Aug. 4, 1931. L. GUSMUS 1,817,409

SAFETY LOCK FOR LIQUID DISPENSING APPARATUS

Filed Aug. 8, 1930 3 Sheets-Sheet 1

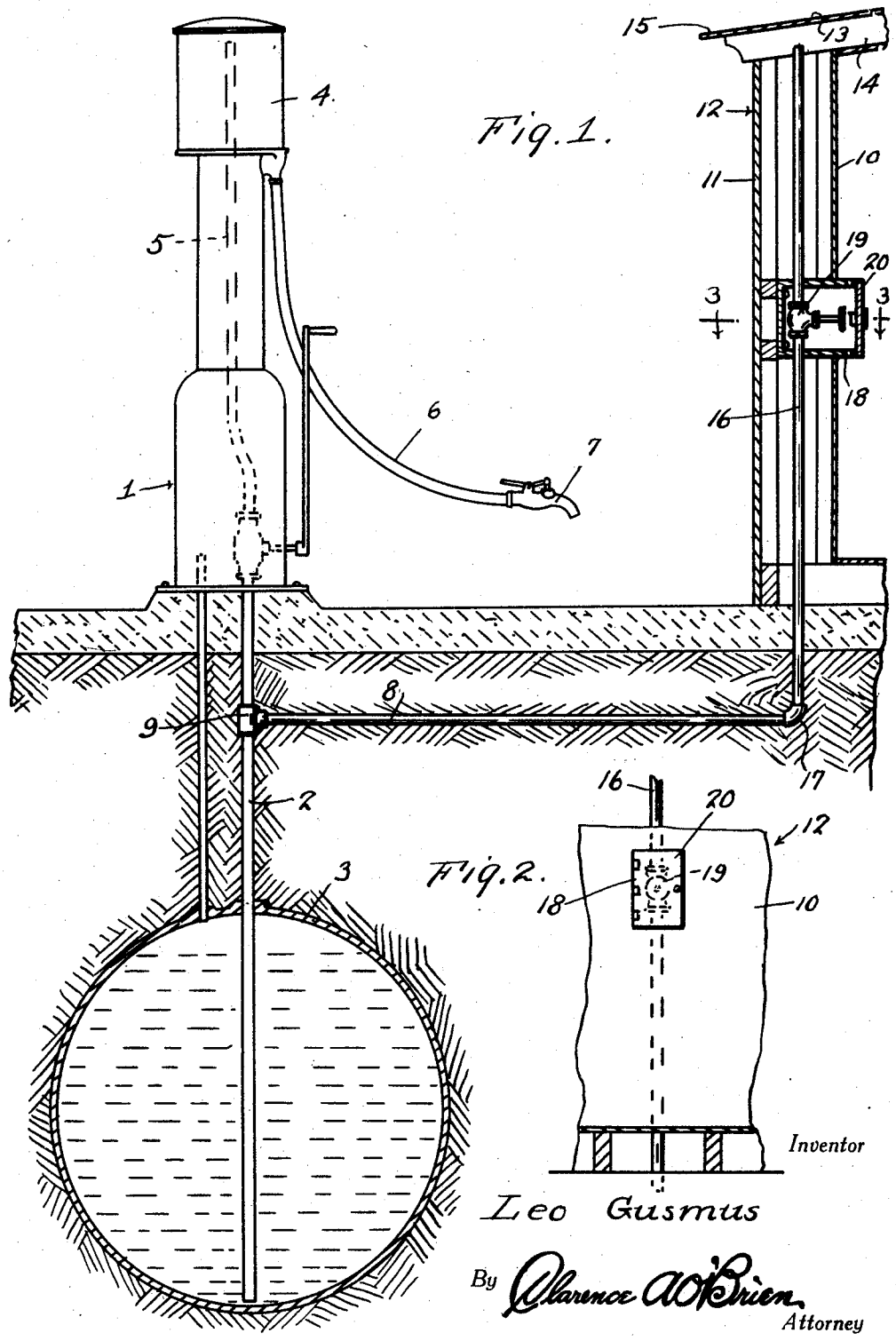


Fig. 1.

