

April 12, 1938.

W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 1

FIG. 1.

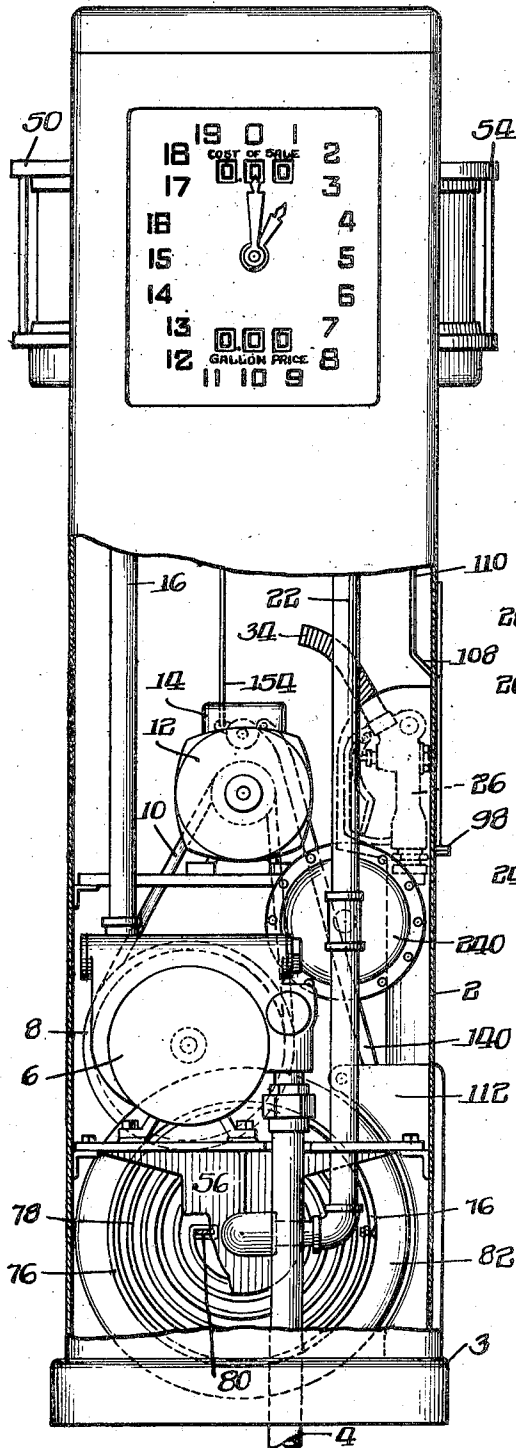
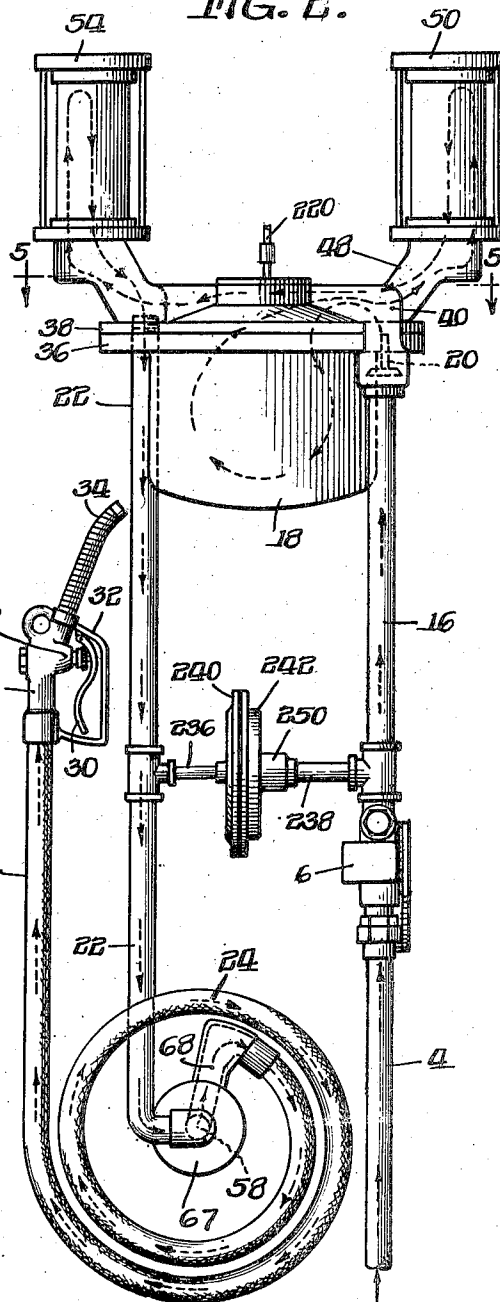


FIG. 2.



Inventor:
William M. Carroll
By: Cox & Moore attys.

April 12, 1938.

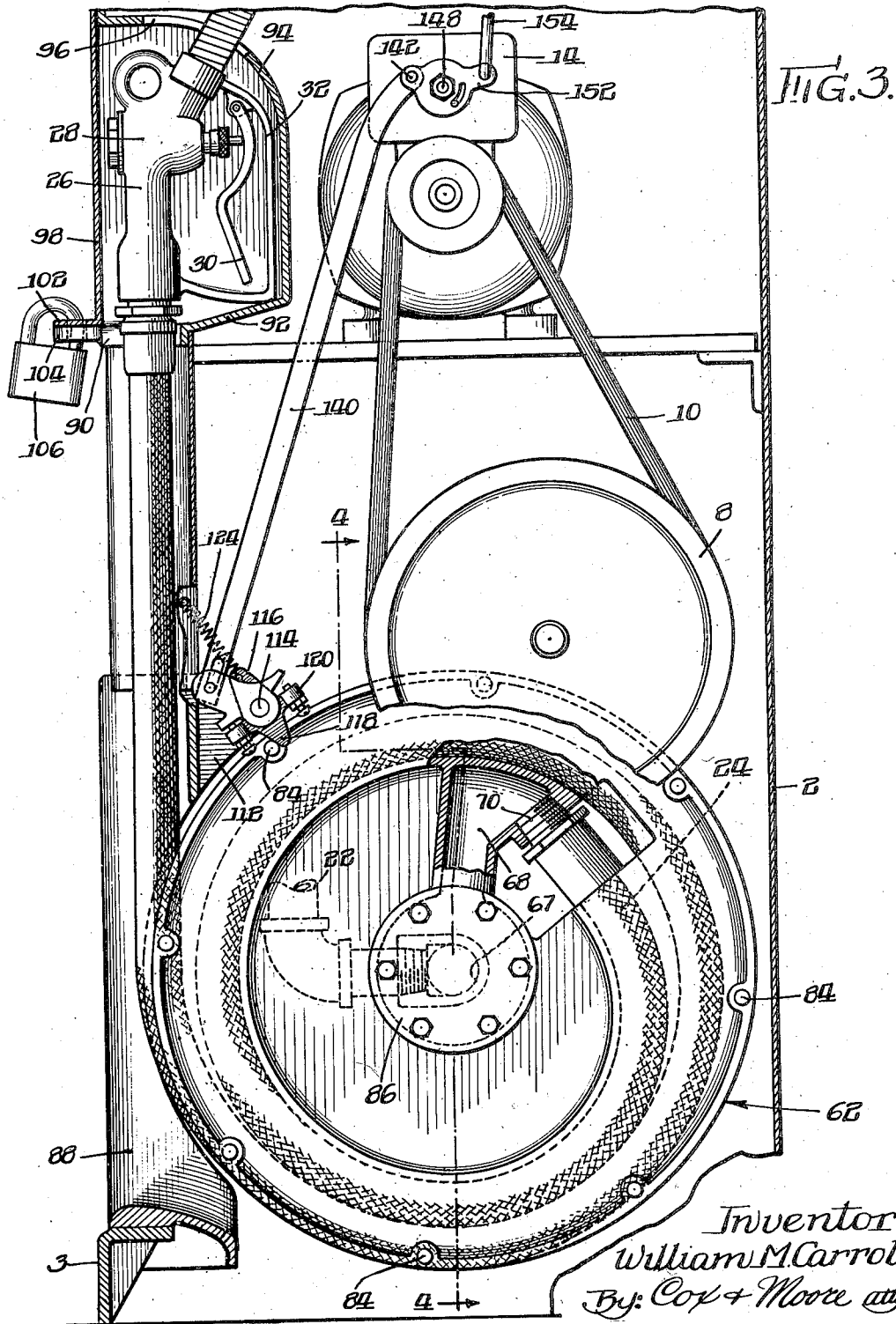
W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 2



April 12, 1938.

