A. W. WHEATON.

LIQUID DELIVERING DEVICE.

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1,230,356. Patented June 19, 1917.

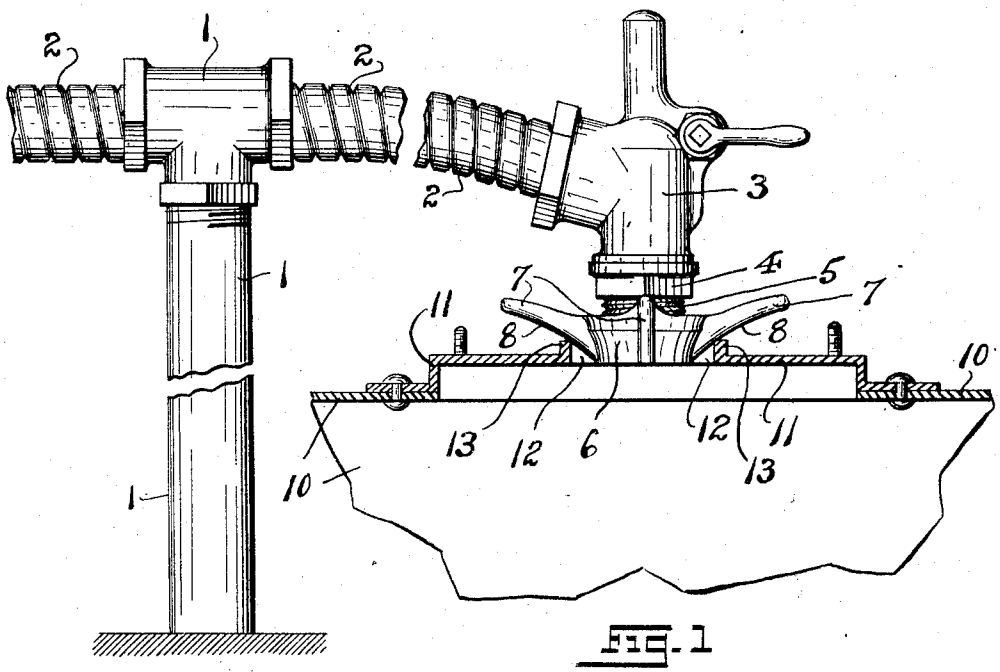

Fig. 1

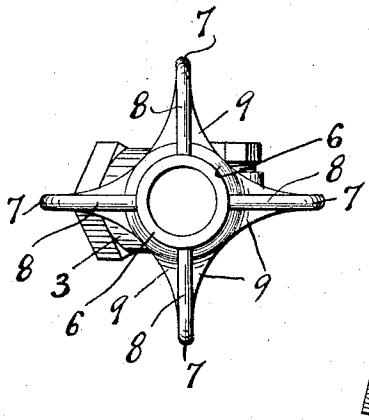

Fig. 2

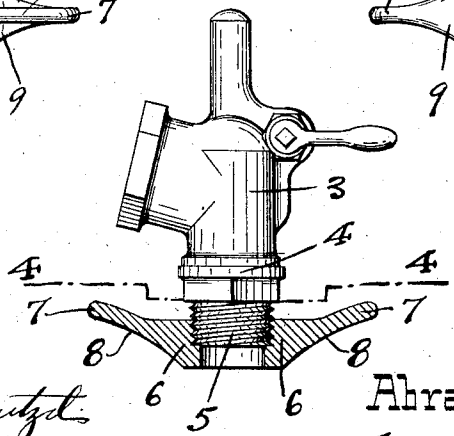

Fig. 3

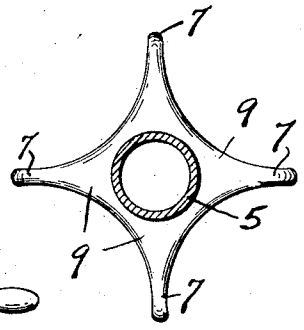

Fig. 4

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LIQUID-DELIVERING DEVICE.

1,230,356. Specification of Letters Patent. Patented June 19, 1917.

