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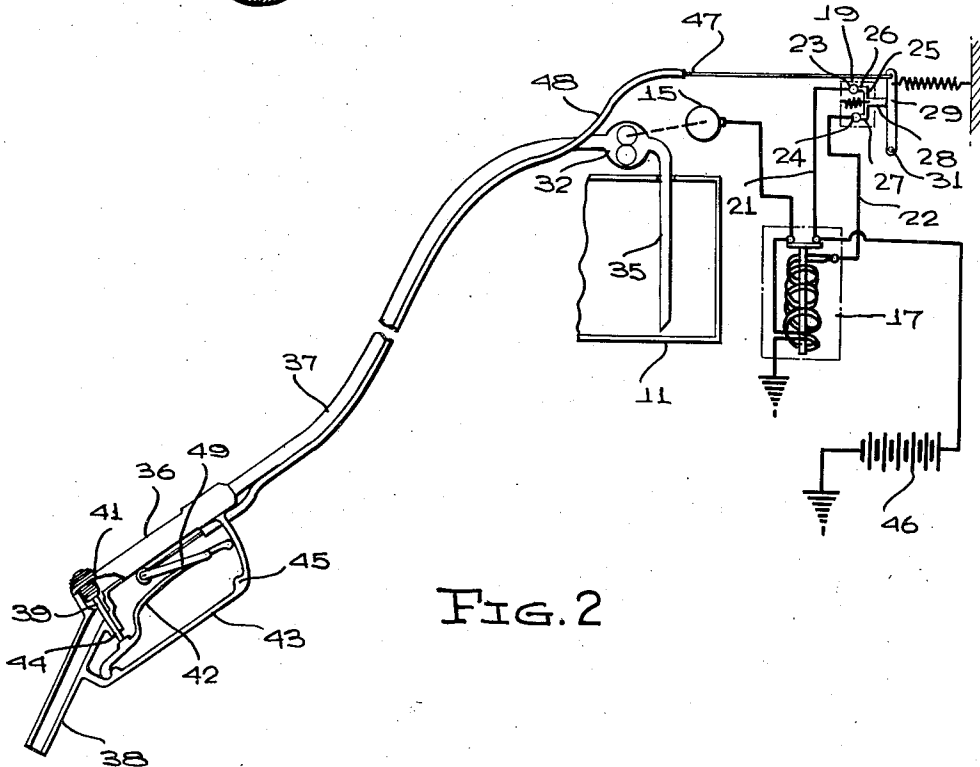
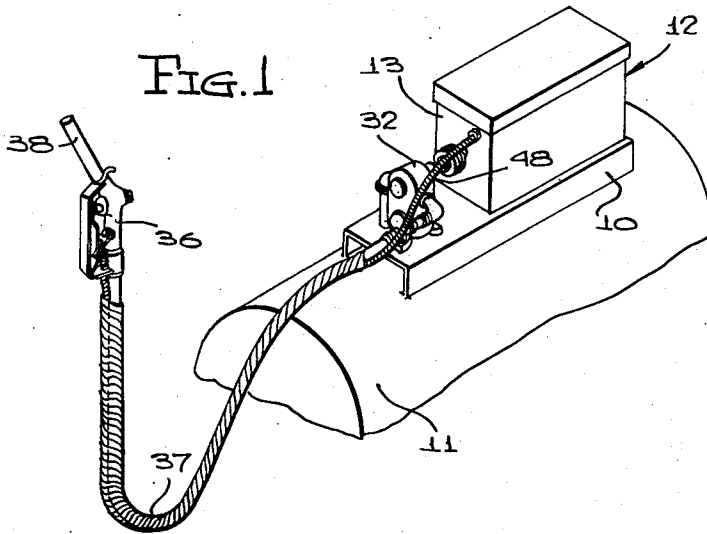
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REMOTE CONTROL LIQUID FUEL DISPENSING ATTACHMENT