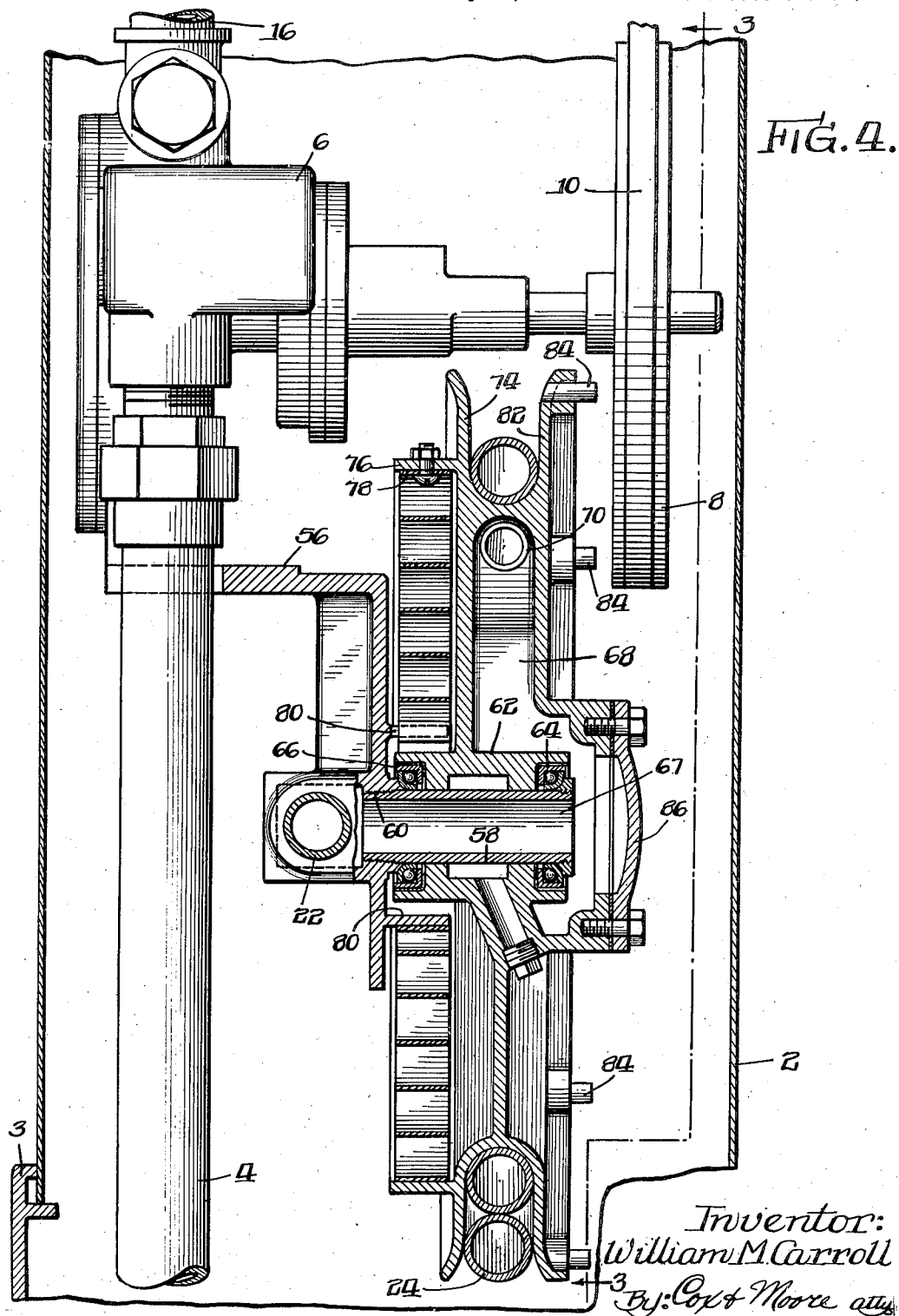
W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 3



April 12, 1938.

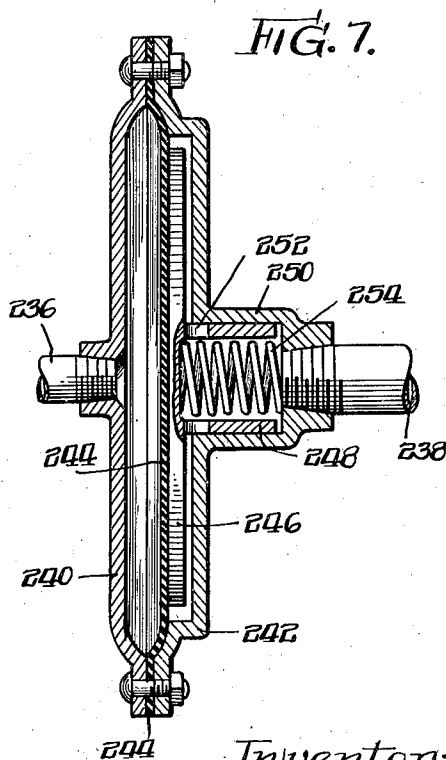
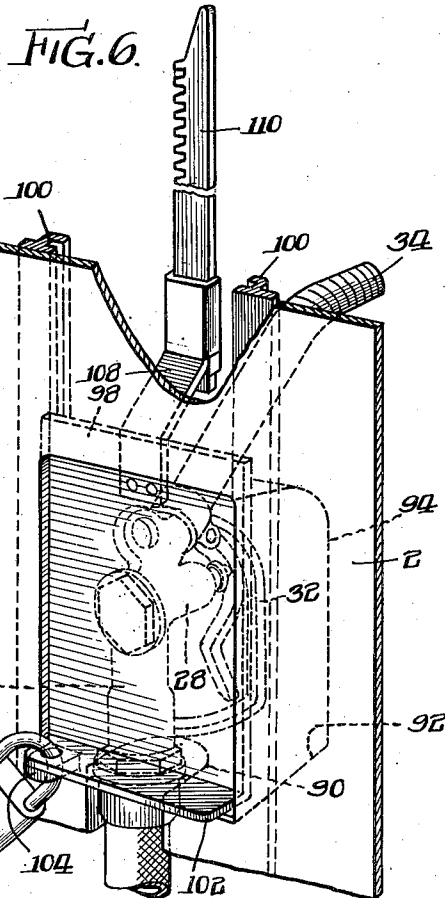
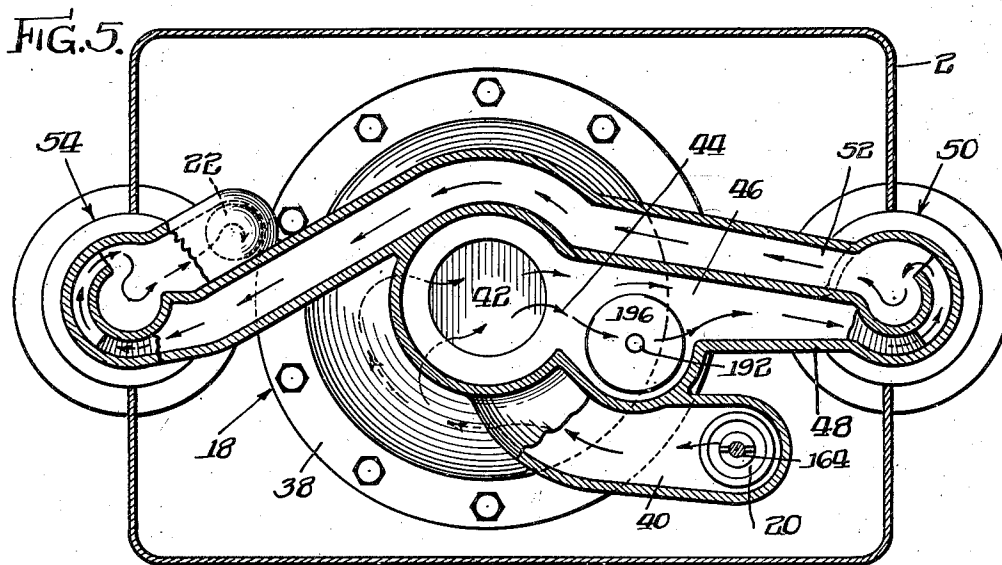
W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 4



204 Inventor:
William M. Carroll
By: Cox & Moore attys

April 12, 1938.

W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 5

FIG. 8.

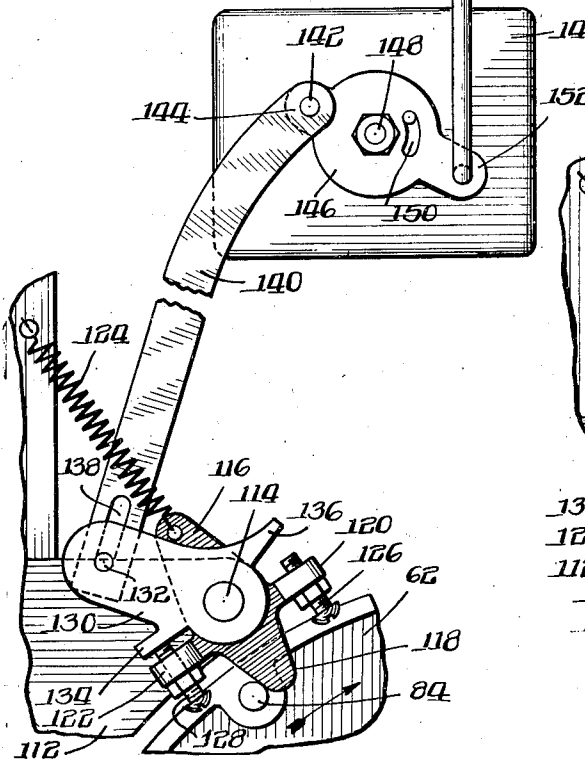
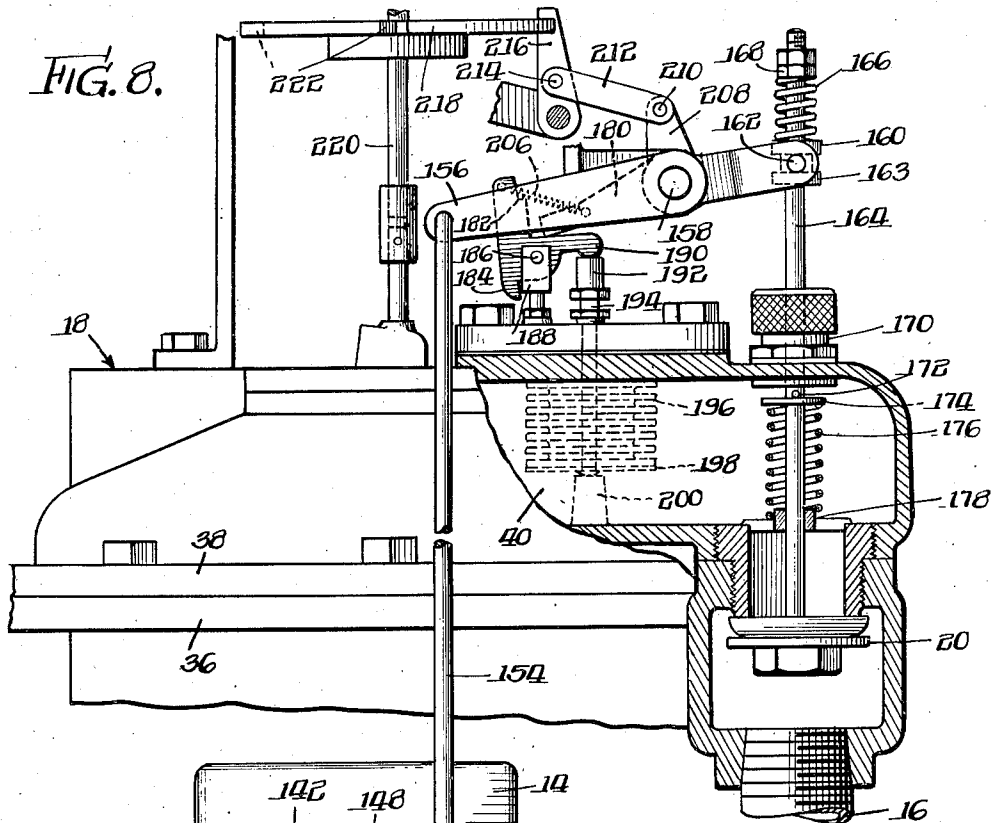
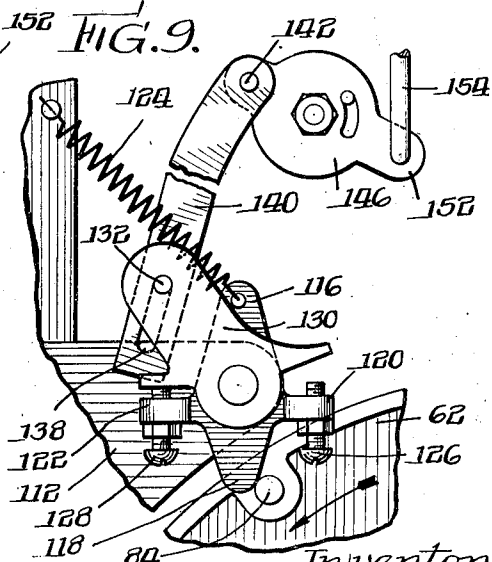