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To all whom it may concern:

Be it known that I, ABRAM W. WHEATON, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Liquid-Delivering Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The present invention relates, generally, to improvements in filling valves for liquid delivering devices; and the invention relates, more particularly, to the filling devices used for delivering oil, gasolene, and other liquids to the tank wagons or motor trucks, tank railroad cars, or other containers in which such liquids are shipped or carried from place to place.

Usually oil, gasolene and similar liquids are delivered to tank wagons, etc., through a system of delivery pipes leading from the storage tanks, such delivery pipes terminating in a stand-pipe to which is connected a flexible pipe member, having at its free end a faucet-valve. When it is desired to fill a tank-wagon, the same is driven up to the stand-pipe, and the operator removes the filling port cover from the tank wagon, and then manipulates the flexible pipe member so as to position the faucet valve above said filling port, after which the faucet-valve is opened to permit the liquid to flow therethrough into the tank wagon. Should the operator become inattentive so as to allow the faucet-valve to move away from the filling port, or, where the tank-wagon is horse-drawn, should the horses suddenly start up with the same result, a considerable amount of liquid is spilled over the sides of the tank and is lost. Furthermore, it is well known, that, when delivering gasolene through the delivery pipes and faucet-valve, the rapid flow thereof under pressure, produces, by reason of the friction set up between the delivery pipes and the flowing liquid, a certain amount of static electricity, and it has happened that, by reason of a lack of perfect contact of the delivery pipes and faucet-valve with the metallic material of the tank, a charge of such static electricity has jumped, in the form of a spark, from the former to the latter, igniting the gasolene fumes, with the result that a serious explosion with consequent damage and loss as to both property and life has occurred.

It is, therefore, the object of the present invention to provide means in connection with the faucet-valve of the delivery pipes, which will not only permit the operator to firmly hold and maintain, against accidental displacement, the faucet valve in proper position over the filling port of the tank-wagon, but which will also establish a positive electrical contact between the former and the latter, which will prevent the liability of electrical discharge between such parts and the consequent liability of explosions, fire, and resulting damage.

The invention consists, therefore, in the novel supporting member for the faucet-valves of liquid delivery devices; and the invention consists, furthermore, in the novel arrangements and combinations of the several devices and parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the claims appended thereto.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the stand-pipe and flexible pipe of a liquid delivering device, the latter having at its free end the faucet-valve equipped with the novel supporting frame, made according to and embodying the principles of my present invention, the same being shown in operative relation to the filling port of a tank-wagon.

Fig. 2 is a bottom view of said faucet valve and supporting frame; Fig. 3 is a side view of said faucet-valve showing said supporting frame in vertical section; and Fig. 4 is a horizontal section, taken on line 4—4 in said Fig. 3, looking downward.

Similar characters of reference are employed in all of the herein described views, to indicate corresponding parts.

Referring now to said drawings, the reference character 1 indicates the stand-pipe of a delivery system leading from the storage tank for oil, gasolene or other liquids. Connected with the upper end of said stand-pipe 1 is a metallic flexible pipe 2, to the free end of which is attached the faucet-valve 3, of any desirable construction. The flexible pipe 2 renders the faucet-valve 3 movable so that the same may be easily car-

ried into position over the filling port of a tank-wagon, or other container.

Connected with the outlet end 4 of the said faucet-valve 3 is screw-threaded nipple portion 5.

The novel supporting frame comprises an annular ring-like main body-portion 6, which is preferably internally threaded to screw on to said screw-threaded nipple-portion 5 of said faucet-valve 3. Extending outwardly and radially from said main body-portion 6, and preferably integrally formed therewith, are a plurality of supporting-arms or horns 7. These supporting arms or horns 7 are provided on their under sides with upwardly inclined, and preferably slightly curved contour 8. The base of each supporting arm or horn 7, where it joins said main body is widened laterally to provide laterally extending reinforcing webs 9. Any desired number of said supporting-arms or horns 7 may be provided, but, preferably, they are four in number, radiating at an angle of ninety degrees one from the other. While I have described the supporting-frame, thus constructed, as a separable part of the faucet-valve 3, it must be understood, that, if it is so desired, the same may be cast as an integral part of the body or casing of said faucet-valve 3.