Fig. 2.

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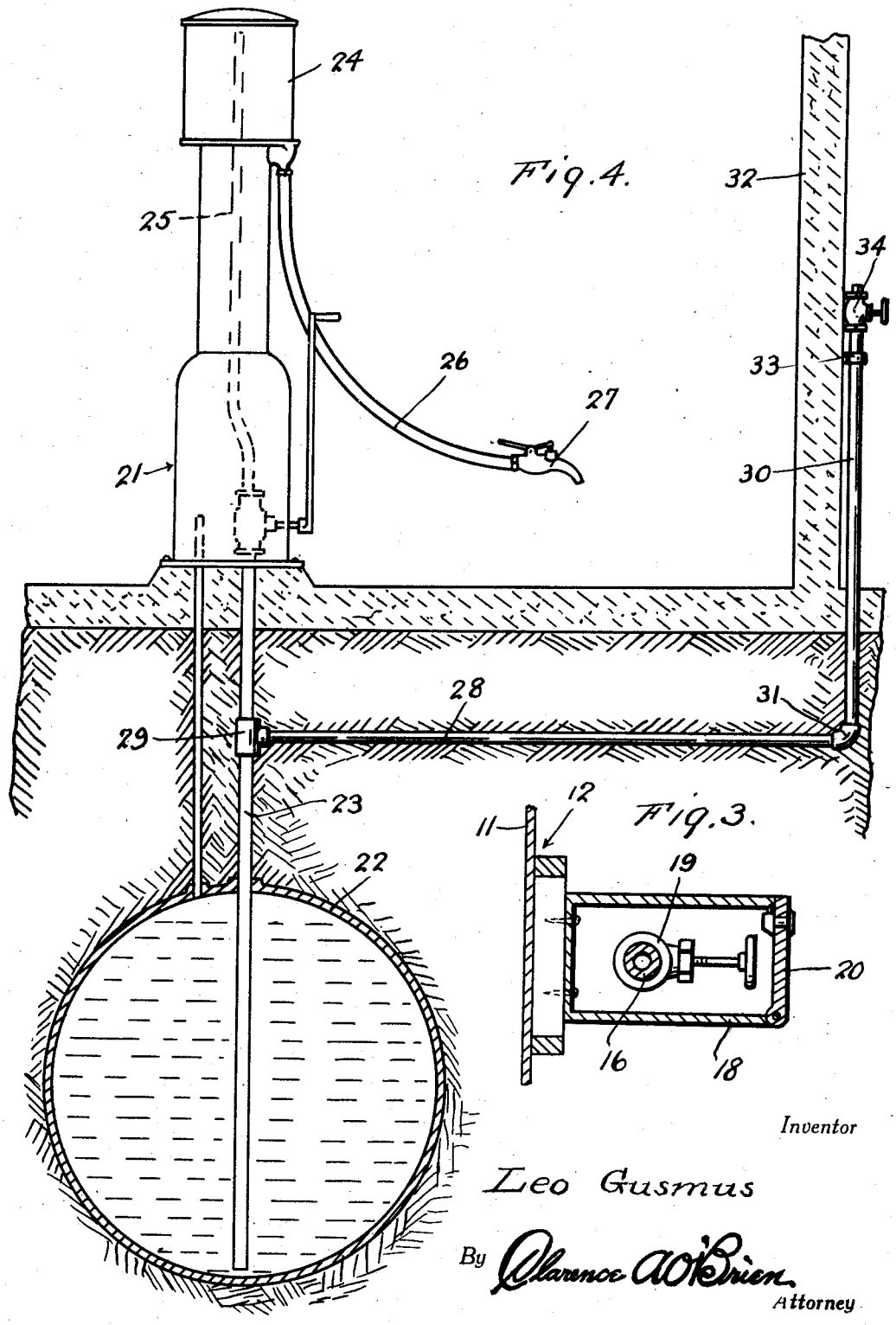


Fig. 4.

