valve body having an internally threaded tubular outlet, a rigid spout having a tubular inlet threaded into said outlet and having a radially projecting collar spaced from said outlet, there being an annular recess between said collar and said outlet, and a

3

two-part guard of plastic material comprising a spout-enclosing unit and a valve body-enclosing unit, the spout-enclosing unit including an enlarged diameter terminal fitting over said collar and including a portion fitting over said outlet beyond said collar in said recess and including an outwardly facing groove, and the valve body-enclosing unit including a tubular end portion extending over said outlet and having an intumed lip beyond the end thereof tightly seated in said groove.

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10

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