FIG. 9.



Inventor
William M. Carroll
By: Cox & Moore attys

April 12, 1938.

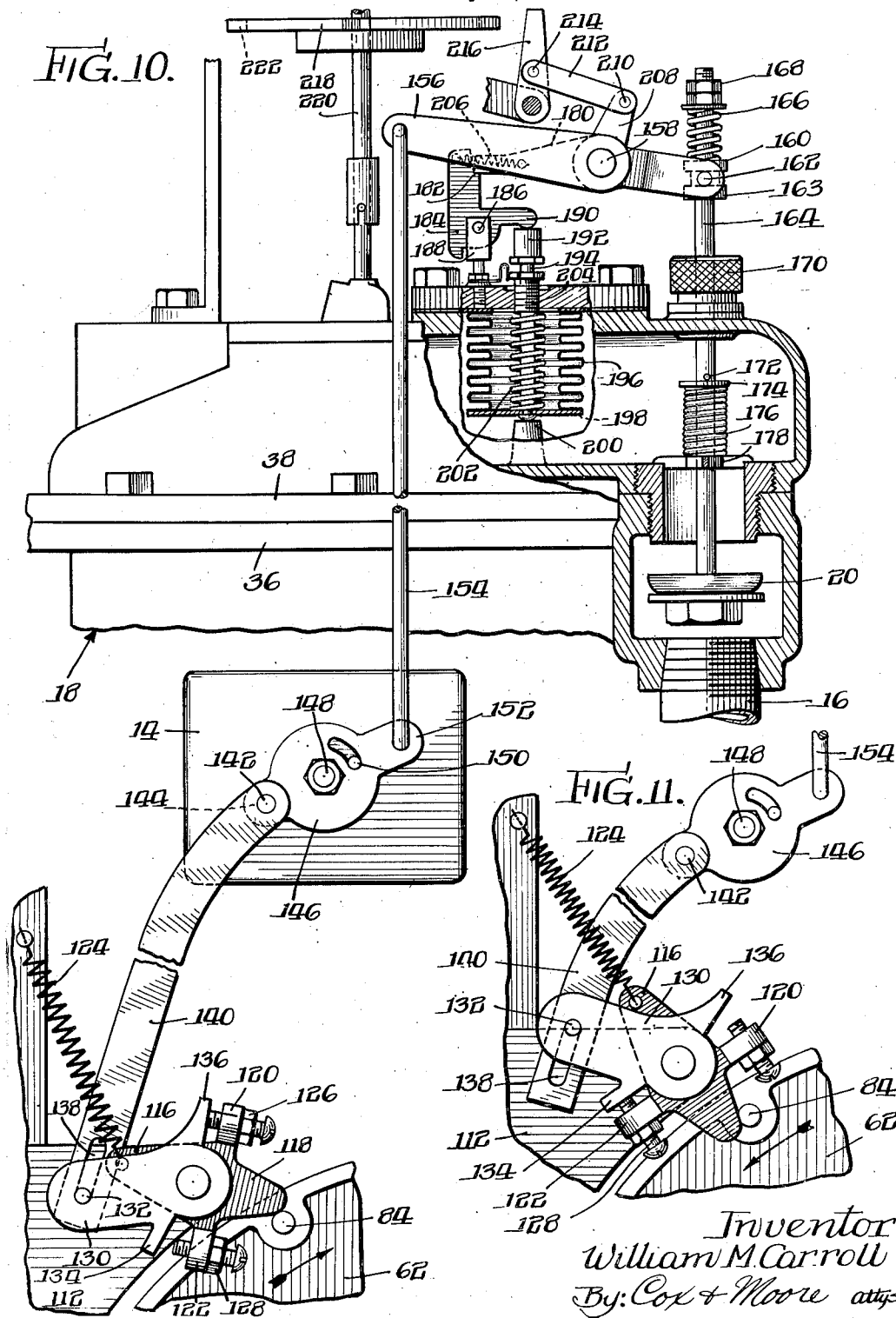
W. M. CARROLL

2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 6



April 12, 1938.

W. M. CARROLL

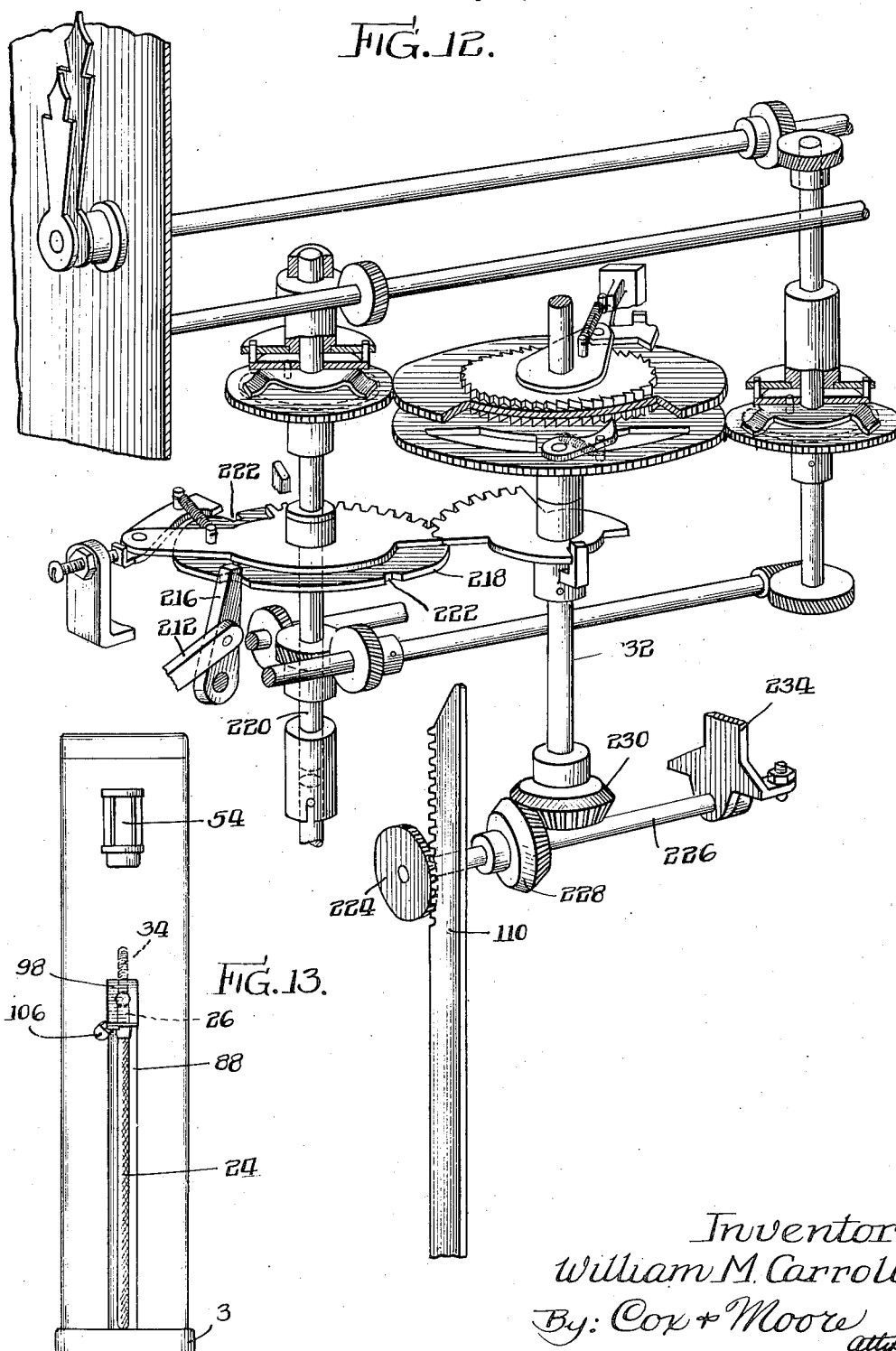
2,113,676

LIQUID DISPENSING APPARATUS

Filed May 20, 1935

7 Sheets-Sheet 7

FIG. 12.



