Oct. 10, 1933. F. V. MAYO 1,929,986

SERVICE DISPENSING SYSTEM FOR PARKED AUTOMOBILES

Filed May 5, 1931 3 Sheets-Sheet 1

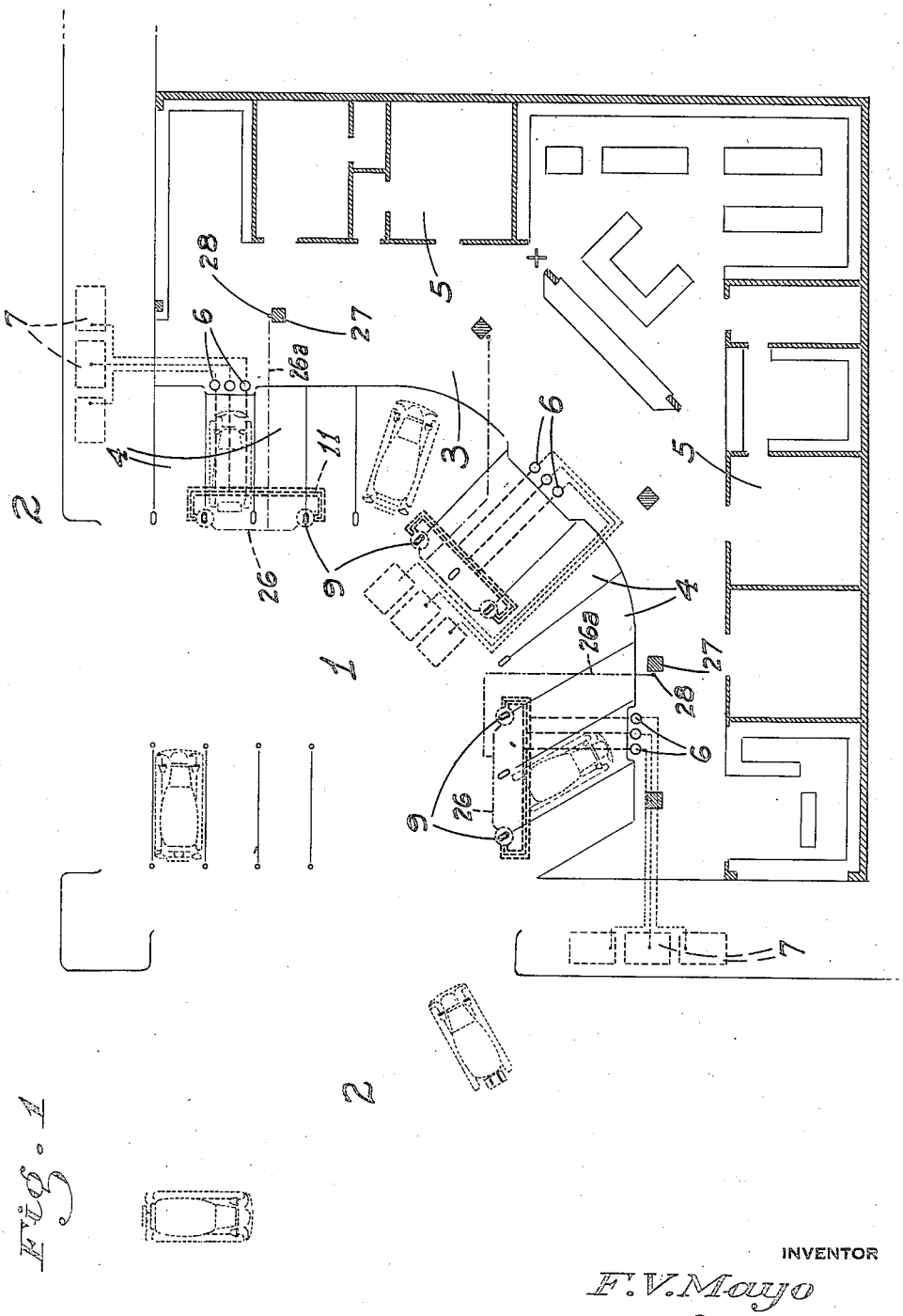


Fig. 1

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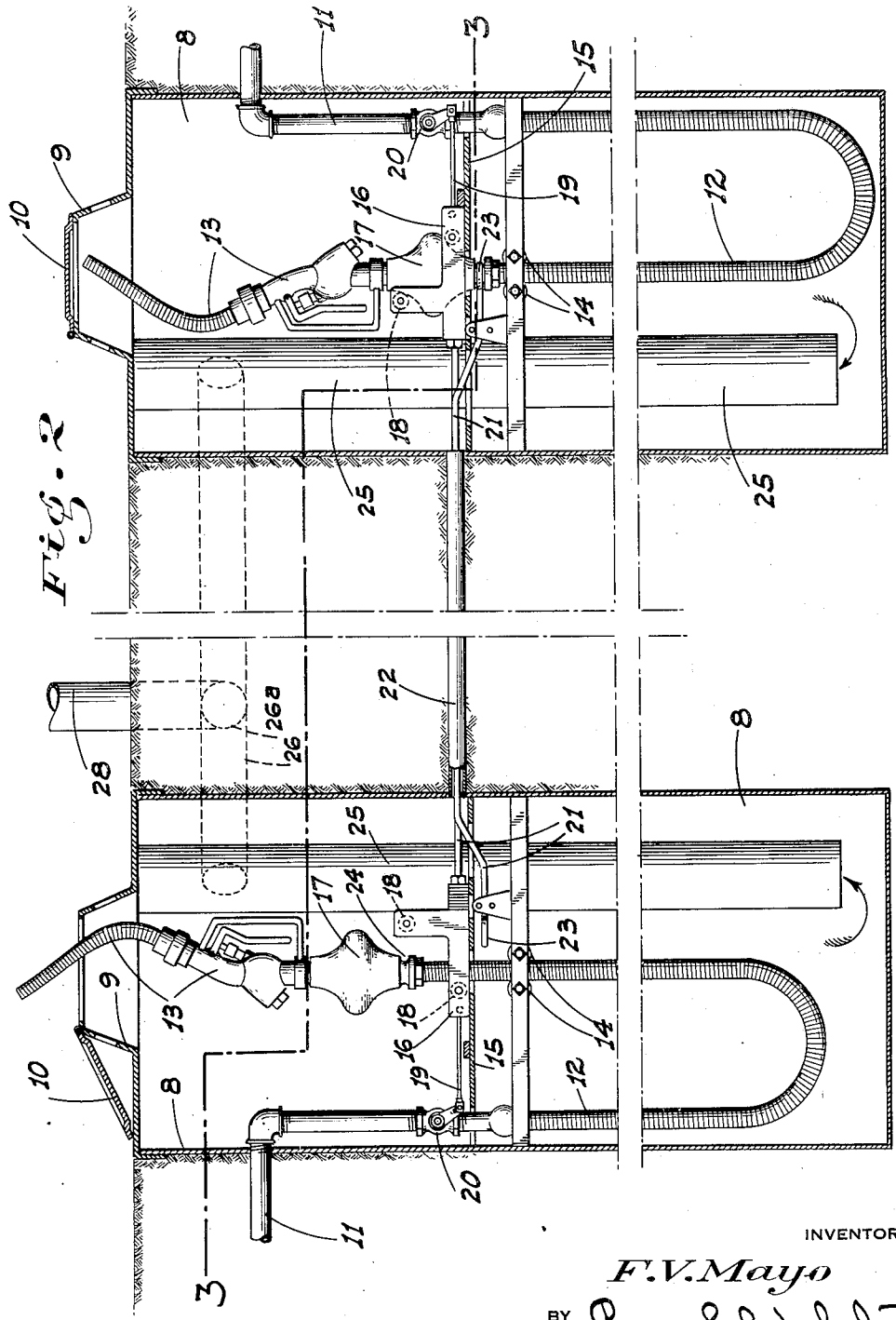