Fig. 3.

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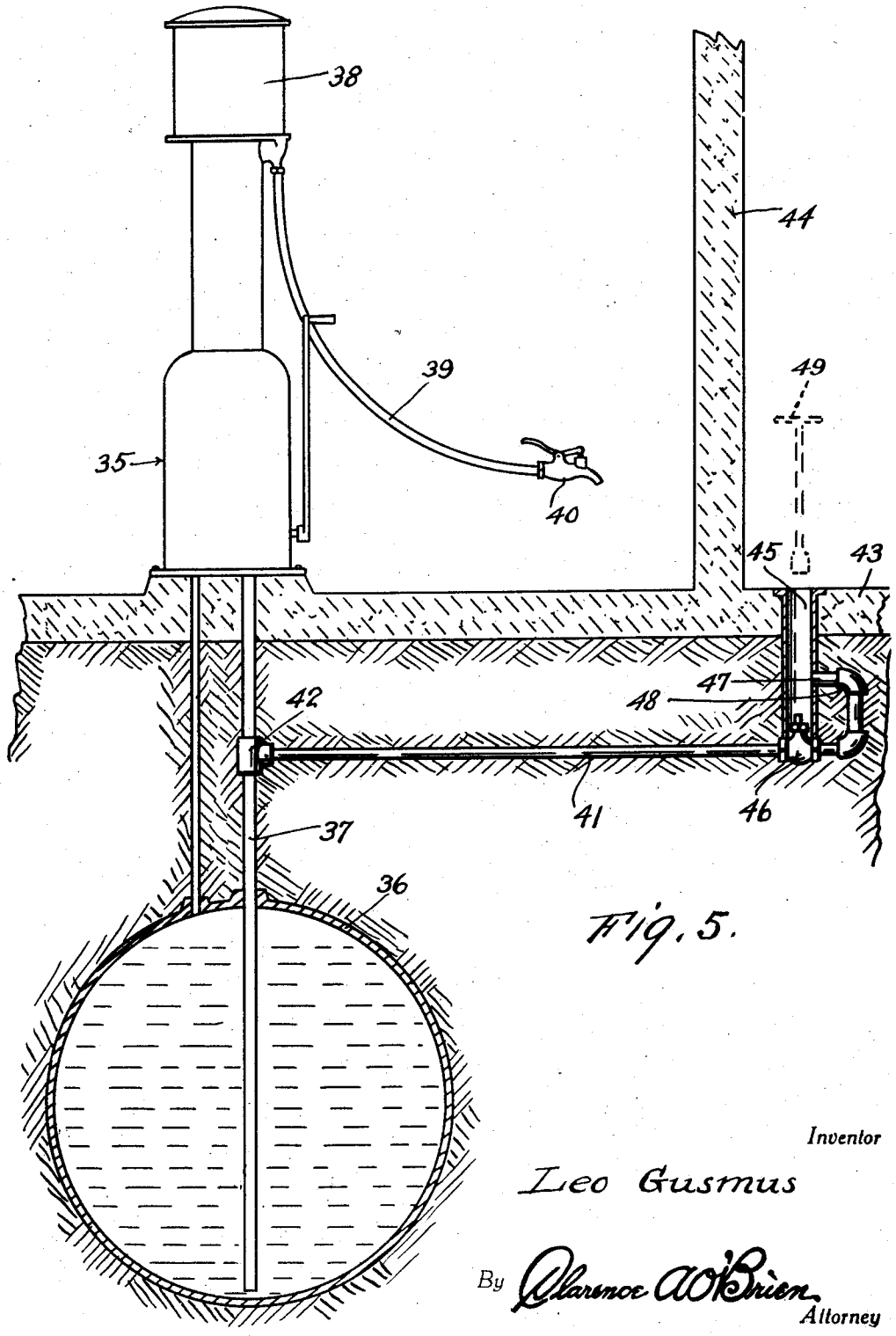


Fig. 5.