Inventor:
William M. Carroll
By: Cox + Moore attys

UNITED STATES PATENT OFFICE

2,113,676

LIQUID DISPENSING APPARATUS

William M. Carroll, Fort Wayne, Ind., assignor to
S. F. Bowser & Company, Inc., Fort Wayne,
Ind., a corporation of Indiana

Application May 20, 1935, Serial No. 22,287

29 Claims. (Cl. 221—95)

My invention relates to liquid dispensing devices and more particularly to devices for dispensing gasoline and similar liquids.

Among the objects of my invention are to provide a liquid dispensing device which includes a dispensing flow line terminating in a flexible hose provided with a dispensing nozzle, wherein the hose is normally wound on a reel or other support and positioned within the housing in such a manner that when dispensing is terminated the length of flexible hose, together with the nozzle, will be automatically moved wholly within the housing, the arrangement being such that when dispensing is desirable, the hose may be pulled or otherwise projected from the housing; to provide a liquid dispensing device comprising a cabinet or stand within which is reeled a flexible dispensing hose terminating in a dispensing nozzle, which hose is adapted to be pulled from the housing for dispensing gasoline at a distance from the cabinet, and which hose after dispensing may be automatically or otherwise reeled back into the housing in position and condition for a subsequent dispensing operation; yet another object of my invention resides in providing a dispensing device of the foregoing character, wherein the movement of the reel and/or the movement of the hose out of the housing operates to control the flow control means and operates specifically to control the liquid forcing means such as electrically driven pump or the equivalent thereof, and/or operates to control a control valve in the liquid flow line; to provide a liquid dispensing pump having a clock mechanism of any desired type which is adapted to be re-set to initial or zero position and wherein the flow line terminates in a flexible hose adapted to wind upon and unwind from a reel located within the housing, and wherein an interlocking means is provided to function in connection with a resetting mechanism upon the positioning of the hose and nozzle in the housing whereby it will be necessary to re-set the clock mechanism in order to accomplish a subsequent dispensing operation; to provide a liquid dispensing device comprising a housing or cabinet enclosing a reel or shiftable support upon which a flexible hose forming the terminal of the liquid flow line is adapted to be wound or positioned; and wherein means is provided for permitting the hose to be manually unwound and pulled out of the cabinet for a dispensing operation and when so pulled out to be automatically held in uncoiled dispensing position and wherein means is provided for automatically releasing the holding means and/or

particularly from the remote end of the hose whereby to provide a remote control or releasing means from the nozzle end of the hose which will permit the hose to automatically rewind and disappear, or be positioned within the cabinet after the termination of the dispensing operation; to provide a rewinding or repositioning mechanism of the foregoing character for the hose reel or for the hose thereon, wherein the mechanism for permitting the automatic repositioning or rewinding of the hose within the reel is accomplished by operation of means disposed preferably at the nozzle end of the hose, and particularly and preferably by means of the usual nozzle valve for the hose and in such a manner to create a water hammer effect whereby the inertia of the moving column of liquid will automatically operate means in the liquid flow line to operate the repositioning mechanism; to provide a liquid dispensing device including a housing enclosing a flexible hose forming the terminal of the liquid flow line, which flexible hose is provided with a nozzle and wherein the housing is provided with an opening forming a support for the nozzle when not in use, and wherein a shiftable door is provided for said opening which may be locked and closed when the nozzle and hose are positioned wholly within the cabinet, whereby to provide access to the nozzle or hose; to provide a liquid dispensing device having a cabinet adapted to house a reel or other shiftable support upon which a flexible hose is coiled or positioned and in such a manner that the nozzle of the hose and any desired length of hose may be pulled from the housing or repositioned within the housing and wherein the housing is provided with an opening preferably formed of a pocket, stationary support or opening provided with an adjacent, contiguous or associated support constructed and arranged so that when the hose is positioned or wound wholly on the reel or support within the housing a nozzle may likewise be placed on its support wholly within the housing, and wherein the housing and support are provided with an associated shiftable door or closure which when closed will prevent access to the nozzle or hose; to provide associated means in connection with the foregoing construction wherein the movement of the door or closure to opened or closed position, or semi-opened or semi-closed position, operates to control the on or off position of the pump or the liquid forcing means, and/or the opened or closed position of a liquid flow valve, and/or controls the operation of the re-set mechanism of the clock of the dispensing device; to provide a liquid dis-

pensing device having a cabinet enclosing a hose
 reel or other shiftable support on which the
 hose may be wound or positioned, and wherein the
 movement of the reel itself is actuated by means
 5 of a spring or spring motor, or by means of a
 prime mover or alternative such as the pump
 motor, for positioning the hose out of or into the
 housing; to provide a liquid dispensing device in-
 cluding a cabinet or closure adapted to house a
 10 reel or other hose support upon which the hose
 may wind and unwind, and wherein means, pref-
 erably spring means, is operable normally to
 position the hose in coiled form on the reel with-
 in the housing, and whereby the hose may be
 15 pulled manually in an uncoiling operation from
 the housing and preferably held in such posi-
 tion against the tension of the spring means by
 suitable latching mechanism, and wherein addi-
 tional means is provided for releasing the spring
 20 means at the desired time for automatically re-
 storing the hose to housed position within the
 cabinet; to provide a device of the foregoing char-
 acter wherein the reel itself is provided with oper-
 ating mechanism preferably at spaced apart in-
 25 tervals about the periphery of the reel adapted to
 co-operate with shiftable actuating mechanism for
 the purpose of starting and/or stopping the
 pump and/or opening or closing a dispensing
 control valve; to provide a device of the foregoing
 30 construction, wherein a collapsible and/or ex-
 pansible device such as a syphon bellows or the
 like is related to the liquid flow line, and par-
 ticularly at the discharge side of the meter, and
 is provided with connections and operating mech-
 35 anism so that upon closure of the nozzle valve
 it will serve to operate the collapsible member and
 its connections whereby to cause the closure of
 the control valve and/or the stopping of the
 motor and/or the operation, particularly the hose
 40 coiling operation of the reel; and preferably in a
 predetermined sequence whereby the liquid forc-
 ing means such as the pump will be stopped sub-
 sequently to the closure of the valve whereby the
 movement or pressure created by the pump or
 45 liquid forcing means will serve to assist in the
 closing of the valve; to provide a liquid dispensing
 device wherein the flexible hose of the liquid flow
 line is adapted to coil upon and uncoil from a
 winding reel or other shiftable hose support and
 50 wherein means is provided to absorb or take up
 the additional pressure created in the flexible
 hose due to the winding operation; to provide
 means associated with and connected to the liquid
 flow line providing an expansible chamber con-
 55 structed and arranged so that when the flexible
 hose is wound up onto the reel the liquid in
 the coiled flexible hose can flow into the ex-
 pansion chamber whereby to eliminate excess
 pressure due to the coiling operation; to provide a
 60 device of the foregoing character wherein the ex-
 pansion chamber is disposed in the liquid flow
 line in such a manner as to not only take up the
 excess pressure in the liquid flow line due to the
 coiling operation, but wherein the expansion
 65 chamber will serve to maintain the sight glass
 full or substantially full to the normal liquid
 level; to provide a liquid dispensing device where-
 in the flow line is provided with a meter and two
 70 visi-gauges or sight gauges in the liquid flow
 line between the meter discharge and the dispensing
 nozzle and wherein the construction arrangement
 is such that the liquid will, in discharging from
 the meter, flow in substantially circumferential
 75 fashion about the inner wall of one visi-gauge and
 will then pass centrally through a bottom outlet

of said visi-gauge whereby to draw all air there-
 from and will thence pass into the second visi-
 gauge in a similar manner and thence out through
 the terminal of the liquid flow line; to provide a
 reel mechanism for a pump of the foregoing char-
 5 acter having a series of operating members
 spaced about its periphery together with as-
 sociated mechanism adapted to be shifted by cer-
 tain of said spaced operating mechanism wherein
 when the hose is pulled out one of said operat-
 10 ing mechanisms operates the associated mecha-
 nism; to provide these and other objects of in-
 vention as will appear from a perusal of the fol-
 lowing specification when taken in consideration
 with the following drawings, wherein

Fig. 1 is a front view partly in section of one
 type of a liquid dispensing pump showing the use
 of the preferred form of my invention.

Fig. 2 is a somewhat diagrammatic view of a
 portion of the liquid flow line of the pump;

Fig. 3 is a sectional view taken on line 3-3
 of Fig. 4 showing the hose reel and the nozzle
 pocket, and the mechanism for operating the
 motor switch;

Fig. 4 is a sectional view taken on line 4-4
 of Fig. 3 showing a portion of the hose reel con-
 25 struction;

Fig. 5 is a plan section on line 5-5 of Fig. 2;

Fig. 6 is a perspective view of the hose reel,
 pocket with the movable door and rack connec-
 30 tion;

Fig. 7 is the sectional view of the pressure re-
 lease diaphragm;

Fig. 8 is a view of operating the motor switch
 and the meter valve;

Fig. 9 illustrates a changed position of the parts
 shown in Fig. 8;

Fig. 10 shows the changed position of the parts
 shown in Fig. 8;

Fig. 11 also illustrates a view of still another
 40 changed position of the parts shown in Fig. 8;

Fig. 12 is a view showing a connection between
 the door operated rack and one form of a clock
 mechanism including re-set mechanism therefor,
 and

Fig. 13 is a side elevation of the preferred
 form of liquid dispensing pump.