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2 Sheets-Sheet 1



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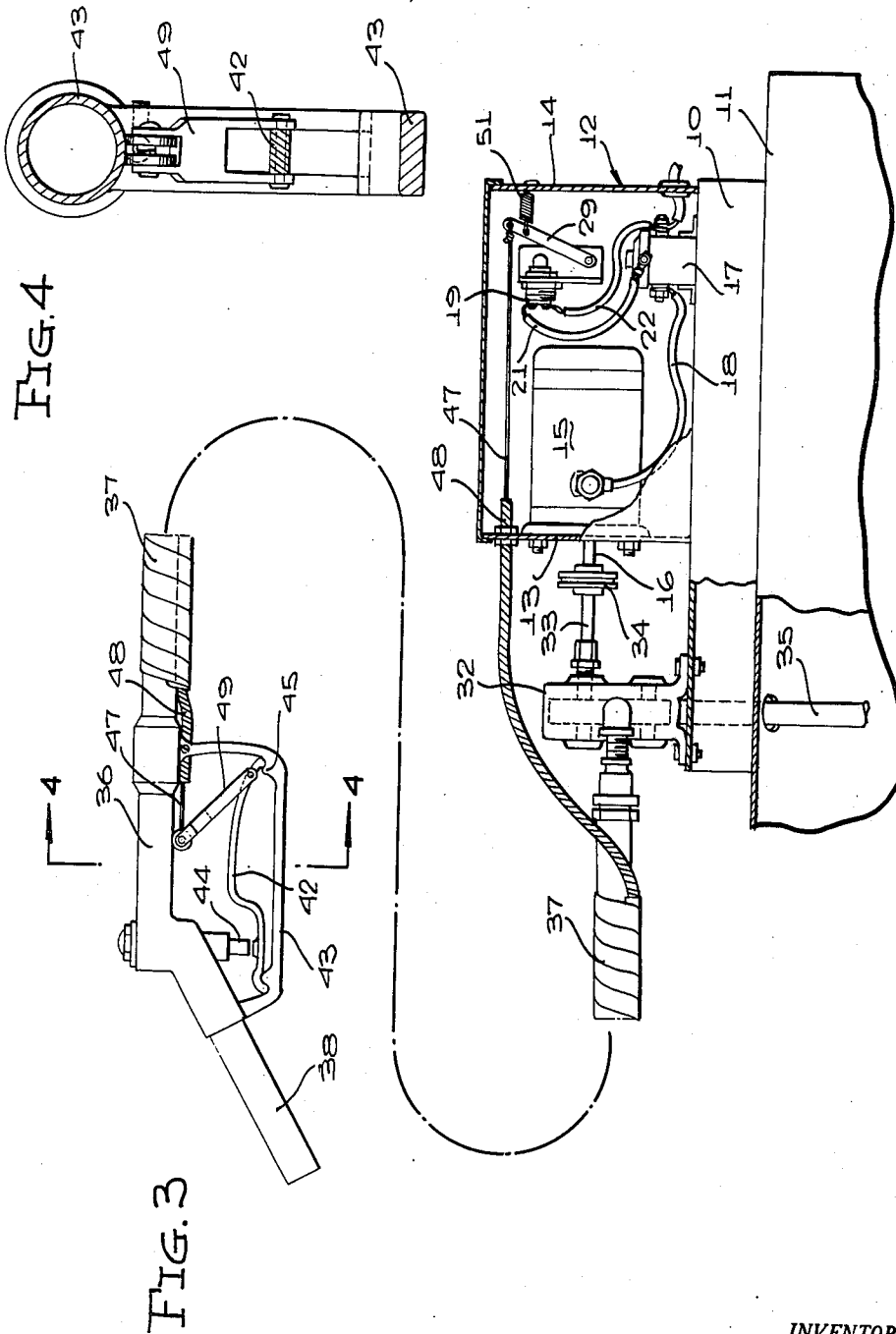
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REMOTE CONTROL LIQUID FUEL DISPENSING ATTACHMENT

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REMOTE CONTROL LIQUID FUEL DISPENSING ATTACHMENT

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3 Claims. (Cl. 222-76)

The present invention relates to a remote control liquid fuel dispensing attachment for a tank truck or tank trailer.

An object of the present invention is to provide a remote control liquid dispensing attachment which lends itself to safe and efficient transfer of liquid fuel from a tank truck or a tank trailer to a farm implement, one which saves fuel, time, and labor in such transfer of liquid fuel, one which is readily applicable to the transfer of other liquids, such as liquid fertilizer, one which is sturdy in construction and of simple structure, easily manufactured and assembled, and one which is highly efficient in action.

These and other objects and advantages of the present invention will be fully apparent from the following description when taken in connection with the annexed drawings, in which:

Figure 1 is a perspective view of the upper end portion of the tank showing the remote control liquid dispensing attachment of the present invention installed thereon;

Figure 2 is a fragmentary sectional view of the dispensing handle of the present invention with a schematic view of the electrical components of the invention;

Figure 3 is a side elevational view of the dispensing handle and nozzle and a side elevational view of the electrical components as mounted within the box on the upper end of the tank; and

Figure 4 is a sectional view taken on the line 4-4 of Figure 3, and on an enlarged scale.

Referring in greater detail to the drawings in which like numerals indicate like parts throughout the several views, the remote control liquid dispensing attachment of the present invention comprises a base 10 of inverted U-shaped configuration fixedly secured on the upper end of a tank 11 and an upstanding box 12 including spaced end walls 13 and 14 positioned upon and fixedly carried by the base 10.