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UNITED STATES PATENT OFFICE

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SAFETY LOCK FOR LIQUID DISPENSING APPARATUS

Application filed August 8, 1930. Serial No. 473,959.

This invention relates generally to liquid dispensing apparatus, and more particularly to pumps for use at supply or filling stations, which are common along highways and in garages or the like, for dispensing gasoline, oil and other liquid, but it is understood, of course, that a safety lock in accordance with this invention, may be operatively connected with any type of pump or dispensing apparatus, for which same is found adapted and desirable.

The present invention further relates to a safety lock for use on liquid dispensing apparatus of the general type disclosed in U. S. Patent #1,699,097, issued on January 15, 1929, and U. S. Patent #1,736,489, issued on November 19, 1929, to J. C. Cravey and Paul R. Pierson (co-inventors) and upon which devices the present invention constitutes an improvement.

One of the important objects of this invention is to provide, in a manner as hereinafter set forth, a safety latch for liquid dispensing apparatus of the aforementioned character, which includes a valve controlled concealed vent pipe, which communicates, at one end, with the delivery pipe extending between a pump and a supply tank which is usually buried in the ground, a valve for controlling the concealed vent pipe being disposed in a building where unauthorized access ordinarily could not be had thereto, the invention still further providing means whereby unauthorized operation of the vent pipe control will be prevented, even should access be had to the interior of the building in which the valve is located.

Other objects of the invention are to provide a safety latch for liquid dispensing apparatus of the character described, which will be simple in construction, strong, durable, efficient in its use, and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention may become apparent from a study of the following specification, taken in connection with the accompanying drawings, wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view principally in vertical section, and partly in elevation, of an embodiment of the invention.

Figure 2 is a detail view, in elevation showing the front of the locked casing which encloses the vent pipe control valve illustrated in Figure 1.

Figure 3 is a horizontal sectional view, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a view principally in vertical section and partly in elevation, showing another embodiment of the invention.

Figure 5 is a view principally in vertical section and partly in elevation, of another form of the invention.

Referring to the drawings and to Figures 1 to 3 thereof in particular, it will be seen that the reference numeral designates generally a pump of conventional construction, from which a pipe extends to the underground storage tank 3. As is usual, the pump 1 draws the liquid from the tank 3, through the pipe 2, and elevates said liquid to the measuring container 4 through the upstanding pipe 5.

The liquid is transferred from the measuring container 4, to the fuel tanks of a vehicle or other container, through the delivery hose 6, having the usual nozzle 7 on its free end. It is understood, of course, that any desired type of pump may be connected with the suction pipe 2 for drawing the liquid from the supply tank 3. It is further understood that the dispensing apparatus need not include the measuring container 4.

A vent pipe 8 is connected to the suction pipe 2 between the supply tank 3 and the pump 1, through the medium of a T-coupling 9. The vent pipe 8 extends underground to a point beneath the inner and outer sides 10 and 11 respectively of a building wall designated generally by the reference numeral 12, which supports the roof 13, in spaced relation on the rafters 14. The reference numeral 15 designates the eave portion of the roof. A stand pipe 16

is connected to the pipe 8, by the elbow 17, and extends upwardly between the spaced inner and outer sides 10 and 11 of the building wall 12 and terminates adjacent the roof 13 between the rafters 14 and above the wall 12, as clearly seen in Figure 1 of the drawings.

A pipe 16 passes through a metallic casing, 18, which is rigidly mounted in the wall 12 and extends through the inner side 10 of said wall 12. A control valve 19 is disposed in the pipe 16 within the casing 18 for manually opening and closing said pipe 16. The side of the casing which is disposed within the building has mounted thereon a hinged door 20, through which access may be had by an authorized person to the valve 19. The door 20 is provided with a suitable lock for preventing unauthorized persons from operating the valve 19, as will be apparent.

Thus, when it is desired to prevent the pump 1, even though operated, from drawing liquid from the supply tank 3, through the suction tank 2, the valve 19 is opened, and air will be sucked into the pumps through the vent pipes. After the valve 19 is opened, it is understood, of course, that the door 20 is closed and locked to prevent unauthorized persons from closing the valve 19 to permit the pump 1 to function when operated.

