March 24, 1970 G. E. MOORE ETAL 3,502,121

SAFETY MECHANISM FOR AUTOMATIC NOZZLE

Filed Nov. 14, 1966 3 Sheets-Sheet 1

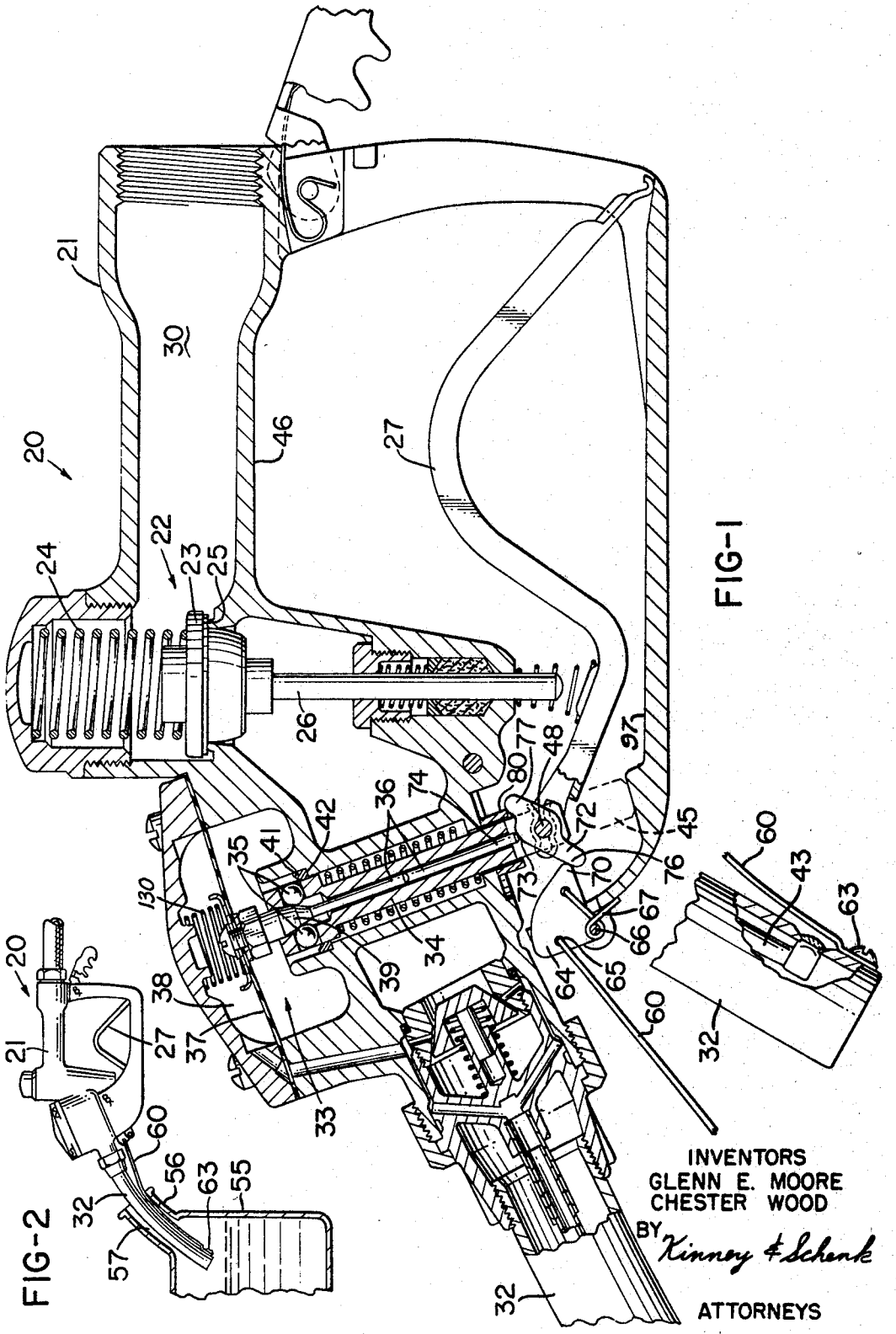


FIG-1

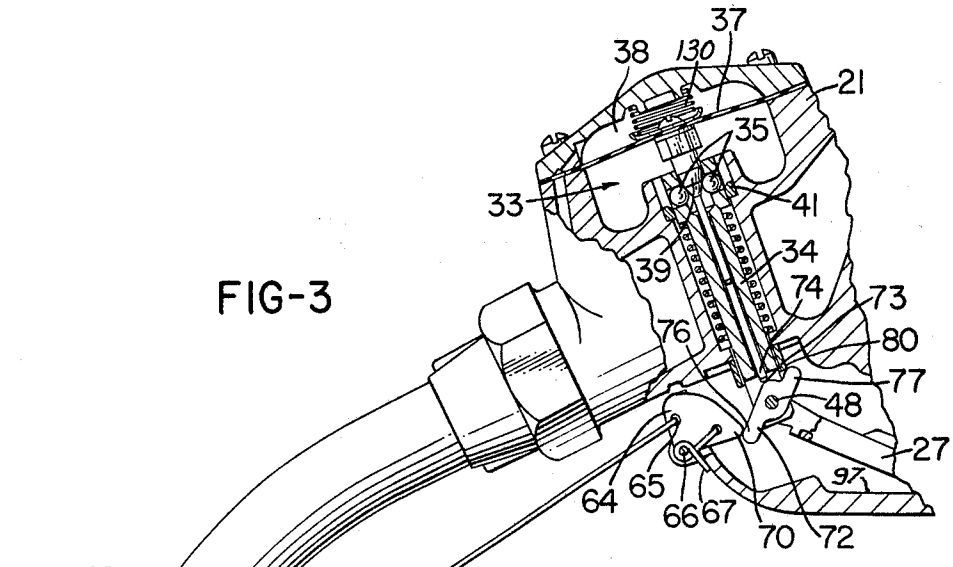
FIG-2

March 24, 1970 G. E. MOORE ETAL 3,502,121