A motor 15 having a drive shaft 16 is arranged within the box 12 so that the drive shaft 16 projects through the end wall 13 of the box 12. A starter assembly, indicated generally by the reference numeral 17, is positioned within the box 12 and is electrically connected to the motor 15 by a conduit 18 and grounded through the base 10 and the framework of the box 12.

A switch 19 is positioned within the box 12 adjacent to and above the starter assembly 17 and is connected by wires 21 and 22 to the starter assembly 17 for operation of the latter. The switch 19 includes a pair of fixed contacts 23 and 24 and a member 25 having other fixed contacts 26 and 27 projecting from one face and an element 28 projecting from its other face is positioned so that the fixed contacts 26 and 27 are adjacent to and normally out of contact engagement with the fixed contacts 23 and 24 and the element 28 is remote from the fixed contacts 23 and 24.

The member 25 is mounted in the interior of the box

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12 for movement toward and away from the fixed contacts 23 and 24.

An arm 29 is positioned within the box 12 adjacent the end wall 14 and is mounted upon the side wall of the box 12, there being a pivot pin 31 extending through one end of the arm 29 and anchored in the wall of the box 12 so that the arm 29 has rocking movement about the pivot pin as the horizontal axis. The arm 29 is contiguous to the element 28 on the member 25.

A pump 32 having an input side and an output side is positioned upon and carried by the base 10 adjacent the other end of the latter and is operatively connected to the projecting motor shaft 16 by means of a short shaft 33 and a universal joint connection 34, the latter being of conventional make.

A conduit 35 is connected to the input side of the pump 32 and extends to the tank 11 below the level of fuel contained therein.

A hollow elongated handle 36 is positioned remotely from the tank 11 and is connected to the output side of the pump 32 by means of a flexible conduit 37. A discharge nozzle 38 extends from the end of the handle 36 opposite to the point of connection of the conduit 37 and is connected in communication with the interior of the handle 36.

Within the handle 36 and adjacent the discharge nozzle 38 is positioned a valve 39 and a spring 41 keeps the valve 39 in the position normally preventing the flow of fuel from the handle 36 to the nozzle 38.

Hand actuable means is provided exteriorly of and carried by the handle 36 and is operably connected to the valve 39 for moving it from the flow preventing position to a position permitting the flow of fuel from the handle 36 into and through the nozzle 38.

Specifically, this hand actuable means consists in a lever 42 fixedly secured inwardly of one end to the stem of the valve 39 and slidable within the frame 43 of the handle 36 from the position in which the end remote from the valve stem, indicated by the reference numeral 44, is positioned within a notch 45 formed in the adjacent end of the frame 43, as shown in Figure 3, to a position in which that end of the lever 42 is toward the body of the handle 43 and remote from the notch 45, as shown in Figure 2.

Means is provided connecting the other end of the arm 29 to the lever 42 for movement of the arm 29 so that the fixed contacts 26 and 27 on the element 28 engage with the fixed contacts 23 and 24 to complete the circuit from a battery 46 to energize the starter assembly 17 and the pump 32 in response to execution of the movement of the lever 42 from the flow preventing position to the flow permitting position. Specifically, this means includes a flexible cable element 47 enclosed in a sheath 48 and having one end fixed to the end of the arm 29 remote from the pivot pin 31 and having the other end fixed to one end of a push rod 49, the other end being pivotally connected to the adjacent end of the lever 42. A spring 51 biases the arm 29 for movement to the position in which the fixed contacts 26 and 27 on the element 28 are out of engagement with the fixed contacts 23 and 24. The spring 51 has one end anchored in the box end wall 14 and the other end secured to the arm 29 intermediate the ends of the latter.

In operation, the remote control dispensing attachment of the present invention is installed upon a tank preferably mounted upon a body or trailer body and transportable to the work location, the truck body or trailer body being provided with the battery 46 conventionally installed and having one side grounded to the truck or trailer body. The dispensing attachment is useful for refueling farm tractors, combines, and all implements

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which are self-powered. It may also be used to refuel power boats or any engine wherever located. The dispensing attachment provides a safe and efficient method of refueling any engine. The simultaneous actuation of the pump 32 upon movement of the lever 42, caused by the movement of the cable 47 to close the contacts in the switch 19 permits the safe and accurate dispensing of liquid fuels without spillage or waste.

