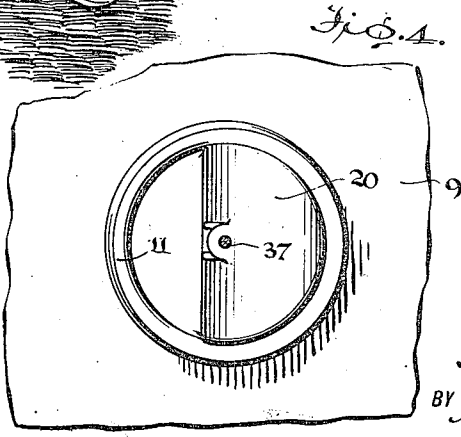
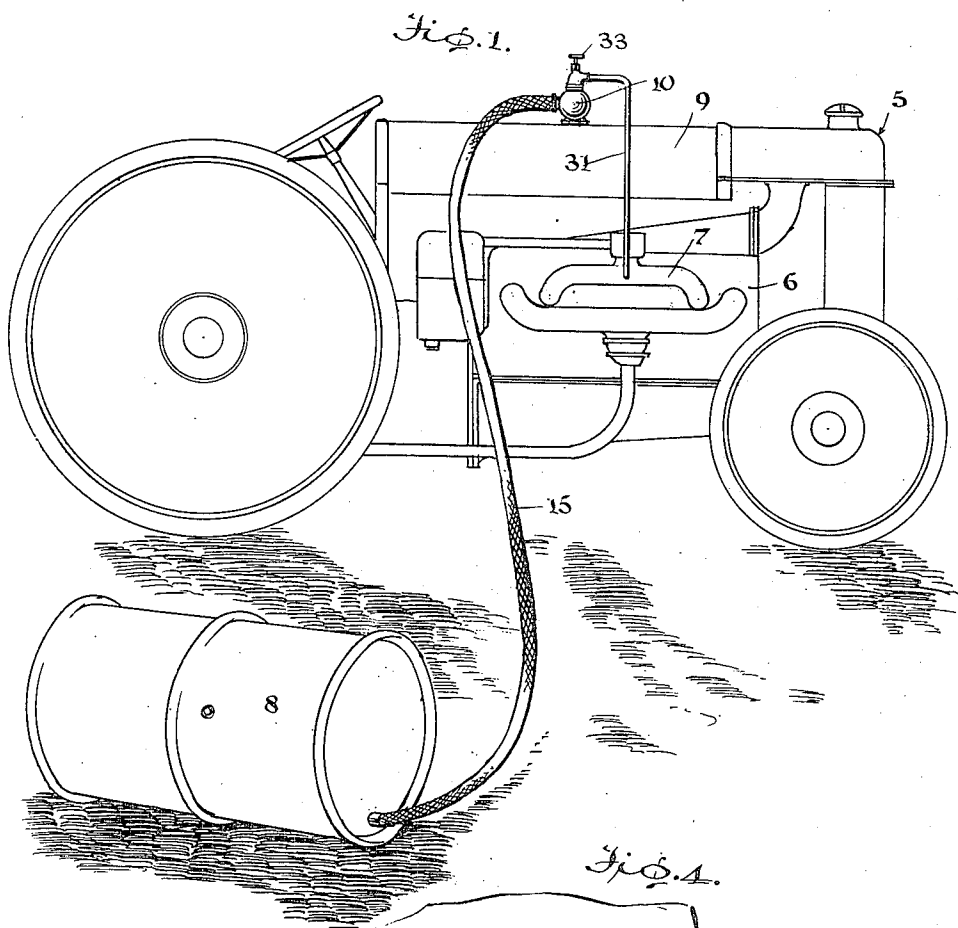


Feb. 6, 1923.