SAFETY MECHANISM FOR AUTOMATIC NOZZLE

Filed Nov. 14, 1966 3 Sheets-Sheet 2

FIG-3



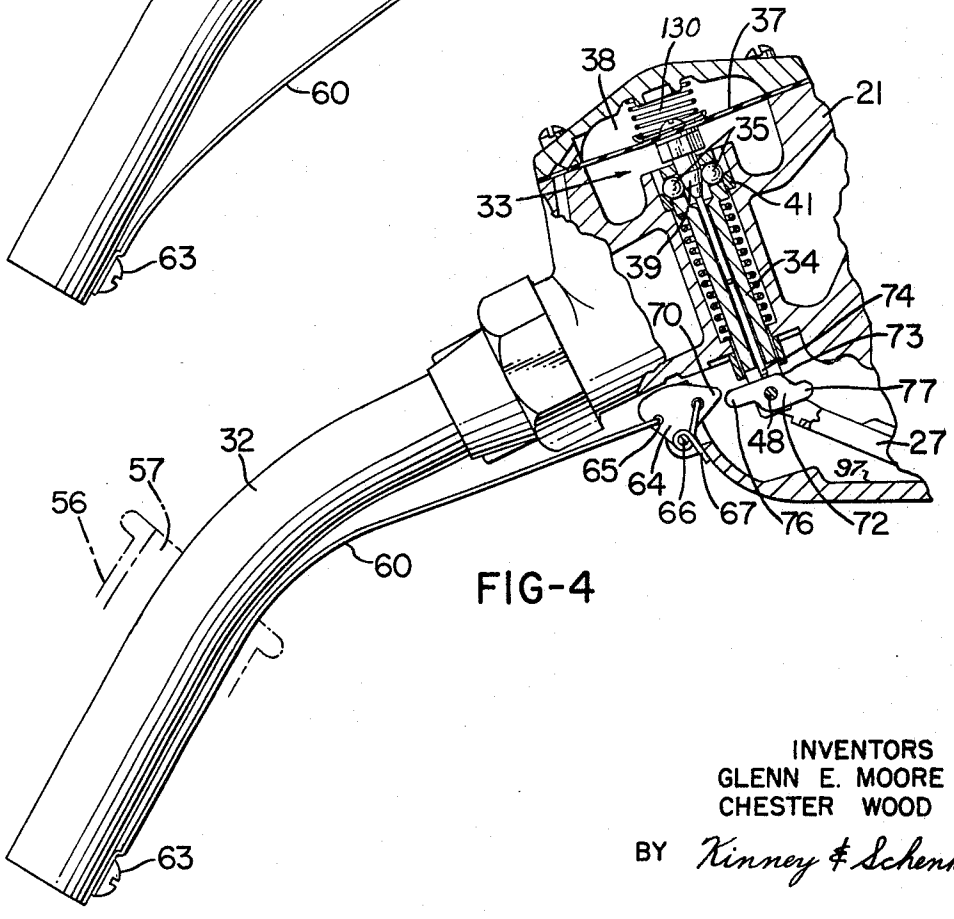


FIG-4

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March 24, 1970 G. E. MOORE ETAL 3,502,121