Referring now to the drawings in particular,
 in preferred form my invention comprises any
 construction or design of housing, cabinet or
 50 standard 2 adapted to house certain portions of the
 dispensing system. Specifically, the housing is
 adapted to enclose part of a liquid flow line in-
 cluding the pipe 4 connecting to a liquid con-
 taining reservoir which in the well known prac-
 55 tice is generally disposed underground. A liquid
 forcing means is arranged to force the liquid
 through the pipe 4. In the present instance the
 liquid forcing means comprising a pump 6 of de-
 sired construction having the usual by-pass for
 by-passing the liquid after the pump starts oper-
 ating and while a dispensing valve in the flow line
 is yet closed. The pump 6 in the present in-
 stance carries a pulley 8 adapted to be driven
 65 by a belt 10 from an electric motor 12. The
 pump and electric motor are shown mounted on
 suitable brackets supported from the housing.
 Switch mechanism for the electric motor is shown
 as mounted within the switch box 14. The dis-
 charge side of the pump in the liquid flow line is
 70 connected by means of a pipe 16 to the inlet side of
 a meter 18. This meter in its general construc-
 tion and operation is preferably of the well known
 liquid displacement type, including a series of
 cylinders and pistons and interconnecting valve

mechanism. I prefer to use a meter such as now manufactured and sold by the S. F. Bowser & Company, Inc., such construction being shown in a number of the patents and pending applications filed by Blum. It is understood, however, that various other types of meters may be utilized. In the embodiment illustrated the inlet to the meter is controlled by a valve 20 which is adapted to control the flow through the liquid flow line. When this valve is open liquid will flow from the pipe 16 through the liquid displacement cylinders of the meter and will thence flow through certain visi-gauge mechanism, hereinafter described, from which visi-gauge mechanism the liquid will thence flow through a discharge pipe 22, as illustrated in Fig. 2 of the drawings, which pipe 22 is connected to a flexible hose 24. In the present instance the flexible hose terminates in a nozzle 26 which is preferably provided with a liquid flow control valve 28 and a valve actuating handle or lever 30. The nozzle is provided with a guard 32 and a spout 34, as is well known in the art.

In order to provide a visi-gauge on each side or on opposite sides of the housing 2, I have provided the arrangement shown more clearly in Figs. 1, 2 and 5, wherein the meter is slightly modified by providing the upper flange of the meter casting 36 and the cap or top 38 with internal passages arranged as shown particularly in Fig. 5. In such construction a liquid flowing past the valve 20 will flow along an internal conduit 40, formed preferably integrally with the top cap 38 from which point the liquid will flow into the liquid displacement cylinders of the meter proper, where acting under the control of the valve mechanism the liquid will then be discharged centrally of the meter through the discharge port 42 from whence the liquid will flow, as shown by the arrows 44 through a conduit 46. An extension 48 of which extends upwardly and has removably connected thereto in any desired manner a first visi-gauge 50. Arrangement of the visi-gauge is preferably of the construction such that the liquid in entering will pass upwardly and circumferentially of the inner wall of the visi-gauge whence, by means of a swirling movement it will create a whirl-pool effect within the visi-gauge, the liquid discharging centrally and downwardly of this visi-gauge through another conduit 52 formed in the meter top 38. By reference to Fig. 5 it will be seen by the arrows that the liquid will thence pass across the top of the meter closure 38 to the inlet side of the opposite visi-gauge 54, whence it will flow circumferentially as in the manner herein described in connection with visi-gauge 50, and will then discharge centrally in a whirl-pool effect through the outlet pipe 22. The details of construction of these visi-gauges may follow the disclosure in the patent granted to Carl E. Carlson No. 1,984,630 of December 18, 1934.

It will thus be seen that I have provided a meter wherein the top plate or cap and the co-operating under flange are formed internally with passages and are provided with integral extensions forming connections with said internal passages, which extensions are adapted detachably to receive visi-gauges and wherein the conduits are arranged so that the liquid in discharging from the meter will pass circumferentially through said visi-gauges, and wherein means is provided for automatically withdrawing air from said visi-gauges by means of the liquid flow therethrough, which withdrawal action prevents

the accumulation of air in the top of the visi-gauges. It is to be understood, however, that the visi-gauges per se may be of any desired construction.

In connection with one feature of my invention, I arrange the housing whereby the flexible hose terminal portion of the liquid flow line and the nozzle thereof may be housed completely within the housing for night storage, or alternatively may be withdrawn from the housing to any usual length whereby to dispense liquid at various distances from the housing. In this connection means is provided within the housing for positioning or coiling the hose upon a reel or other support in such a manner that it will be in ready position to be projected or withdrawn from the housing and in such a manner that it may be quickly repositioned within the housing. In this connection I provide means with an aperture in the housing for supporting the nozzle when not in use and in such a manner that any control for the liquid flow through the liquid flow line is inaccessible when the housing is closed for non-dispensing use, and particularly at night time. In this connection I provide the flexible hose supporting mechanism within the housing with an associated control means so that if desired an automatic control is provided which will automatically put in operation a flow compelling means such as an electric motor or the equivalent, and/or will also control a flow-controlling valve of any desired character, including the use of a nozzle valve as a flow-controlling valve.

From a broad standpoint, the means for supporting a hose in ready position within the cabinet may take any desired form and is not necessarily limited to a coiled construction nor a rotary construction. Specifically, I prefer to use a hose reel and mount the same for turning movement. The turnable reel is adapted to have the flexible terminal portion of the liquid flow line coil therearound with the nozzle in such a manner that the free end carrying the nozzle may be pulled from and through an opening in the cabinet, thereby uncoiling a desired length of hose when dispensing is to take place and contrariwise, when the dispensing is finished, the hose length will coil preferably automatically upon the reel in such a manner as to reposition the complete length of hose and the nozzle within the housing. I prefer to provide the housing at the opening with a suitable nozzle support, the arrangement being such that a closure is provided for the cabinet adjacent or associated with this nozzle support so that when the coil of hose is wound up on the reel and the nozzle placed freely upon its support the closure may then be operated to closed position.

Referring now to the drawings in detail, it will be seen that the housing 2 is provided with an internal bracket 56, preferably supported from the pump stand or independently mounted from the side of the housing, if desired, which bracket 56 carries a stationary hub 58 formed as a portion of a conduit which connects with the pipe 22 in the flow line. The connection is afforded by means of threads 60, as shown in Fig. 4. This central conduit 58 affords a rotatable bearing for a rotatable reel 62, which is mounted on the ball bearing 64—66, so as to be freely revolvable on the hollow hub 58. Reel 62 is provided with an internal passageway 67 communicating with hollow hub 58. This passageway is provided with a lateral branch 68 having a nipple or connector 70 to which is connected the inner end of

the flexible hose 24. The periphery of the reel 62 is formed with a substantially U-shaped groove 74 to receive one or more coils of the flexible hose 24. In addition one of the side walls of the reel is provided with a flange 76 to which is connected one end of a coil spring 78, the inner end of the coil spring 78 being fastened to a flange 80 on the stationary bracket 56. A side wall 82 of the reel is provided peripherally with a series of outstanding pins 84. The central portion of the reel 62 opposite the open end of the hollow hub sleeve 58 is closed in a liquid tight fashion by means of a hub cap 86. Immediately opposite the reel, and extending substantially from the base of the reel, the cabinet is provided on one side with a longitudinal slot or vertical opening 88. This opening extends upwardly to a point substantially half way of the height of the cabinet, as shown particularly in Fig. 1 of the drawings. At a distance substantially equal to the height of the nozzle from the top of the slot, the walls thereof are provided with a bifurcated platform 90, the walls of which preferably are inclined downwardly. These downwardly inclined walls are continued inwardly as at 92 and thence upwardly as at 94 to form a pocket or nozzle housing. The upper portion of the pocket, as at 96, is provided with an opening through which the spout of the nozzle may be inserted. It will be noted that the wall 92 of the pocket is inclined downwardly so that when the guard is positioned thereon, as shown in Fig. 7, the guard portion of the nozzle will tend to slide downwardly and the nozzle pull out of the pocket unless held therein. In the position shown in Fig. 3 the nozzle is shown as resting between the furcations of the horizontal support. In order to hold the nozzle in position, the cabinet is provided with a door or closure, preferably in the form of a sliding door 98, which is adapted to slide on vertical guardways 100, formed in the cabinet. The bottom of the sliding door is provided with a forwardly projecting ledge 102 having an opening through which the same may be padlocked to a stationary lug 104 formed on the cabinet so that a padlock 106 may be passed through the registered openings to lock the door in position. In addition, the door is provided with upward extension 108, the upward portion of which provides a rack 110 which is adapted to connect with a reset mechanism hereinafter shown and described in Fig. 12. It will be understood that instead of having the slot 88 extend entirely to the base 3 of the housing, it may stop at a point spaced from the underside of the ledge 90 to provide a sufficient opening for the hose to pass through the casing at such elevated point. In this event an additional loose pulley can be used to guide the unwinding action of the hose. In this event the extra pulley would be placed in such a manner as to provide a smooth pulling out operation for the hose. In this manner the entire bottom portion of the cabinet would be imperforate and only a small opening immediately under the present pocket 94 would remain in the cabinet.

In addition it is within the contemplation of my invention to provide a cabinet wherein the hose reel is placed at the uppermost portion of the cabinet, either above or below the clock dial so that the hose when unwound will be pulled downwardly toward the ground from an overlying position.

The means for controlling the operation of the liquid forcing means, i. e., the pump, and a

control valve in the liquid flow line, comprises mechanism adapted to be associated with the operating members or pins 84 on the side of the reel. By reference particularly to Figs. 3, 8, and 9, it will be seen that on a bracket 112 carried by the housing is mounted as by means of the pivot pin 114, a pivotal lever having an arm 116 and an obviously extending arm 118 and a laterally extending arm 120 and a second laterally extending arm 122. Arm 116 is connected to a spring 124 attached to the stationary part of the bracket 112 so as normally to pull the arm 116 toward the bracket. The opposite lever 118 is provided with a somewhat rounded nose to operatively contact any one of the pins 84. Each one of the arms 120—122 is provided with an adjustable stop 126 and 128, the adjustment being made by screwing the stop longitudinally and retaining the adjustment by means of a suitable lock nut. Likewise, pivoted to swing about the pivot pin 114 is a second lever 130, this lever has a pin 132 projecting laterally therefrom and has a first arm 134 projecting from the left side looking at the lever as from Fig. 8, and a second arm 136 projecting from the right side thereof in the same view. These two arms, while extending in opposite directions, are disposed angularly one from the other. It will be noted that the arm 136 is inclined upwardly from a line passing through the bottom edge of the arm 134.