Fig. 2

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SERVICE DISPENSING SYSTEM FOR PARKED AUTOMOBILES

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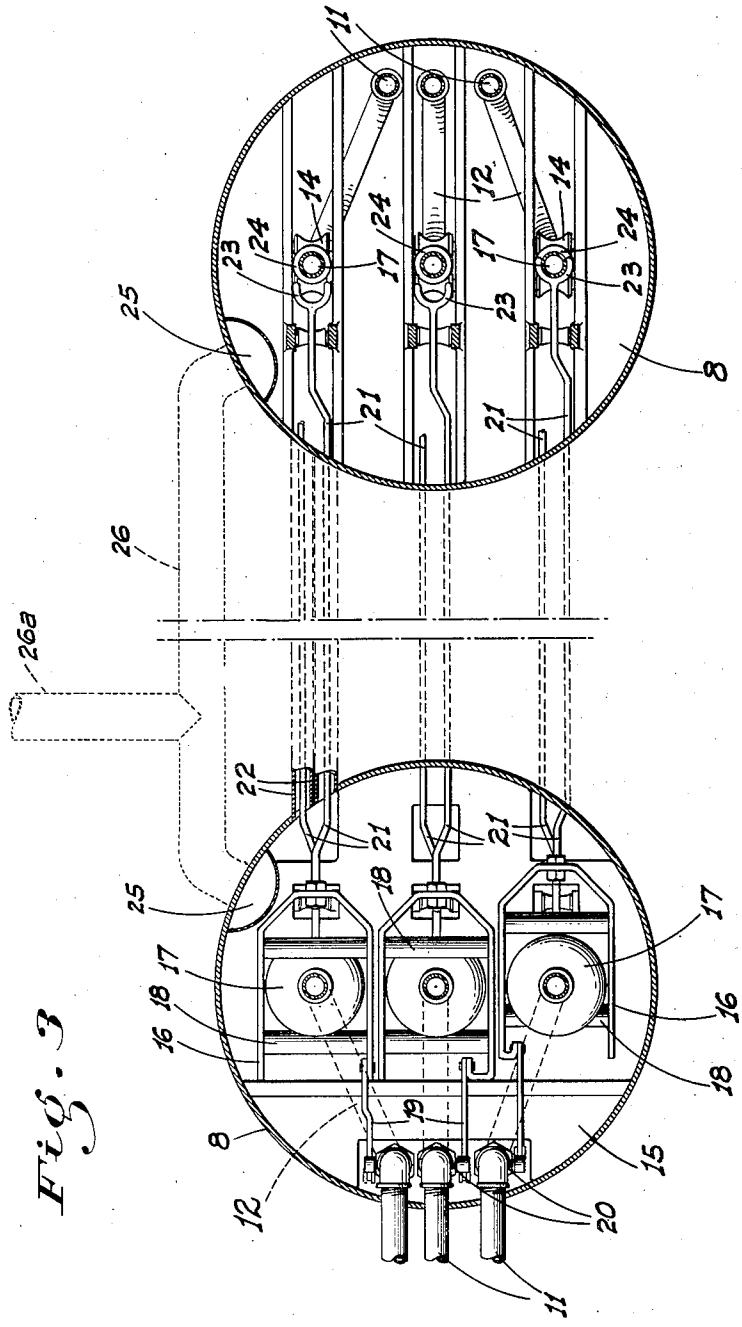


Fig. 3

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SERVICE DISPENSING SYSTEM FOR PARKED AUTOMOBILES

Frank V. Mayo, Stockton, Calif.

Application May 5, 1931. Serial No. 535,158

9 Claims. (Cl. 221—100)

This invention relates to the servicing of automobiles with gasoline, oil and other accessories.

My main object is to provide a system for the purpose by means of which a number of cars, all in a predetermined parking area set aside for the purpose and associated with suitable apparatus for the dispensing of gasoline, etc., may be individually serviced as their owners may require without the necessity of moving their cars after they have once parked. As a part of the system and in connection with the parking area, I may provide a retail store arrangement, so that the owners of the parked cars may conveniently do their shopping if desired, or have their cars serviced; without moving such cars from their parked positions.

For the purpose of convenience of operation and to take up a minimum of valuable parking space, the gasoline pumps are located at points somewhat remote from the dispensing nozzles by which the gasoline is delivered into the car tanks. For the purpose of economy of installation, I arrange each nozzle so that it may take care of a number of cars, and I also use a pair or more of the nozzles to a single pump.

In connection with the above arrangement, a further object of the invention is to provide a means for interlocking the nozzles of each pump in such a manner that one nozzle cannot be used while the other one is in operation. This prevents any incorrect or short measure being dispensed which would obviously be had if both nozzles were drawing from the one pump at the same time.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a plan view of a typical layout of my improved system as in operation.

Fig. 2 is a vertical section of a pair of adjacent nozzle retaining units, showing the interlocking connections therebetween.

Fig. 3 is a sectional plan of such units taken on the line 3—3 of Fig. 2.