SAFETY MECHANISM FOR AUTOMATIC NOZZLE

Filed Nov. 14, 1966 3 Sheets-Sheet 3

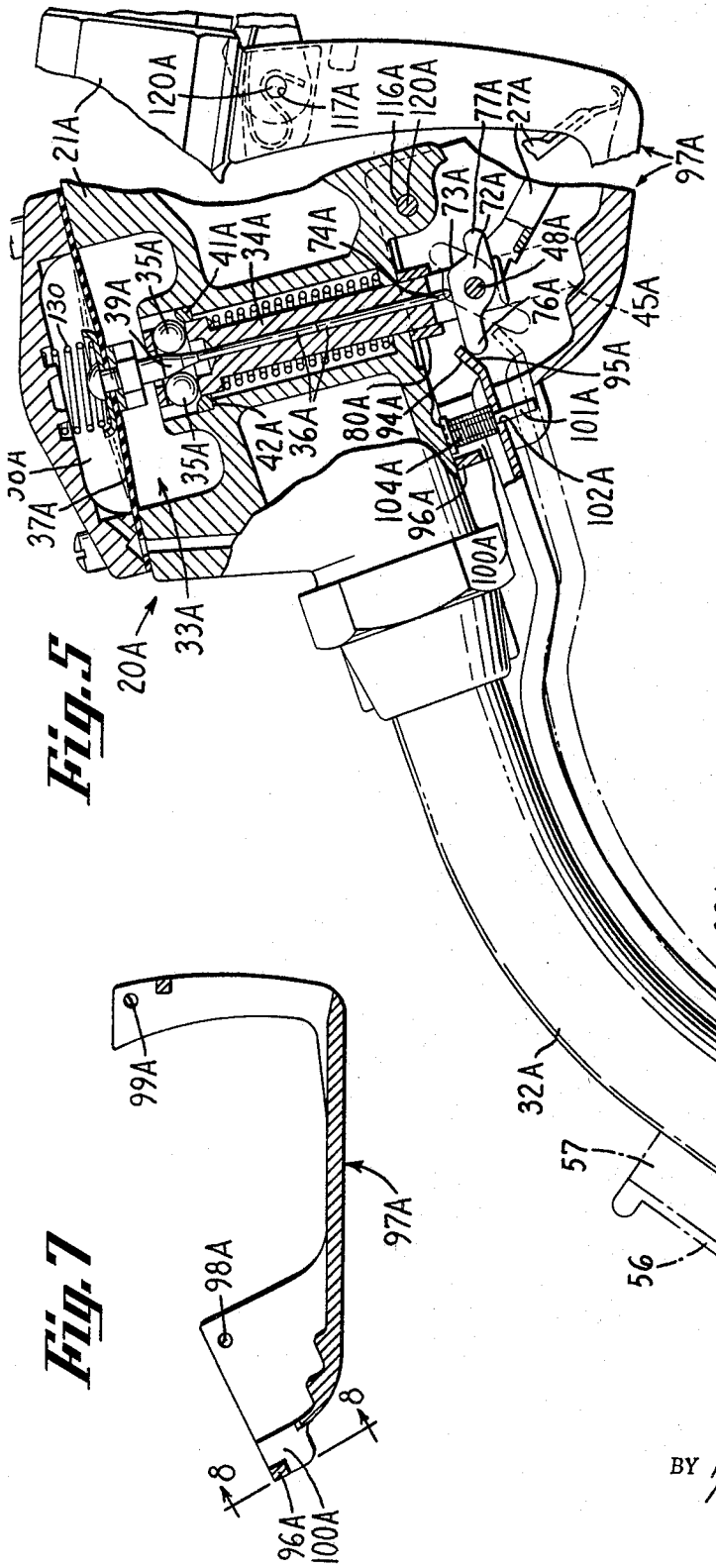


Fig. 5

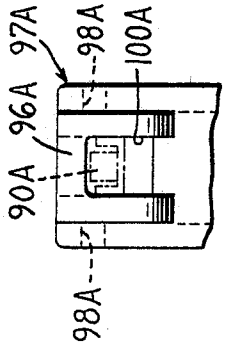


Fig. 8

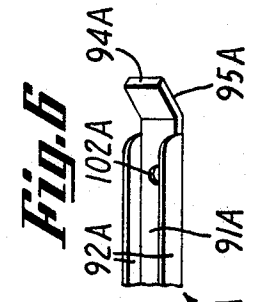
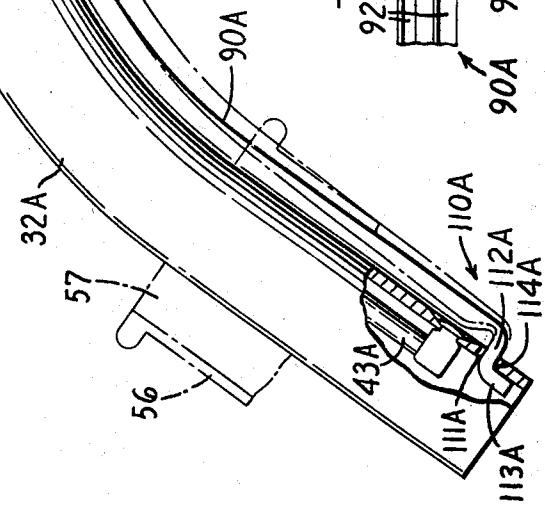


Fig. 6

Fig. 7



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SAFETY MECHANISM FOR AUTOMATIC NOZZLE

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Int. Cl. B65b 1/30, 57/14, 3/28
U.S. Cl. 141—207 10 Claims

ABSTRACT OF THE DISCLOSURE

The safety means includes a member extending in spaced relation along the inner side of said arcuate dispensing nozzle from the free end thereof, where it is fixedly attached to the other end, where it is operatively connected to the triggering cam means which is associated with the automatic shut-off means. The intake neck of the tank bends or forces the member into contact with the inner side of the nozzle and operates the triggering cam to permit normal operation of the shut-off means. The triggering cam is pivotally mounted on the end of the plunger of the shut-off means and is bodily movable therewith.

This invention pertains to fluid dispensing head means and more particularly to a safety device for such fluid dispensing head means.

Fluid dispensing head means such as dispensing nozzles for liquids, such as gasoline, or the like, in present use are generally operated by experienced personnel. Particularly in the dispensing of gasoline in automobiles, any inadvertent flow of gasoline prior to insertion of a nozzle within an automobile fuel tank could create a serious fire hazard as well as damage articles upon which the inadvertently dispensed gasoline might fall. In self-service type gasoline stations where the automobile operator is encouraged to operate the gasoline nozzle it is especially important that a nozzle be provided with adequate safety means to assure that gasoline is not dispensed inadvertently.