What is claimed is:

1. The combination with a closed tank containing a body of liquid fuel of a remote control dispensing attachment comprising a base supported on said tank, an upstanding box including spaced end walls positioned upon and fixedly carried by said base, a motor having a drive shaft arranged within said box so that the drive shaft projects through one of the end walls of said box, a switch within said box and electrically connected to said motor, said switch including a pair of fixed contacts, and a member having a pair of fixed contacts and a projecting element carried by said member positioned so that the fixed contacts are adjacent to and normally out of contacting engagement with said first-named fixed contacts and the projecting element is remote from said first named fixed contacts, said member being movable toward and away from said first-named fixed contacts, a pump having an input side and an output side positioned upon and carried by said base and operatively connected to said projecting motor shaft, a conduit connected to and carried by the input side of said pump and extending into said tank, a hollow elongated handle positioned remote from said tank, a flexible conduit connecting the output side of said pump to one end of said handle, a discharge nozzle connected in communication with the other end of said handle, a valve in said handle adjacent said nozzle and normally in position to prevent flow of fuel from said handle through said nozzle, hand actuable means exteriorly of and carried by said handle and operatively connected to said valve and operable to shift said valve from the flow preventing position to a position permitting flow of fuel from said handle through said nozzle, and means connecting said movable member projecting element to said hand actuable means for movement of the fixed contacts carried by said movable member into contacting engagement with the fixed contacts of said switch in response to the execution of the movement of said hand actuable means from the flow preventing position to the flow permitting position.

2. The combination with a closed tank containing a body of liquid fuel, of a remote control dispensing attachment comprising a base supported on said tank, an upstanding box including spaced end walls positioned upon and fixedly carried by said base, a motor having a drive shaft arranged within said box so that the drive shaft projects through one of the end walls of said box, a starter assembly within said box and electrically connected to said motor, a switch within said box and electrically connected to said starter assembly, said switch including a pair of fixed contacts and a member having a pair of fixed contacts projecting from one face and an element projecting from the other face positioned so that the fixed contacts are adjacent to and normally out of contacting engagement with said first-named fixed contacts and the projecting element is remote from said first-named fixed contacts, said member being movable toward and away from said first-named fixed contacts, an arm positioned within said box adjacent the other end wall thereof and contiguous to the projecting element on said movable member and having one end supported for rocking movement about a horizontal axis, a pump having an input side and an output side positioned upon and carried by said box and operatively connected to said projecting motor shaft, a conduit connected to and carried by the input side

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of said pump and extending into said tank, a hollow elongated handle positioned remote from said tank, a flexible conduit connecting the output side of said pump to one end of said handle, a discharge nozzle connected in communication with the other end of said handle, a valve in said handle adjacent said nozzle and normally in position to prevent flow of fuel from said handle through said nozzle, hand actuable means exteriorly of and carried by said handle and operatively connected to said valve and operable to shift said valve from the flow preventing position to a position permitting flow of fuel from said handle through said nozzle, and means connecting the other end of said arm to said hand actuable means for movement of said arm into engagement with the projecting element of said movable member in response to the execution of the movement of said hand actuable means from the flow preventing position to the flow permitting position.

3. The combination with a closed tank containing a body of liquid fuel, of a remote control dispensing attachment comprising a base supported on said tank, an upstanding box including spaced end walls positioned upon and fixedly carried by said base, a motor having a drive shaft arranged within said box so that the drive shaft projects through one of the end walls of said box, a starter assembly within said box and electrically connected to said motor, a switch within said box and electrically connected to said starter assembly, said switch including a pair of fixed contacts and a member having a pair of fixed contacts projecting from one face and an element projecting from the other face positioned so that the fixed contacts are adjacent to and normally out of contacting engagement with said first-named fixed contacts and the projecting element is remote from said first-named fixed contacts, said member being movable toward and away from said first-named fixed contacts, an arm positioned within said box adjacent the other end wall thereof and contiguous to the projecting element on said movable member and having one end supported for rocking movement about a horizontal axis, a pump having an input side and an output side positioned upon and carried by said box and operatively connected to said projecting motor shaft, a conduit connected to and carried by the input side of said pump and extending into said tank, a hollow elongated handle positioned remote from said tank, a flexible conduit connecting the output side of said pump to one end of said handle, a discharge nozzle connected in communication with the other end of said handle, a valve in said handle adjacent said nozzle and normally in position to prevent flow of fuel from said handle through said nozzle, hand actuable means exteriorly of and carried by said handle and operatively connected to said valve and operable to shift said valve from the flow preventing position to a position permitting flow of fuel from said handle through said nozzle, means connecting the other end of said arm to said hand actuable means for movement of said arm into engagement with the projecting element of said movable member in response to the execution of the movement of said hand actuable means from the flow preventing position to the flow permitting position, and spring means operatively connected to said arm intermediate its ends and said other box end wall for biasing said arm toward its normal position out of contacting engagement with said projecting element.

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