Referring now more particularly to the characters of reference on the drawings, the system as a whole comprises a parking area 1, located for example at a street corner and having access to both streets 2 adjacent their intersection.

A raised sidewalk 3 limits the parking area at the back, the parking spaces 4 for a plurality of cars projecting outwardly from the curb line of the sidewalk so that the cars will be disposed in close side by side relation and substantially at right angles to the curb in facing relation to the sidewalk. A row of retail shops 5 is arranged along the sidewalk a certain distance back from the curb line.

Arranged at intervals along the sidewalk 3 adjacent the curb, are groups of gasoline dispensing pumps 6, for different makes or grades of gasoline, the pumps of each group being fed from corresponding underground tanks 7 in the usual manner. Since practically all makes of cars have their fuel tanks at the rear, the nozzles from the different pumps are located at the back ends of the parking spaces and cars, between certain ones of said spaces, and are arranged so as not to interfere with the movement of the cars into or out of said spaces, but actually serve as guides to facilitate parking.

These arrangements will now be described in detail: Sunk in the ground at the point of location of each set of nozzles is a pit 8. An oblong ventilated casing 9 provided with a hinged cover 10 projects upward from said pit above the ground level, and extends lengthwise of a parking space centrally between adjacent spaces. Underground supply pipes 11 from the different pumps project into the pit toward the top and each pipe is there connected to a length of flexible hose 12. This hose normally extends to about the bottom of the pit, and then upwardly a certain distance, with a standard dispensing valve and nozzle unit 13 on its upper end. The nozzle when not in use is disposed below the level of the cover 10, and the depth of the pit and the length of hose is sufficient to enable the nozzle when withdrawn, to be used to service a number of cars parked on either side of the pit.

Adjacent its upper end the hose passes between a pair of locating and guide rollers 14 mounted in the pit. Above the rollers, a platform 15 is removably mounted in the pit, which forms a support for a slide 16. The slide is movable horizontally in the direction of the pit having the companion set of nozzles for the same pumps therein. The hose passes upwardly through the slide and between the hose and the nozzle 13 a hollow bulbous member 17 is interposed, which member forms a part of the gasoline conduit or passage. The slide is provided with a pair of vertically and horizontally spaced rollers 18, arranged relative to the member 17 so that when the latter is fully lowered, the lower

roller will be engaged by the under side of said member, and the slide will be drawn along and away from the other pit into a neutral position; and when said member 17 is raised, the upper roller will initially engage the upper surface of the member 17 and the slide will be moved toward the other pit.

This movement of the slide in the latter direction accomplishes a double object. It is connected by a link 19 to a valve 20 in the pipe 11 just above the hose. This valve is arranged so that when the slide is moved in said direction, the valve is opened and vice-versa. The slide is also connected to a rod 21 which extends horizontally through a guide conduit 22 to the other pit. At its end in said other pit, the rod is provided with a horizontal fork 23 adapted to engage a circular groove 24 provided at the base of the member 17; it being understood that when said member 17 is in its lowest position and is resting on the lower roller 18 of the slide, said groove and fork are horizontally alined, but not necessarily engaged.

The nozzle units of the two pits which are connected to any one pump, are each associated with a slide and forked rod so as to engage and hold the corresponding nozzle unit of the other pit. The nozzles for the different pumps in each pit are arranged so that they are in a line centrally along the major axis of the casing 9, thus keeping the nozzles in a compact space transversely of the parking spaces.

In operation, to dispense gasoline to any car within the range of operation of any particular set of nozzles, the cover 10 of the corresponding pit casing is raised and the proper nozzle is raised out of the pit. This movement of the nozzle and hose connected thereto moves the corresponding slide in the direction of the opposite pit as previously explained. The fork of the rod connected to said slide engages the groove in the member 17 of the other nozzle from the same pump, and of course prevents said nozzle from being withdrawn from its pit. An attendant attempting to raise such nozzle will therefore understand that the other one from the same pump is being used, and will wait until the first nozzle is replaced in position in the pit. This replacing movement withdraws the fork from the other nozzle unit, enables the same to be raised and used. Similarly raising this other nozzle will lock the first one in place against removal. The automatic closing of the valve in the main supply pipe when the extension nozzle is in place in the pit, keeps the pressure off the hose when not in use and tends to prevent a possible leakage of gasoline into the pit.