Accordingly, it is a feature of this invention to provide an improved fluid dispensing head or nozzle means having safety means incorporated as an integral part thereof to prevent inadvertent dispensing of fluid therethrough.

Another feature of this invention is to provide an improved fluid dispensing nozzle of simple and economical construction having safety means assuring that fluid will be dispensed through such nozzle only while such nozzle is placed in dispensing relation within fluid receiving container means.

Another feature of this invention is to provide improved safety means adapted to be used with automatic shut-off means provided in a fluid dispensing nozzle.

Another feature of this invention is to provide mechanical linkage means adapted to be fastened to a fluid nozzle at one of its ends and operatively connected to automatic shut-off means provided within such nozzle at its other end to provide a mechanical safety device preventing operation of such fluid nozzle at all times except when such nozzle is inserted within an associated tank in a fluid dispensing position.

Another feature of this invention is to provide mechanical safety means arranged to operate within a fluid nozzle such as a gasoline nozzle and comprising mechanical cam means operatively connected to actuate automatic high-level shut-off means normally provided within such nozzle.

Another feature of this invention is to provide an improved safety means for a gasoline nozzle which can be easily incorporated in standard existing nozzles efficiently and with minimum modification of such existing nozzles.

Therefore, it is an object of this invention to provide

an improved safety means having one or more of the novel features of this invention as set forth above or hereinafter shown or described.

Other objects, uses, and advantages of this invention are apparent from a reading of this description which proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIGURE 1 is a sectional view illustrating a dispensing nozzle of the type used to dispense gasoline and illustrating a portion of one exemplary embodiment of the safety means of this invention.

FIGURE 2 is a view illustrating the gasoline nozzle of FIGURE 1 inserted within container means such as the filler pipe of an automobile gasoline tank.

FIGURE 3 is a fragmentary view of the terminal end portion of the nozzle of FIGURE 1 with parts in section and parts broken away particularly illustrating mechanical safety means provided therefor prior to insertion within a gasoline tank.

FIGURE 4 is a fragmentary view similar to FIGURE 3 with parts in section and parts borken away illustrating the exemplary gasoline nozzle of FIGURE 1 inserted in dispensing position within such gasoline tank.

FIGURE 5 is a view with parts in section and parts broken away illustrating another exemplary embodiment of this invention.

FIGURE 6 is a fragmentary perspective view illustrating the upper end portion of a rigid member which comprises the safety device provided on the nozzle of FIGURE 5.

FIGURE 7 illustrates a lower guard used with the nozzle of FIGURE 5.

FIGURE 8 is a view on the line 8—8 of FIGURE 7.

While the various features of this invention are hereinafter illustrated and described as being particularly adaptable for providing mechanical safety means for a gasoline dispensing nozzle or the like, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide mechanical safety means for other uses as desired.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings because the drawings are merely utilized to illustrate one of the wide variety of uses of this invention.

In the exemplary embodiment of this invention shown in FIGURES 1–4 of the drawings, an improved fluid dispensing head means such as a gasoline dispensing nozzle **20** is illustrated. Dispensing nozzle **20** is comprised of a main body **21** having normally closed valve means indicated generally by the numeral **22** supported within body **21**.

Valve means **22** comprises a poppet valve **23** which is normally urged closed by a spring **24** against a cooperating seat **25** provided in housing **21**. Poppet valve **23** has a stem **26** fixed to the lower end thereof. The lower end of stem **26** is normally engaged by a suitably pivoted lever **27** to override spring **24** and thus open valve assembly **22**.

A passage **30** is provided in housing **21** and such housing has means such as threads or the like at the entrance to passage **30** for connection of nozzle **20** to a flexible hose, or the like, which in turn is connected to a source of gasoline through a gasoline metering pump. A discharge conduit **32** is also suitably connected to the discharge end of nozzle **20**. Upon actuating lever **27**, with nozzle **20** inserted in a gasoline tank so that the safety means of this invention to be later described is overridden, stem **26** and hence poppet **23** is raised upwardly allowing gasoline to flow through passage **30** and out of nozzle **20** through its discharge conduit **32**.

Presently used gasoline nozzles generally include automatic shut-off means enabling leaving the nozzle unattended. Therefore it is necessary to provide automatic shut-off

means to shut off the flow of gasoline through nozzle 20 once an associated gasoline tank has been filled.

In this example of the invention, such automatic high-level shut-off means is of a known type and is designated within nozzle 20 generally by the numeral 33. Shut-off means 33 comprises a generally tubular cylindrical plunger 34 mounted within housing 21 for axial movement within confined limits. Plunger 34 has radial openings in one end portion thereof, shown in the upper end portion in this example, and a plurality of balls 35 carried within such radial openings for radial movement toward and away from the elongated axis of plunger 34. The balls 35 normally lock plunger in a raised position as shown in FIGURE 1 upon being urged radially outwardly by a cooperating stem 36 extending through the central portion of tubular plunger 34 as will be presently described.