Referring now to Fig. 1 of the drawings, the reference character 10 indicates a fragment of the tank body of a tank-wagon or similar container, which is usually provided with the dome-like portion 11, in the upper wall of which is formed the filling port or opening 12, usually bounded by the vertical flange portion 13, over which the cover-portion (not shown) is clamped down when the tank is full.

In practice the tank-wagon is driven up adjacent to the stand-pipe 1, and the filling port or opening 12 being opened, the flexible pipe 2 is flexed to position the faucet-valve over said filling port or opening 12, so that its outlet end is positioned over the same. When so positioned, the operator presses down on the faucet-valve to carry said supporting-frame into contact with the margin of said filling port or opening 12, thus causing the supporting-arms or horns 7 to engage the flange-portion 13, or other marginal structure of the filling port or opening 12. The under side of said supporting-arms or horns 7 being upwardly inclined or curved, as at 8, the same, when in engagement with the flange-portion 13 permits the outlet of said faucet-valve to enter the filling-port or opening 12 for a slight distance, and at the same time such curved or inclined formation 8 of the supporting-arms or horns 7 tends to permit the supporting frame to readily adapt itself to various diameters of filling-ports or openings 12; tends to center the outlet of said faucet-valve in said filling-ports or openings; and tends to hold the faucet-valve when so positioned, against lateral movement or displacement, in a manner clearly to be understood by an inspection of said Fig. 1 of the drawings.

It will thus be apparent that the faucet-valve may now be opened to permit the flow of the liquid therethrough and into the tank-wagon, and it will be further apparent that any movement of the tank-wagon, caused either by the restlessness or sudden movement of the horses drawing the same, or movement thereof from other causes, will be transmitted to the faucet-valve through said supporting frame, without danger of displacing the faucet-valve from the filling port or opening 12, and the spilling and waste of the liquid before the operator can shut off the faucet-valve. It will be clear that the operator merely applies to the faucet-valve a downward pressure sufficient to maintain the supporting-frame in contact with the marginal structure of the filling port or opening, so that less careful attention upon the part of the operator is required, and danger of his inattention resulting in the spilling and waste of the liquid is eliminated.

It will be also understood that, since the supporting-frame is metallic, like the faucet-valve, and since the same is maintained in contact with the metallic material of the tank-wagon, any static electricity tending to accumulate in or on the supply pipe and faucet valve is distributed through the supporting frame to or upon the body of the tank-wagon and to the ground, so that the same is constantly carried off, and is not allowed to accumulate in such quantity as is liable to cause a spark, with danger of igniting liquids of explosive or combustible character, as above explained.

I am aware that some changes may be made in the general arrangements and combinations of the devices and parts of my present invention as well as in the details of the construction of the same, without departing from the scope thereof as set forth in the foregoing specification, and as defined in the appended claims. Hence, I do not limit my invention to the exact arrangements and combinations of the devices and parts as set forth in the foregoing specification, nor do I confine myself to the exact details of the construction of said parts as illustrated in the accompanying drawings.

I claim:—

1. The combination with a movable delivery pipe of a faucet-valve connected with the free end of said pipe, and means connected with the outlet end of said faucet-valve for engaging the marginal edges of a filling opening with which said faucet-valve may be registered, to support said faucet-

valve in operative relation to said filling opening, comprising horizontally radiating supporting arms extending outwardly from the outlet end of said faucet-valve, the under side of said supporting-arms being inclined upwardly and outwardly from the point of juncture with said faucet-valve, and adapted to centralize the latter in said filling opening and accommodate the same to filling openings of various sizes.

2. The combination with a movable delivery pipe of a faucet-valve connected with the free end of said pipe, an exteriorly threaded extension connected with the outlet end of said faucet-valve, a supporting frame capable of conducting electricity comprising an interiorly threaded annular main body adapted to screw on said threaded extension, and horizontally radiating supporting arms extending outwardly from said main body, the under side of said supporting arms being inclined upwardly and outwardly from the point of juncture thereof with the main body.

In testimony that I claim the invention set forth above I have hereunto set my hand this 17th day of January, 1917.

ABRAM W. WHEATON.

Witnesses:
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FRED'K H. W. FRAENTZEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."