A pin 132 is adapted to operate in a slot 138 formed in a link 140, the opposite end of which is pivotally connected as by means of pin 142 with an ear 144 on a switch operating member 146 which is pivoted about a pivot 148 on the switch box 14. A slot and pin arrangement 150 limits the movement of the switch member 146. The opposite side of the member 146 is provided with arm 152, which connects to a rod 154, which in turn connects with a lever 156. This lever is pivoted to a shaft 158 mounted on a suitable standard or bracket carried by the frame. The opposite end of the lever 156 is bifurcated. Each of the bifurcations is provided with an inwardly extending pin 162, the extreme free ends of which are spaced apart and ride between spaced annular collars 160 and 163 formed on the valve rod 164. A spring 166 is held between the upper grooved collar and adjustable nuts 168 on the outer end of the valve rod. The lower portion of the valve rod 164 passes through a stuffing box 170 formed on the upper portion of the casing. The lower portion of the valve rod is provided with an outwardly extending pin 172 for limiting the movement of the washer 174 therealong. A spring 176 is coiled between this washer and a stationary abutment 178. On the lower end of the valve stem 164 is mounted the liquid control valve 20. The function of the spring 176 is to normally close the valve against its seat. It will be noted that the flow of liquid passing through the valve opening tends to close the valve. The connections between the lever 156 and the valve are disclosed and claimed in my prior application Serial No. 4,674, filed February 2, 1935.

In addition to pivoting the lever 156 about the shaft 158, the shaft 158 also rigidly carries with it a latch 180, which is adapted to co-operate with a shoulder 182, on a second or co-operative latch 184, pivoted as at 186 on a bracket 188. This second latch is an arm 190 overlying the head 192 of a plunger 194 of a collapsible bellows or syphon 196, preferably constructed in the

manner shown in my prior application Serial No. 4,675, filed February 2, 1935. The plunger 194 is affixed to the disc 198 forming the bottom wall bellows, the bottom of the plunger normally resting upon a stationary stop 200. A spring 202 is held between the base 198 and a threaded plug 204 which is adjustable to change the conditions of collapsibility and expansibility of this bellows sylphon cylinder and piston or equivalent device. This sylphon or collapsible device is disposed in the liquid flow line on the discharge side thereof as clearly shown in Fig. 5. This position of the bellows on the discharge side of the meter permits the bellows to act immediately upon a quick closure of the nozzle valve, the operation being such that when the nozzle valve is momentarily or quickly closed a water hammer action will be set up in that portion of the flow line of the flexible hose which will be the cause of an operation of the bellows and hence an operation of the plunger 194, which will raise the arm 190 of the latch 184 to shift the latch 184 to position shown in Fig. 8, whereby releasing the shoulder 182 from the latch 180 to permit the spring 176 of the control valve 20 to urge the valve to closed position. It will be understood that in the absence of the operation of this sylphon, the latch 180 will rest upon the shoulder 182 of the latch 184 being held in such latched position by a small spring 206. The operation of this latching mechanism is likewise shown and claimed in my prior application Serial No. 4,675, and is not specifically claimed in here except in combination with the new features of my present invention. In addition, the shaft 158 carries an arm 208 pivotally connected as at 210 to a link 212. The opposite end of this link 212 is pivoted as at 214 to an index finger or control member 216. This control member is adapted normally to ride on the periphery of a control disc 218, which control disc is mounted for rotation on a meter extension shaft 220. The control disc is provided with associated control devices preferably in the form of spaced apart slots 222 into which the index finger 216 may be moved when the slot registers with such finger. In normal operation, when the meter is rotating as when liquid is flowing through the flow line and out of the nozzle valve, the pump will be on or operating, the control valve 20 will be open, and the index finger will be in the position shown in Fig. 10, that is, spaced away from the rotatable control disc 218. When the nozzle valve is momentarily closed the water hammer effect hereinbefore described will operate the sylphon 196 to release the latch mechanism hereinbefore described, so that the shaft 158 will be moved counter-clockwise by the closure of the control valve 20, both under the force of its spring 176 and the flow of liquid since the pump has not yet been shifted to off position. This slight inward movement of the valve will move the index finger into contact with the smooth periphery of the slotted disc so that the valve will come to a semi-closed position. This action conditions the dispensing mechanism to be stopped exactly at a predetermined position when the next slot in the rotating control disc 218 is registered with the index finger. When this happens the spring 176 will urge the index finger to move quickly into the slot whereby the valve 20 will then completely close, and the flow of fluid through the flow line will stop. This of course stops the meter and stops a further rotation of the slotted disc 218. This condition is shown in Fig. 8 of the drawings. Through the connection 156 and the rod 154 the

motor switch is then brought to an off position, the mechanism being such that the motor will stop after the valve 20 has been closed. All of the foregoing is disclosed and claimed in my prior application Serial No. 4,675 aforesaid.

My present invention includes in combination with the just described mechanism, means whereby when the hose is pulled out the first pin 84 to contact the rocking arm 118, see Fig. 8, as the reel moves in a clockwise direction will rock said arm in a counter-clockwise direction so that the pin can ride past the arm 118. This shifting movement will throw the arm 118 to the position shown in Fig. 10, which permits the pin to ride therepast. The arm 118 being moved counter-clockwise the adjustable stop 126 will contact the foot or arm 136 to shift the lever 130 in a counter-clockwise direction so that the pin 132 will pull the lever 140 downwardly to shift the rod 154 upwardly, whereby to open the valve 120. Substantially immediately after the valve 120 is opened, the switch which is connected to lever 146 by means of a suitable adjustable delay or lost motion mechanism is moved to on position, whereby to start the pump. The benefit derived from having the pump start after the valve is open is so that the valve will not have to open against the pressure of gasoline in the flow line and, obviously, the timing between the movement of the valve and the movement of the switch may be adjusted by varying the amount of lost motion allowed between lever 146 and the switch. These mechanisms may be timed to operate simultaneously, if desired. In this position it will be noted that the latch 180 is cocked in position on the shoulder 182 of the co-operative latch 184 so that the valve is held in open position and the switch is held in on position.

In the position shown in Fig. 10 the operator continues to pull upon the length of hose and the reel continues to revolve clockwise, the pins 84 will continue to slip by the arm 118 since the lever arm 118 has now returned idly to its position shown in Fig. 11. This is due to the spring 124. When the pins 84 continue to freely click by the arm 118 no action will take place upon the arm 140 since the pin will merely reciprocate in the slot 138 of the arm 140. When the desired length of hose has been pulled out of the cabinet the reel will then tend to move in a counter-clockwise direction, as shown in Fig. 11. When this happens the first pin in the counter-clockwise movement will strike the arm 118 and tend to move it in a clockwise direction, but since the stop 128 is in contact with the arm 134 and since the pin 132 is at the extreme upper end of the slot 138, and since the arm 140 and the rod 154 are held immovably by the latch mechanism 184 the reel or drum will be held in this position, which means that the lengths of hose will be held and the operator can dispense without the necessity of maintaining a pull on the hose.

If the operator be filling a tank, he watches the liquid level as it rises and as soon as it gets within, say, an estimated one quart from the top he momentarily snaps the nozzle valve which, due to water hammer action hereinbefore described, operates the sylphon and releases the latch mechanism 184 which will permit the shaft 158 to turn counter-clockwise to move the index finger under the urge of spring 176 against the periphery of the meter driven disc 218. This slight movement of lever 156 due to the movement of shaft 158 will not be sufficient to unlatch the arm 118 from its retaining pin 84 so that the drum will still

be held stationary. However, when the meter's continuous rotation presses a slot 222 in registration with the index finger 216, the finger will then move into the slot under the urge of spring 176, whereupon the latch mechanism 184 will be released, the valve 20 will close, the arm 156 will move downwardly to shift the pump to off position to pull the arm 140 upwardly, which allows the pin 132 to move upwardly in the slot 138 due to the action of the spring 78, see Fig. 4, which tends to return the reel to a coiled position. This movement of the reel counter-clockwise will cause the pins to strike the arm 118 and reposition the same to the position shown in Fig. 8. All of the pins will click by freely as the reel turns in a counter-clockwise position to coiled position. As the reel returns the hose will be coiled upon the winding reel and will be carried inside of the housing in wound up position ready for a subsequent dispensing operation.

The operator now places the hose nozzle in the recess in the manner shown in Fig. 3 and, in order to prevent the hose nozzle sliding down the inclined wall 92 of the recess and dropping out of the bifurcated support he pulls downwardly the door 98. Upon pulling down this door to a position such as to hold the nozzle on its inclined support, the rack 110 will operate a pinion 224 on a shaft 226 carrying a bevelled pinion 228 which meshes with a second bevelled pinion 230 on a shaft 232. On the end of the shaft 226 is provided a stop mechanism 234 for limiting the travel of the shaft 226. This stop mechanism may or may not be used, as desired.

Fig. 12 is a view substantially similar to Fig. 10 of my prior application Serial No. 4,675 aforesaid, and shows the manner in which the operation of the reset shaft 226 operates the shaft 232 for causing the resetting of the clock meter hands. The arrangement of the rack 110 with respect to reset shaft 226 and the door 98 is such that when the door is pulled down to any position such as to hold the nozzle from falling out, such downward position of the door, be it a partially closed position or a fully closed position, will have caused the complete resetting of the clock mechanism. In other words, the act of placing the nozzle on its stationary support and holding it on its stationary support by means of the movement of the closure or door, automatically serves to reset the clock mechanism. The act of closing this door and locking it with a padlock not only prevents access to the nozzle valve lever but also prevents any movement of the reel and, consequently, any opening of the control valve 20, or any starting of the pump.