In order to ventilate the pits, flues 25 project upwardly in the pits from near the bottom of the same, the flues of corresponding pits being connected toward their upper ends by underground cross flues 26.

From these cross flues a lateral conduit 26a leads to a convenient point, such as adjacent one of the uprights 27 of the overhanging roofing of the shop unit, at which point a vent stack 28 extends upwardly alongside of said upright. This stack would preferably terminate in an exhaust hood or fan above the roof.

It is to be understood that in addition to the gasoline dispensing units, air and water supply hoses are located in the pits and at convenient points. Inasmuch, however, as these features require no special mechanism in connection with their use, they have not been shown or described herein. When the number of hoses is limited by a particular installation to one or two per unit, the hoses would preferably be coiled in a shallower pit or trench, or wound on standard hose spools.

It is also to be understood that while I have shown an underground pit and nozzle arrangement, it is possible that the nozzles may be hung overhead or concealed and still manipulated and interlocked in substantially the same manner.

It should be realized that this invention contemplates the parking of cars in an orderly and general parallel manner, as best adapted for parking in down-town and similar relatively congested areas, and for relatively long periods of time. It is thus distinguished from the temporary halting of a car at a service station, merely to take on fuel and immediately proceed, and which halting does not constitute parking in its proper and accepted sense.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. In a liquid dispensing system, a pair of spaced and movable dispensing nozzles, a single supply reservoir to which both nozzles are connected, means to normally maintain the nozzles in a predetermined idle position, and means functioning with the movement of either nozzle from such position to lock the other nozzle against movement.

2. A system for dispensing gasoline to parked cars including a pair of movable dispensing nozzles normally arranged in spaced relation in predetermined relationship to clearly defined parking spaces, a common supply reservoir for both nozzles, and means between the nozzles to automatically prevent one nozzle being moved and used for dispensing purposes if the other nozzle is in use at the time.

3. A system for dispensing gasoline to parked cars including a pair of spaced pits disposed in predetermined relationship to clearly defined parking spaces, a pair of dispensing nozzles normally disposed in the pits, a supply reservoir to which both nozzles are connected, and means functioning with the withdrawal of either nozzle from its pit to prevent the other one from being withdrawn.

4. A gasoline dispensing system comprising a pair of spaced pits, a single supply reservoir, pipes leading from said reservoir to both pits, nozzles normally disposed in the pits, flexible hoses depending in the pits from the corresponding pipes and then extending upwardly to the nozzles, means to support the nozzles when in the pits at a predetermined level, and means incorporated in part with said supporting means to lock the nozzle in one pit against upward movement when the nozzle in the other pit is raised from its supporting means.

5. A gasoline dispensing system comprising a pair of spaced pits, a single supply reservoir, pipes leading from said reservoir to both pits, nozzles normally disposed in the pits, flexible

hoses depending in the pits from the corresponding pipes and then extending upwardly to the nozzles, slides mounted in the pits for horizontal movement to and from each other, means mounted in connection with each nozzle to be supported by and engage and move a slide away from the other pit when the nozzle associated with said means is lowered into its pit a predetermined distance and to move said slide in the opposite direction when the nozzle is raised and means operated by each slide and the means for moving the same for locking the other nozzle against upward movement from its pit.

6. A structure as in claim 5 with a valve in each pipe, and means between the slide and valve to close the latter when the slide is moved in the direction of the opposite pit and vice versa.

7. In a liquid dispensing system, a pair of spaced and movable dispensing nozzles, a single supply reservoir to which both nozzles are connected, means to normally maintain the nozzles in a predetermined idle position, and interlocking means to prevent one nozzle from being moved from such idle position while the other one is moved for use.

8. In a liquid dispensing system, a pair of spaced and movable dispensing nozzles, a single supply reservoir to which both nozzles are connected, spaced pits in which said nozzles are normally disposed when not in use, and interlocking means between the pits to prevent removal of one nozzle from its pit when the other nozzle is withdrawn from the corresponding pit.

9. In a liquid dispensing system, a pair of spaced and movable dispensing nozzles, a single supply reservoir, conduits from the reservoir to said nozzles, normally closed valves in said conduits, spaced pits in which said nozzles are normally disposed when not in use and interlocking means between the pits to prevent removal of one nozzle from its pit when the other nozzle is withdrawn from the corresponding pit, and means associated with said interlocking means and functioning therewith to open the valve of the nozzle to be withdrawn.

FRANK V. MAYO.