Stem 36 is suitably centrally fastened to a diaphragm 37 which is carried within housing 21 to define a pressure chamber shown at 38. Stem 36 has a tapered portion illustrated at 39 adapted to engage balls 35. A balance spring 130 is provided on the top side of diaphragm 37 for controlling the extent of movement of such diaphragm and hence the movement of tapered portion 39 and balls 35.

During a normal filling operation, with a tank not yet full, the pressure within chamber 38 is such that tapered portion 39 urges balls 35 outwardly so that they engage an O-ring or seat ring 41 supported on a shoulder 42 provided in housing 21, thus holding plunger 34 in its raised position. This is the position shown in FIGURE 4.

As the tank or container is filled, liquid submerges the terminal end portion of arcuate discharge conduit 32 also submerging passage means 43 opening adjacent the end of conduit 32 to cause a reduction in pressure in such passage means. The opposite end of passage 43 communicates with chamber 38 and thus the reduced pressure is also provided in chamber 38. The reduced pressure in chamber 38 allows diaphragm 37 to move upwardly causing balls 35 to roll toward each other unlocking plunger 34 and causing the plunger and a pivot pin 48 for lever 27 carried adjacent the terminal end of shaft 34 to drop to a position indicated by dotted lines at 45. With pivot pin 48 dropped to position 45, lever 27 strikes housing 21 at 46 upon being actuated making it physically impossible for lever 27 to contact the terminal end of rod 26 and allow flow through poppet assembly 23. It will be appreciated that once the mechanical assembly associated with plunger 34 drops to position 45 spring 24 immediately urges poppet assembly 23 closed.

While it is possible and may be desirable in some applications to provide mechanical safety means which operate directly to actuate valve means 22, in this example of the invention the mechanical safety means operates in conjunction with the automatic high-level shut-off means provided in nozzle 20 to thus achieve optimum safety.

Most gasoline nozzles in current use have an automatic high-level shut-off means being generally of the type presented herein and the safety device of this invention is of such simple and economical construction that it can be easily incorporated in existing gasoline dispensing nozzles with minimum modification thereof.

The mechanical safety means of this invention preferably comprises means which engages container means such as a gasoline tank 55 by engaging the inside surface of a filler pipe 56 provided for tank 55. Filler pipe 56 has a tubular opening 57 provided therein, see FIGURE 2, for insertion of discharge conduit 32 therewithin in a gasoline dispensing position.

The mechanical safety means or linkage comprises a flexible member 60 which engages container 55 by engaging pipe 56 thus allowing lever 27 to be actuated and permitting valve assembly 22 to be opened for the dispensing of gasoline. Once the gasoline nozzle 20 is removed from its gasoline dispensing position illustrated in FIGURE 2, the safety means stops flow through nozzle 20 by making use of the mechanism of the automatic shut-off means in a manner as will be presently described.

As seen in the drawings discharge conduit 32 of gasoline dispensing nozzle 20 is arranged generally in an arcuate path. Mechanical member 60 while being easily flexible as previously mentioned is made of a non-stretchable material such as metal and is illustrated in this example as a steel strip. Strip 60 is fastened adjacent the terminal fuel discharge end of arcuate conduit 32 by suitable means preferably by a screw 63. At its opposite end steel strip 60 is fastened to cam means illustrated as a cam 64 as by inserting such steel strip through a cooperating hole 65 provided in such cam.

Cam 64 is mounted on guard 97 for pivoting movement about a pivot point defined by a pin 66 and also includes means urging such cam into engagement with triggering means for triggering the automatic high-level shut-off means 33 provided with nozzle 20 as will be explained later. In this example of the invention such urging means preferably comprises a spring 67 fastened around pin 66 and fixed with respect to guard 97.

Spring 67 rotates or pivots cam 64 about pin 66 and thereby tends to straighten steel strip 60 so that it extends between screw 63 and cam 64 essentially in a straight line. This arrangement is illustrated in FIGURE 3 and comprises the safety position.

Upon inserting conduit 32 within container means such as within filler pipe 56 of gasoline tank 55 for an automobile, steel strip 60 is urged into close proximity with the contour of conduit 32 illustrated in FIGURE 4. This action overrides the spring 67 and rotates cam 64 counterclockwise thereby allowing spring urged stem 36 to move cam 72 clockwise into inoperative position and allowing the shut-off means 33 to operate normally.

Upon removing dispensing nozzle 20 from within pipe 56, steel strip 60 is removed from engagement with pipe 56 and thus spring 67 is allowed to rotate the entire mechanical assembly so that it assumes the position of FIGURE 3 and a terminal end portion of cam 64 designated by the numeral 70 engages triggering means for triggering the shut-off means 33 independently of liquid level.

The triggering means of this example of the invention comprises cam means illustrated as another cam designated by the numeral 72 which is pivotally mounted on the lower end of the holding plunger 34 and is adapted to engage a portion of the automatic shut-off means 33 to accomplish the triggering action.