The embodiment of the invention illustrated in Figure 4 of the drawings includes the conventional pump designated generally at 21, and which, when operated, draws liquid from the under ground supply tank 22, through the suction pipe 23, and elevates the liquid to the measuring container 24 through the pipe 25. The liquid is discharged from the measuring container 24 through the delivery hose 26 having the nozzle 27 on its free end. The pump 21 may be of any desired type and the measuring container 24, need not be included in the apparatus, and it is further understood that the supply tank 22 may be located at any desired point. A vent pipe 28 is connected to the suction pipe 23, between the pump 21 and the supply tank 22, through the medium of the T-coupling 29, and said vent pipe terminates in an upstanding section 30, which is connected thereto by the elbow 31. The section 30 of the vent pipe extends upwardly adjacent the inner side of a wall 32 of a building to the interior of which building only authorized persons may have access. The section 30 of the vent pipe is secured to the wall 32, by any suitable means, such as the strap 33. A control valve 34 is mounted for manual actuation on the upper end of the upstanding sections 30 of the vent pipe 38. When the valve 34 is in opened position, the pump 21 will be prevented from drawing the liquid from the tank 22 through the suction pipe 23, and said suction pipe will be opened to atmosphere through the vent pipe and the control valve 34.

In Figure 5 of the drawings, the pump which is designated generally by the reference numeral 35 is of conventional construction and draws the liquid to be dispensed from the underground storage tank 36 through the suction pipe 37 and discharges said liquid into the measuring container 38.

The liquid is transferred from the measuring container 38 through the discharge hose 39, having the nozzle 40 on its free end.

A vent pipe 41 is connected with the suction pipe 37 between the pump 35 and the supply tank 36 by the T-coupling 42, and extends from said T-coupling to a point beneath the floor 43 of a building, which may be located adjacent the pump 35 and one of the walls of which is designated by the reference numeral 44. The vent pipe 41, is, of course, concealed in the ground. The vent pipe 41 passes the lower end of a pipe section 45, which is opened at its upper and lower ends, and extends through the floor 43 of the building and into the ground below said floor. A manually operable valve 46 is interposed in the vent pipe 41, immediately below the pipe section 45 and extends upwardly into said pipe section 45. The vent pipe 41 has communication with an intermediate portion of the pipe section 45, through the medium of the sections 47 and the elbows 48. A wrench or other suitable tool 49 is insertable into the pipe section 45 for engagement with the control valve 46, for manually operating said control valve.

It will thus be seen that the vent pipe control valve 46 is effectively concealed from the view of unauthorized persons, and even though said unauthorized persons should discover the location of the valve after gaining access to the building in which same is located, it is necessary that a suitable tool be used for operating the valve. When the valve 46 is in opened position, the pump 35 will, when operated, instead of drawing the liquid from the tank 36, draw air downwardly through the pipe section 45 and through the vent pipe into the suction pipe 37, thus preventing unauthorized removal of the liquid from the storage tank.

It is believed that the many advantages of a safety latch for liquid dispensing apparatus, in accordance with this invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction may be had, which will fall within the scope of the invention as claimed.

What is claimed is:

In a liquid dispensing apparatus of the character described including a pump, an underground liquid supply tank, and a suc-

tion pipe extending between the pump and the tank, a vent pipe concealed in the ground and connected with the suction pipe intermediate the pump and the tank for admitting air to said suction pipe, said vent pipe extending from a point on the suction pipe to a point beneath a building, a manually operable control valve interposed in the vent pipe at a point beneath the building, and a pipe section communicating with the interior of the building and extending downwardly through the floor of the building into the ground to the control valve and providing means whereby access to the control valve may be had for actuating the same, the vent pipe having one end communicating with an intermediate portion of the pipe section.

In testimony whereof I affix my signature.

LEO GUSMUS.