By reference to Figs. 2 and 7, it will be seen that I have interposed between the flow line 16, connected to the discharge side of the pump and the flow line 22, which is on the discharge side of the meter in connection with the flexible hose, an expansible chamber adapted to take up the pressure in the flexible hose when the flexible hose is coiled upon its support, the same being full of liquid at that time. Experience has shown that this winding action will create an additional pressure in the hose and requires some means for taking up this pressure. To this end, I provide a pipe 236 which connects with the pipe 222 and a pipe 238 which connects with pipe 16. Between these two pipes I provide a housing consisting preferably of two cup-shaped plates 240 and 242, clamping therebetween a flexible diaphragm 244 of any suitable material. On the side of the diaphragm to which pipe 238 is con-

nected, I provide a disc 246 having at a central portion a sleeve 248 adapted to slide in a hollow hublike extension 250 of the cup-shaped plate 242. The junction of the plate and hollow extension is provided with a series of ports 252 and a spring 254 serves normally to press the plate against the diaphragm 244, whereby to normally press the diaphragm in a direction to expel all liquid from that part of the housing on that side of the diaphragm connecting with the pipe 236. Any suitable means for adjusting the spring may be provided during the dispensing. The diaphragm is moved to the left under the action of the spring 254 and also under the action of pressure created by the pump. When dispensing has been finished and the pump stopped, and when the hose is coiled upon its reel, the extra pressure of the coiling operation will compel the liquid flow through pipe 236 into the chamber 240 and thus force the flexible diaphragm against the disc 246 to compress spring 254. This enlargement of the diaphragm chamber with which the hose is in direct communication results in relief of the pressure in the coiled hose. At the same time, this reservoir of pressure when dispensing is finished and between subsequent dispensing operations, serves to provide a reservoir of liquid under pressure which will maintain the liquid level in the visi-gauge to the required level.

It will of course be obvious that in connection with the new reel mechanism herein described that it is not necessary that such mechanism be used with a type of pump where a predetermined amount of liquid is to be dispensed. In other words, it is not necessary to utilize the mechanism in conjunction with rotated disc 218 or with the index finger mechanism 216, as these elements may be eliminated, in which case when the reel has been pulled out the latch mechanism 184 will hold the reel in out position, as hereinbefore described, and then when the dispensing continues to the desired amount the operator momentarily snaps or operates the nozzle valve, which will immediately operate the siphon to thereupon close the control valve 20, stop the pump and release the hose reel to recoil the hose within the housing. As a matter of fact, probably the greater amount of installations will be made utilizing the hose reel with the type of device which does not include the meter driven disc 218 and the index finger 216. It will also be understood that the hose reel construction when not using the slotted disc arrangement such as 218 would not need the control valve 20 since the pump alone and the nozzle valve would suffice to control the passage of fluid through the dispensing line. However, I have shown the same in connection with this mechanism as a preferred form.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a liquid dispensing device the combination of a housing, means forming a flow line through which liquid may be forced under pressure, a hose reel shiftably mounted in said housing and about which a flexible hose is adapted to be coiled, said hose reel having a liquid conduit formed therein and connecting with the hose and with the flow line, said flexible hose terminating in a nozzle having a flow control member thereon, said housing being provided with a nozzle support having a portion for receiving the nozzle, said portion being shaped to permit the nozzle to slide freely from said support and said

housing having a member adapted to retain the nozzle from such sliding movement, said member including means for preventing access to the flow control member of the nozzle when so desired.

2. In a liquid dispensing device the combination of a housing, means forming a flow line terminating in a flexible hose provided with a nozzle, said nozzle having a flow control member, a hose reel mounted in said housing and about which the flexible hose is adapted to be coiled, said housing having a support for the nozzle and an opening adjacent said support, said support including means for preventing the nozzle normally resting on said support, said housing having a door adapted to close said opening and adapted to retain said nozzle on the support when the door is moved to predetermined position, said door in said position preventing access to the flow control member.

3. A liquid dispensing device comprising a housing, a liquid flow line having a portion thereof enclosed by said housing, said flow line terminating in a flexible hose having a nozzle, said nozzle having a flow control member and a spout, a hose reel shiftably mounted in said housing and providing means on which said hose is adapted to coil and uncoil, means forming an opening in said housing, means including a stationary nozzle support, forming a pocket within said housing, said pocket being accessible from the exterior of the housing through said opening, said pocket also being perforated to permit the spout of said nozzle to project beyond the pocket when said nozzle is positioned on the support, said nozzle support being inclined so as to compel the nozzle to normally slide off the support, said housing having a door adapted to close said opening, house the nozzle in the pocket and retain the nozzle on its support, means for locking the door, said door preventing access to the flow control member of the nozzle when closed to predetermined position.

4. In a liquid dispensing device the combination of a housing, means forming a liquid flow line a portion of which is enclosed in said housing, a meter in said flow line, clock mechanism for the meter, reset mechanism for the clock mechanism, said flow line terminating in a flexible hose terminating in a nozzle, said nozzle having a flow control member, said housing having an opening and an associated nozzle support, said nozzle support having a surface formed to prevent the nozzle normally remaining thereon, a closure for said opening, said closure being shiftable to predetermined position to retain the nozzle on the support, a connection from said closure to the reset mechanism, said connection including means for holding the nozzle when the nozzle is in retaining position, said connection operating the reset mechanism.

5. In a liquid dispensing device the combination of a housing adapted to enclose a part of the liquid flow line through which liquid is adapted to be forced under pressure, said flow line terminating in a flexible hose provided with a nozzle having a manually operable flow element, a meter in said flow line, a clock for the meter and reset mechanism for the clock, said housing having a nozzle support for the hose when not in use, said support including means normally incapable of supporting the nozzle, a shiftable member adapted to be shifted to a position to retain the nozzle on said support, and operative connections from said shiftable member to the reset mechanism including means to cause actuation of the reset mechanism upon a predetermined movement of the shiftable member.

6. In a liquid dispensing device the combination of a housing, a hose reel rotatably mounted in said housing, a flexible hose forming a part of the liquid flow line and terminating in a nozzle, said hose being adapted to be coiled on said reel as the reel is rotated in one direction and uncoiled therefrom when it is rotated in the opposite direction by tension exerted on the nozzle end of the hose, means for automatically latching said reel in rotated position when a length of hose is uncoiled therefrom, means for automatically unlatching said reel at the completion of a dispensing operation and means for automatically rotating said reel when unlatched to recoil the hose.

7. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted within said housing, a liquid flow line including a flexible hose terminating in a dispensing nozzle adapted to be coiled upon and uncoiled from said reel as it shifts, pumping means for forcing liquid through the hose, said housing having an opening through which the hose may be moved as it is uncoiled from said reel for dispensing, means for latching the reel when a length of hose has been moved through said opening, and means operable automatically at the termination of a dispensing operation for recoiling said hose on said reel.

8. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted within said housing, a liquid flow line including a flexible hose terminating in a dispensing nozzle adapted to be coiled upon and uncoiled from said reel, said housing having an opening through which the hose may be moved to uncoil it from said reel, means for latching the reel in uncoiled position when a length of hose has been moved through said opening, means for recoiling said hose on said reel, said latching mechanism including means to permit said reel to be latched in various positions corresponding to the passage of different lengths of hose through said opening, and means automatically operated upon the termination of the dispensing operation for releasing said latching mechanism to cause the coiling of the hose on the reel.

9. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted within said housing, a liquid flow line including a flexible hose terminating in a dispensing nozzle adapted to be coiled upon and uncoiled from said reel, said housing having an opening through which the hose may be moved to uncoil it from said reel, means for latching the reel in uncoiled position when a length of hose has been moved through said opening, means for recoiling said hose on said reel, and operating means disposed adjacent the nozzle end of the hose for actuating the latching means to release the same.

10. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted within said housing, a liquid flow line including a flexible hose terminating in a dispensing nozzle, said hose being adapted to be coiled upon and uncoiled from said reel, liquid control means carried by said nozzle latching means for said reel to hold the same in position when said hose is uncoiled, and means operated by said liquid control means for releasing said latching mechanism.

11. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted

within said housing, a liquid flow line through which liquid is adapted to be forced including a flexible hose terminating in a dispensing nozzle adapted to be coiled upon and uncoiled from said reel, said nozzle having a valve and a manually operable member for said valve, means automatically operated by movement of said valve operating member for controlling the shifting movement of said reel.

12. In a liquid dispensing device the combination of a housing, a hose reel shiftably mounted within said housing, a liquid flow line including a flexible hose coiled on said reel and said hose having a dispensing nozzle, means whereby said hose may be uncoiled from said reel and pulled out of said housing, liquid control means carried by said nozzle, and means operable upon a momentary closing of said nozzle valve including latch release mechanism for releasing said reel to permit the return of the hose within the housing.

13. In a liquid dispensing device the combination of a housing enclosing in part a liquid flow line having a meter in said line, said flow line terminating in a flexible hose provided with a nozzle having a manually actuated control valve, a reel shiftably mounted in said housing, means whereby said flexible hose is adapted to coil upon said reel within said housing and whereby said hose may be extended through an opening in the housing for dispensing at a distance from the housing, a latch mechanism for holding said reel in coil extended position through said housing, a collapsible device located in the liquid flow line on the discharge side of the meter and having connections for operating the latch mechanism for the reel and adapted to be actuated by closure of the nozzle valve.

14. In a liquid dispensing apparatus, the combination of a housing, a liquid flow line including a hose terminating in a nozzle, hose retrieving and storing means mounted in said housing and adapted to permit the withdrawal of hose therefrom when tension is applied to the nozzle end of the hose, means controlled from the nozzle end of the hose for automatically rendering said retrieving means effective to retrieve said hose at the termination of a dispensing operation.