Cam 72 has a sloping camming surface designated by the numeral 73 which sloping surface engages rounded terminal end 74 of stem 36 in the automatic shut-off means 33, as shown in FIG. 3. Thus, upon holding nozzle 20 so that strip 60 is out of engagement with an associated container means cam surface 70 of cam 64 engages a terminal end portion 76 of cam 72 and thereby rotates cam 72 counterclockwise. The counterclockwise rotation of cam 72 causes projection 73 to move upwardly and thereby move stem 36 upwardly causing balls 35 to move toward each other causing plunger 34 to drop to the position illustrated in dotted lines at 45. This same action was accomplished by the automatic high-level shut-off means 33 by reducing the pressure acting against the top side of diaphragm 37 which also caused tapered portion 39 to move upwardly and plunger 34 to drop and stop flow through valve 22.

As cam 72 is rotated counterclockwise by cam 64 it is limited in its counterclockwise rotation by a shoulder portion 77 thereof engaging an associated shoulder 80 provided in housing 21.

Irrespective of whether stem 36 is actuated by the action of diaphragm 37 or by projection 73 of cam 72, the net effect is to cause balls 35 to roll toward each other and thereby drop plunger assembly 34 to dotted position 45 as previously explained. Thus the mechanical safety means of this exemplary embodiment of the invention employs the structure and operation of the automatic high-level

shut-off feature normally provided in a fuel dispensing nozzle of this type.

Another exemplary embodiment of mechanical safety means of this invention is illustrated in FIGURES 5–8 of the drawings used on a gasoline nozzle which is practically identical to the nozzle of FIGURE 1; therefore, the nozzle of this latter embodiment will also be designated by the numeral **20** followed by the letter designation A and component parts of nozzle **20A** which are identical to corresponding parts of nozzle **20** will be designated by the same numeral as in nozzle **20** also followed by the letter designation A and not described again in detail.

Only those component parts of nozzle **20A** which are different from corresponding parts in nozzle **20** will be designated by a new numeral also followed by the letter A and described in detail.

The improved mechanical safety means used in nozzle **20A** also preferably operates in conjunction with the automatic high level shut-off means provided in such nozzle to provide optimum safety yet without unnecessary duplication of component parts.

The mechanical safety means or linkage of this latter embodiment comprises an elongated rigid member **90A** which engages inside wall means of filler pipe **56** provided on container **55** thus allowing lever **27A** to be actuated and permitting valve assembly **22A**, identical to valve assembly **22** of nozzle **20**, to be opened for dispensing of gasoline through nozzle **20A**. In a practically identical manner as described in connection with nozzle **20**, once nozzle **20A** is removed from its gasoline dispensing position the safety means moves from the solid line position illustrated in FIGURE 5 of the drawings to the dotted line position and utilizes the mechanism of the automatic shut-off means provided in nozzle **20A** to stop flow through such nozzle.

Discharge conduit **32A** of nozzle **20A** is formed in an arcuate path and mechanical member **90A** is formed so that it has a contoured portion corresponding in length and configuration to the arcuate path of conduit **32A**. Member **90A** is supported for pivoting movement at its lower terminal end in a manner as will be described subsequently.

Member **90A** is a substantially U-shaped member, see FIGURE 6, which has a base portion designated by the numeral **91A** and a pair of substantially parallel legs each designated by the numeral **92A** extending from base portion **91A**. The U-shaped configuration of member **90A** enables such member to be formed to follow the contour of conduit **32A** yet to have sufficient strength and rigidity to enable member **90A** to be moved in a pivoting manner about its lower end and toward and away from conduit **32A** upon the application of an actuating force or an urging force against member **90A** at practically any position along its length. Although member **90A** may be made of any suitable rigid material, in this example of the invention such member is made of metal which can be formed into the arcuate configuration in a simple and economical manner yet has high structural strength and rigidity.

The terminal end portion **94A** of member **90A** is supported adjacent the main housing **21A** of nozzle **20A**. Upper portion or tip **94A** is defined essentially by only a short section of base portion **91A** of U-shaped member **90A**. Tip **94A** is preferably bent upwardly, as viewed in FIGURE 5, at a slight angle and has lower surface means such as a cam surface **95A** which is adapted to engage and trip cam **72A** in a similar manner as previously described in connection with cam **64** engaging and tripping cam **72** within nozzle **20**.

In this exemplary embodiment of the invention housing means such as a cover designated by the numeral **96A** is arranged around the upper end portion of U-shaped member **90A**. Cover **96A** is preferably formed as an integral part of a lower guard unit or member **97A**, see FIGURE 7, which in this exemplary embodiment of the invention defines the lower portion of housing **21A**. Guard **97A** has a pair of openings adjacent its opposite ends designated by the numerals **98A** and **99A** respectively which are used to fasten guard **97A** to the main portion of housing **21A** as will be subsequently described.

Integral cover portion **96A** of guard **97A** has an elongated slot designated by the numeral **100A** arranged in its outer forward surface which allows movement of the upper end portion of member **90A** toward and away from the head portion of nozzle **20A**. Such upper end portion of member **90A** is supported for movement within cover **96A** as will be presently described.

A pin **101A** is provided and rests or abuts against housing **21A** in any suitable manner and such pin has a smooth cylindrical outer surface which is adapted to support and enable sliding movement of the upper end portion of member **90A** immediately adjacent its terminal upstream tip **94A**. A cooperating circular opening **102A** is provided in the upper end portion of member **90A** and such opening corresponds in size to the outside diameter of pin **101A**.