15. In a liquid dispensing device, the combination of a housing provided with an opening, and enclosing part of a liquid flow line through which liquid is adapted to flow under pressure, said flow line terminating in a hose provided with a nozzle, shiftable means in said housing adapted to retrieve the hose and position it within said housing in predetermined relation with respect to said opening to permit movement of said hose therethrough, whereby said nozzle may be transported to a distance from said housing for operation during a dispensing transaction, and may be thereafter returned into said housing, automatic instrumentalities associated with said shiftable means and adapted to actuate the latter to retrieve the hose, and means positioned at said nozzle for initiating the operation of said instrumentalities.

16. In a liquid dispensing device the combination of a housing provided with an opening and enclosing in part a liquid flow line through which liquid is adapted to flow under pressure, said flow line terminating in a flexible hose provided with a nozzle, shiftable means in said housing adapted to receive the hose and position it in predetermined relation thereon for movement through the opening whereby the nozzle may be projected

to a distance from the housing for dispensing operation, a motor for moving said hose positioning means, and means disposed at the nozzle end of the hose for controlling the operation of said motor means.

17. In a liquid dispensing device the combination of a housing provided with an opening and enclosing in part a liquid flow line through which liquid is adapted to flow under pressure, said flow line terminating in a flexible hose provided with a nozzle, shiftable means in said housing adapted to receive the hose and position it in predetermined relation thereon for movement through the opening whereby the nozzle may be projected to a distance from the housing for dispensing operation, means for stopping the flow of liquid through said nozzle, a prime mover for moving said hose positioning means, and means automatically operated by actuation of said flow stopping means for actuating the prime mover to reposition said hose in said housing.

18. In a liquid dispensing device the combination of a housing provided with an opening, means forming a liquid dispensing line through which liquid is adapted to be forced under pressure, a portion of said line being enclosed by said housing and said line terminating in a flexible hose provided with a nozzle, a hose reel shiftably mounted in said housing and associated with the flow line whereby said flexible hose may be coiled thereon and uncoiled therefrom for projection through the opening of said housing, a plurality of spaced apart latching devices mounted on the periphery of said hose reel and an associated latching device adapted to co-operate sequentially with said spaced latching devices upon movement of said reel, said associated latching device including means for holding the reel in a plurality of shifted positions corresponding to various angular movements of the hose reel.

19. In a liquid dispensing device the combination of a housing provided with an opening, means forming a liquid dispensing line through which liquid is adapted to be forced under pressure, a portion of said line being enclosed by said housing and said line terminating in a flexible hose provided with a nozzle, a hose reel shiftably mounted in said housing and associated with the flow line whereby said flexible hose may be coiled thereon and uncoiled therefrom for projection through the opening of said housing, a plurality of spaced apart latching devices mounted on the periphery of said hose reel and an associated latching device adapted to co-operate sequentially with said spaced latching devices upon movement of said reel, said associated latching device including means for holding the reel in a plurality of shifted positions corresponding to various angular movements of the hose reel, and a liquid flow control means operable by the contact of any one of said spaced apart latching devices with said associated latching device.

20. In a liquid dispensing device the combination of a housing provided with an opening, a liquid flow line having a portion enclosed in said housing, said flow line terminating in a flexible hose provided with a nozzle, a reel turnably mounted in said housing and arranged to have the hose wind upon and unwind therefrom for projection through the opening of said housing when unwound, said reel having a plurality of spaced apart peripherally disposed operating members and an associated operating member disposed in the path of movement of said periph-

erally disposed operating members and adapted to be actuated thereby, flow control means, shiftable actuating means for said control means adapted to be operated by said associated member when the reel is turned in one direction, latching means adapted to retain said flow control means and said shiftable means in operated position where they will remain unaffected by subsequent motions of said associated member caused by continued turning of the reel in the same direction, said shiftable means being so constructed and arranged when latched as to prevent actuation of said associated member when said reel turns in an opposite direction said associated member serving in turn to arrest turning of said reel in said opposite direction, means for unlatching said shiftable means to permit free motion of said associated member and consequently free turning of said reel in said opposite direction.

21. In a liquid dispensing device comprising a housing, a liquid flow line through which liquid is adapted to be forced under pressure and having a portion enclosed in said housing, said flow line terminating in a flexible hose having a valve controlled nozzle means for maintaining said hose full of liquid, a hose reel of small diameter mounted in said housing and upon which said hose is adapted to coil and uncoil, said housing having an opening through which a portion of the hose may be passed when the hose is uncoiled, and means providing an expansion chamber in the liquid flow line, said expansion chamber including a shiftable wall and a connection from said expansion chamber to a portion of the flow line whereby when the hose is coiled upon the reel liquid may flow into said expansion chamber to relieve the extra pressure in the flexible hose due to the coiling of the hose.

22. In a liquid dispensing device comprising means forming a liquid flow line through which liquid is adapted to be forced under pressure, a flexible hose forming a portion of said flow line, a nozzle for said hose, means for controlling the flow through said line and hose, a rotatable reel upon which said hose is adapted to be wound and from which it is adapted to be unwound, a housing enclosing said flow line and said reel and having an opening through which a part of the hose is adapted to be withdrawn, means operated by pressure created within said flow line for actuating said flow control means, and means in said flow line for relieving the flow line from excess pressure created by the winding of the hose on said reel.

23. In a liquid dispensing device comprising means forming a liquid flow line through which liquid is adapted to be forced under pressure, a flexible hose forming a portion of said flow line, a nozzle for said hose, means for controlling the flow through said line and hose, a rotatable reel upon which said hose is adapted to be wound and from which it is adapted to be unwound, a housing enclosing said flow line and said reel and having an opening through which a part of the hose is adapted to be withdrawn, means actuated by predetermined pressure created in said flow line for actuating said reel and means in said flow line for relieving a flow line from excess pressure created by the winding of the hose on said reel.

24. In a liquid dispensing device comprising means forming a liquid flow line through which liquid is adapted to be forced under pressure, a flexible hose forming a portion of said flow line, a

nozzle for said hose, means operable for controlling the flow through said flow line and hose, a rotatable reel upon which said hose is adapted to be wound and from which it is adapted to be unwound by pulling upon said hose, a housing enclosing said flow line and said reel and having an opening through which a part of the hose is adapted to be pulled, releasable means for maintaining said reel in any one of a plurality of positions when the hose is unwound therefrom by pulling upon said hose and when pulling tension has been released from said hose, means actuated by movement of said hose for operating the means for controlling the flow through said maintaining means being connected to maintain said controlling means in operated position, power means operable to rewind said hose on said reel, means for releasing said maintaining means, and automatic means rendered operable upon release of said maintaining means for controlling the operation of said power means and said flow controlling means.

25. In a liquid dispensing device comprising means forming a liquid flow line through which liquid is adapted to be forced under pressure, a flexible hose forming a portion of said flow line, a nozzle for said hose, a rotatable reel upon which said hose is adapted to be wound and from which it is adapted to be unwound, a housing enclosing said flow line and said reel and having an opening through which a part of said hose is adapted to be withdrawn, means for controlling the flow of liquid through said line and hose, manually actuated means adapted to be operated in advance of the delivery of a predetermined unit measure of gasoline for subsequently automatically actuating said flow control means to stop the flow of gasoline through said flow line after the delivery of said predetermined measure of gasoline, and means automatically actuated thereby upon the delivery of said predetermined measure of gasoline for actuating the reel to rewind the hose upon said reel.

26. In a liquid dispensing device comprising means for a liquid flow line through which liquid is adapted to be forced under pressure, a flexible hose forming a portion of said flow line, a nozzle for said hose, a valve for said nozzle, a manually actuated member for said nozzle valve, a pressure operated device in said flow line, a pump for forcing liquid through said line, a motor for said pump, a switch for said motor, operative connections from said switch to said pressure operated means in said line, said pressure operated means including means for adjusting said pressure operated means whereby upon momentary closing of said nozzle valve said pressure operated means will be actuated by the pressure in said line for actuating said switch and means also operable by the actuation of said pressure operated means, a rotatable reel upon which said hose is adapted to be wound and from which it is adapted to be unwound, a housing enclosing said flow line in said reel and having an opening through which a part of the hose is adapted to be withdrawn, means for rotating said reel to coil the hose thereon and means actuated by the pressure operated means for operating said hose coiling means.

27. In a dispensing apparatus, the combination of a flow line which comprises a flexible conduit and a nozzle valve, storing means for said conduit including means movable as the hose is withdrawn from or returned to said storing means, flow control mechanism adapted to be operated by said movable means during the initial part of the

- withdrawing movement of said hose for a dispensing operation to supply fluid to the hose, mechanism operable upon actuation of said nozzle valve in a predetermined manner for restoring said flow control mechanism to its initial position, said movable means serving to again operate said flow control mechanism upon a further withdrawing movement of said withdrawn conduit to supply fluid to the hose.
28. In a liquid dispensing apparatus, the combination of a flow line including a flexible conduit, storing mechanism for said conduit including means which move in one direction as the conduit is withdrawn, power means for moving said means in another direction to retrieve said conduit, means associated with said movable means and operated thereby, as the conduit is withdrawn, to initiate the flow of fluid to said conduit, means for maintaining said associated means in operated position, said associated means comprising an element movable into position to prevent movement of said movable means by said power means,

and means including said maintaining means for locking said element in said position.

29. In a liquid dispensing apparatus, a housing having a base, an opening in said housing adjacent the base; said housing being adapted to enclose part of a liquid flow line which comprises a hose provided with a nozzle, shiftable hose storing means mounted in said housing adjacent said opening and adapted upon shifting to retrieve said hose and position it in said housing adjacent said opening to permit movement of said hose therethrough, means for supporting said nozzle, said nozzle supporting means being accessible from the exterior of said housing and being located above said opening, an exteriorly facing groove in said housing disposed between said nozzle support and said opening and adapted to receive that portion of said hose which extends between said opening and said nozzle when the latter is on its support.

WILLIAM M. CARROLL.