Rigid member **90A** is thus supported along arcuate conduit **32A** so as to enable pivoting movement about its lower end while the upper end of member **90A** is arranged within cover **96A** with pin **101A** inserted through opening **102A** to enable limited sliding movement of such upper end along pin **101A** and toward and away from conduit **32A**.

A compression spring designated by the numeral **104A** is provided within cover **96A** and in surrounding relation around pin **101A**. Compression spring **104A** is adapted to engage inside surface means adjoining opening **102A** at the upper end portion of member **90A** and urge such upper end portion away from the main body of housing **21A** and hence away from conduit **32A**.

Thus, with member **90A** supported in its normal position along conduit **32A** spring **104A** urges the upper end portion of member **90A** outwardly away from arcuate conduit **32A**. This position is illustrated as a dotted line position in FIGURE 5 of the drawings and comprises a safety position.

Upon inserting conduit **32A** within filler pipe **56**, member **90A** is urged substantially in nested relation immediately adjacent conduit **32A** and shown as the solid line position of FIGURE 5 to thereby override spring **104A** and move cam surface **95A** away from the previously described triggering means or triggering cam **72A** which is used to trigger the automatic shut-off means **33A** provided within nozzle **20A**.

Upon removing conduit **32A** of nozzle **20A** from within pipe **56**, spring **104A** acts against the upper end portion of member **90A** and urges such upper end portion outwardly along slot **100A** so that cam surface **95A** engages cam **72A**, as shown by the dotted line position, to thereby rotate cam **72A** counterclockwise. The counterclockwise rotation of cam **72A** causes projection **73A** to move upwardly and thereby move stem **36A** upwardly causing balls **35A** to move toward each other and plunger **34** to drop to the position illustrated in dotted lines at **45A**. This, of course, is the safety position and it is physically impossible to cause fuel to flow through nozzle **20A** with plunger **34A** in position **45A** as previously explained in connection with nozzle **20**.

The terminal lower end portion or tip shown generally at **110A** of rigid member **90A** may be supported for pivoting movement in any desired manner. In this example of the invention tip **110A** is defined by only the base portion of U-shaped member **90A**.

A cooperating rectangular slot **111A** is provided adjacent the terminal discharge end of conduit **32A** and tip **110A** has a transverse section **112A** which extends toward conduit **32A** and through slot **111A** and a terminal end portion **113A** which extends along the lower inside surface of conduit **32A** in the direction of fluid flow. Rigid member **90A** thus is supported between slot **111A**

and pin 101A and pivots about the curved surface 114A provided in tip 110A.

Main housing 21A in this example of the invention has a pair of spaced apart openings therein designated by the numerals 116A and 117A and corresponding in size and spacing to openings 98A and 99A in guard portion 97A and such openings are used to enable fastening guard portion 97A in position as will be described subsequently.

The manner of installing member 90A in position on nozzle 20A is comparatively simple and the structural arrangement provided utilizes a minimum number of component parts. Pin 101A is installed on the main lower portion of housing 21A in any suitable manner as previously mentioned and spring 104A is placed in position.

Rigid member 90A in this exemplary embodiment of the invention is preferably preformed so as to provide the proper contours at both end portions as well as between such end portions. In addition, opening 102A is also preformed, as by drilling, in member 90A.

The terminal end portion 113A of member 90A is inserted through slot 111A in conduit 32A by holding member 90A substantially normal to such conduit then member 90A is moved so that transverse portion 112A extends through opening 111A. Guard portion 97A at this point is free of the main portion of housing 21A and with cam 72A in its lower position guard 97A is held so that its opening 100A slips over the upper end portion of member 90A and then member 90A is moved in position with its opening 102A around pin 101A while holding spring 104A compressed.

Guard 97A is then positioned so that its openings 98A and 99A are aligned in position with openings 116A and 117A respectively in housing 21A. Fastening means such as a pair of rivets each designated by the numeral 120A is provided and each rivet 120A extends through an associated pair of aligned openings. Rivets 120A hold guard 97A to main housing 21A and integral cover 96A thereof in surrounding relation around upper end portion of member 90A.

It will be appreciated that it is an important consideration to provide a mechanical safety device which is essentially foolproof and which can be added to existing dispensing nozzles. The simple construction of each exemplary mechanical safety device of this invention makes each device readily adaptable to practically any known automatic nozzle having high-level automatic shut-off means simply by providing an additional manually actuated mechanism which operates together with the high-level automatic shut-off assembly provided in such nozzle. Its simple construction also makes the safety device of this invention readily useable to actuate a flow control valve such as valve 22 directly.

The mechanical arrangement of metal strip or member 60 or member 90A and of its associated mechanical assembly is such that in each case each member operates independently of the size or configuration of any particular opening provided in a fuel container in which the associated nozzle is inserted. Nor is it important that the cross-sectional geometry of each member 60 or 90A be precisely controlled. It is sufficient, for example, to provide an arrangement wherein the actual weight of nozzle 20 or 20A itself is sufficient to move cam surface 70 or 95A respectively away from its associated triggering cam without relying upon any other compressive action or any other forces that might be acting upon the associated nozzle and tending to urge each member 60 or 90A toward its associated adjoining arcuate conduit.

Terms such as "top," "bottom," "lower," "upper," and the like, have been used in this disclosure for ease of description and to correspond to the positions of various components as illustrated in the drawings. It will be appreciated that such terms should not be considered as limiting the scope of this invention in any way.

Thus, it is seen that an improved safety means of simple and economical construction has been provided for a fluid dispensing head means which makes the operation of a dispensing head such as a dispensing head for gasoline or the like foolproof and capable of being used by inexperienced operators.

Further, this invention provides a foolproof safety device which can be incorporated simply and economically on existing fuel dispensing nozzles.

While the form of the invention now preferred has been disclosed as required by statute, other forms may be used, all coming within the scope of the claimed subject matter which follows.

What is claimed is:

1. Fluid dispensing head means for dispensing fluids into fluid container means comprising, valve means within said head means adapted to be opened to allow fluid flow through said fluid dispensing head means, and mechanical safety means adapted to engage said fluid container means, said safety means allowing said valve means to be opened during engagement of said safety means with said container means while shutting off said valve means upon disengaging said safety means from said container means and thus assure said fluid is only dispensed in said container means, fluid discharge conduit means fixed to one end of said head means and adapted to be submerged in fluid upon filling said container means and said head means having automatic shut-off means for automatically shutting off flow through said valve means as a portion of said conduit means is submerged in fluid, whereby said safety means shuts off said valve means by actuating said automatic shut-off means, said safety means comprising means operatively connected to said automatic shut-off means and extending along said discharge conduit means so as to enable easy engagement of said container means with said head means in fluid dispensing position, said discharge conduit means comprising a tubular conduit arranged generally in an arcuate path, said safety means further comprising flexible means having one end held adjacent said tubular conduit downstream of said head means and the opposite end operatively associating with triggering means supported within said head means for triggering said automatic shut-off means, said flexible means normally extending essentially in a straight chordal line manner between said triggering means and adjacent said arcuate tubular conduit thereby allowing said triggering means to trigger said automatic shut-off means upon placing said flexible means into engagement with said container means said triggering means comprising first cam means adapted to engage a portion of said automatic shut-off means and operated by said flexible means to accomplish triggering action.

2. Dispensing head means as set forth in claim 1 in which said triggering means comprises second cam means supported on said head means for pivoting movement and having means arranged to engage and operate said first cam means, said second cam means being operatively connected to said flexible means so that upon placing said flexible means into engagement with said container means said second cam means is rotated out of engagement with said first cam means allowing said normal operation of said shut-off means.

3. Dispensing head means as set forth in claim 2 in which said flexible means comprises non-stretchable means normally tending to remain straight and requiring force application so that said non-stretchable means will follow said arcuate path of said tubular conduit.

4. Dispensing head means as set forth in claim 2 in which said triggering means further comprises spring means normally urging said second cam means into engagement with said first cam means said spring means being overridden by said rigid member once said head means and conduit means are in dispensing position.

5. Dispensing head means as set forth in claim 4 in which said first cam means has a cam projection which engages said portion of said automatic shut-off means and is adapted to be pivoted through a limited arc.

6. Dispensing head means as set forth in claim 5 in which said container means has tubular opening means adapted to receive said tubular conduit therewithin, said flexible means being engaged by portions of said container means adjacent said opening means upon inserting said tubular conduit in dispensing relation within said opening means.

7. Fluid dispensing head means for dispensing fluids into fluid container means comprising, valve means within said head means adapted to be opened to allow fluid flow through said fluid dispensing head means, and mechanical safety means adapted to engage said fluid container means, said safety means allowing said valve means to be opened during engagement of said safety means with said container means while shutting off said valve means upon disengaging said safety means from said container means and thus assure said fluid is only dispensed in said container means, fluid discharge conduit means fixed to one end of said head means and adapted to be submerged in fluid upon filling said container means and said head means having automatic shut-off means for automatically shutting off flow through said valve means as a portion of said conduit means is submerged in fluid, whereby said safety means shuts off said valve means by actuating said automatic shut-off means, said discharge conduit means comprising a tubular conduit, said safety means comprises an elongated rigid member having one end held adjacent said tubular conduit downstream from said head means and its opposite end operatively associating with triggering means supported within said head means for triggering said automatic shut-off means, said rigid member being moved to override said triggering means upon engagement with said container means and thereby allow said automatic shut-off means to operate normally, said automatic shut-off means having an element movable relative to said dispensing head, said triggering means comprising cam means operatively connected with said element and said rigid member, said cam means being actuated by said opposite end of said rigid member to accomplish the triggering action.

8. Dispensing head means as set forth in claim 7 in which said rigid member is substantially U-shaped throughout its entire length for increased strength and rigidity and has a first and second section at its opposite terminal ends which is defined by only the base portion of said U-shaped member, said first section being inserted through cooperating opening means in the terminal discharge end of said conduit means and then extending outwardly therealong to hold said one end for pivoting movement and said second section having said second cam surface means provided therein.

9. Dispensing head means as set forth in claim 7 in which said triggering means comprises second cam surface means provided on the upstream end portion of said rigid member and adapted to engage and operate said first cam means.

10. Dispensing head means as set forth in claim 9 in which said triggering means further comprises compression spring means normally urging said second cam surface means into engagement with said first cam means, said compression spring means being overridden by said rigid member once said head means and conduit means are in dispensing position.

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141—209