J. M. CARR.
TANK FILLER.
FILED Nov. 10, 1921.

1,443,977

2 SHEETS-SHEET 1



WITNESSES
R. E. Rousseau
J. D. Guesada

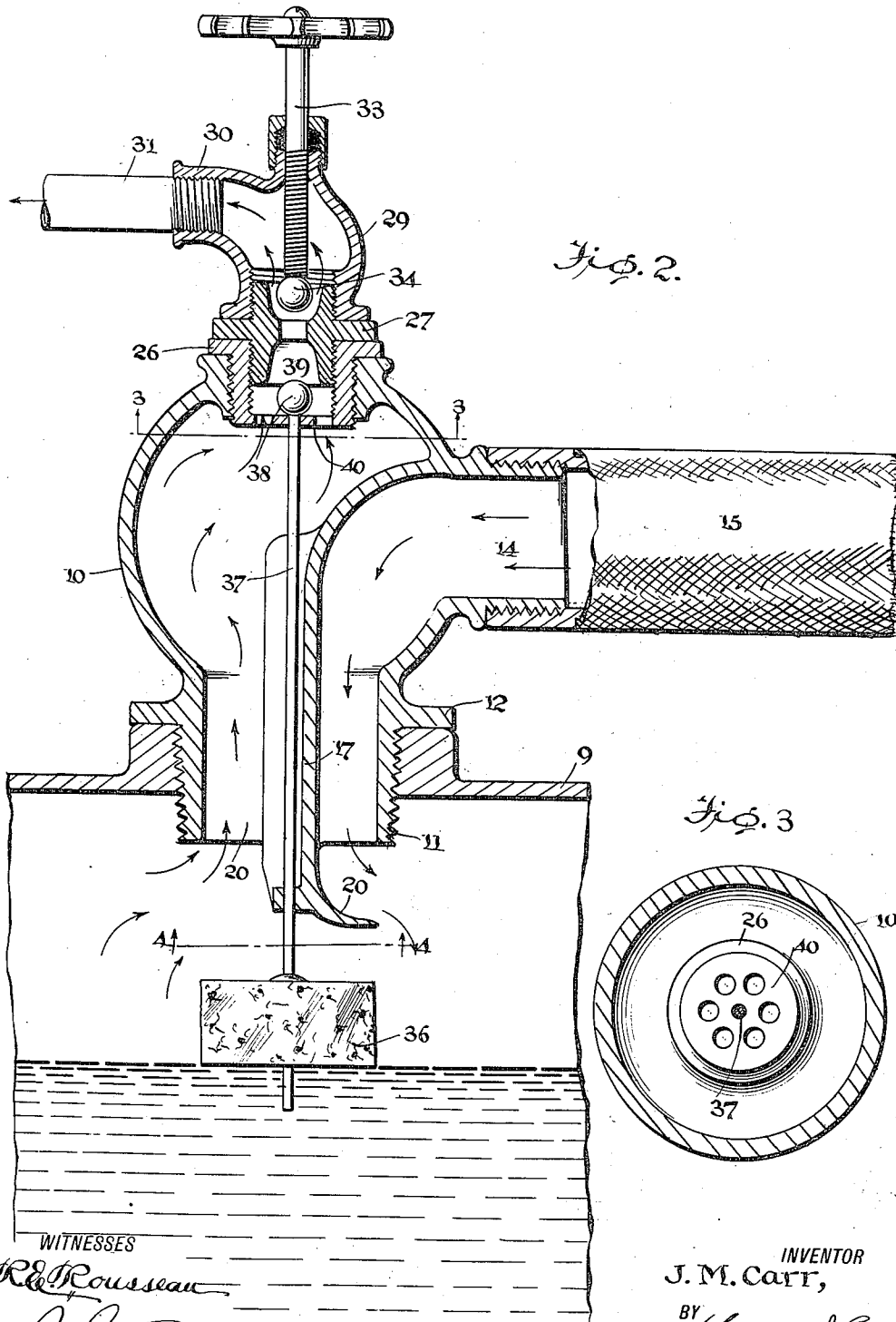
INVENTOR
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ATTORNEYS

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2 SHEETS-SHEET 2



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Patented Feb. 6, 1923.

1,443,977

UNITED STATES PATENT OFFICE.

JESSE MYRON CARR, OF STOCKTON, CALIFORNIA.

TANK FILLER.

Application filed November 10, 1921. Serial No. 514,426.

To all whom it may concern:

Be it known that I, JESSE M. CARR, a citizen of the United States, and resident of Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Tank Fillers, of which the following is a specification.

This invention relates to improvements in valves especially adapted for application to fuel tanks of motor vehicles.

An important object of this invention is to provide novel means whereby the suction or vacuum incident to the operation of internal combustion engines may be utilized to draw the fuel from a drum into the fuel tank of the vehicle.

A further object of the invention is to provide a valve of the class described which is simple to apply, efficient in use and cheap to manufacture.

In the accompanying drawing:

Figure 1 is a side elevation of the improved valve applied.

Figure 2 is a vertical sectional view through the same applied.

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 2.

Figure 4 is a sectional view taken on line 4—4 of Figure 2.

In the drawing the numeral 5 designates a tractor although it is obvious that the improved valve forming the subject matter of this application may be employed in connection with a motor vehicle of any type. In this case the tractor or vehicle 5 is provided with the usual internal combustion engine 6 having an intake manifold 7 and the vacuum or suction in said manifold incident to the operation of the engine is utilized as a means for drawing the fuel from a drum 8 into the main fuel tank 9 of the engine.

The improved valve includes a globular body 10 having its forward portion exteriorly screw threaded as indicated at 11 for attachment to the tank 9. The body of the valve is provided with a flange 12 which engages the boss surrounding the filling opening in the tank and said flange may be polygonal sided to form a means whereby a wrench may be engaged with the valve for the purpose of applying or removing the same.

The body 10 is provided with a laterally projecting inlet branch 14 to which a nose

15 is connected at one end and the other end of the hose or pipe is connected to a drum 8. With reference to Figure 2 it will be observed that a partition 17 is extended centrally through the valve and has its upper portion curved in the direction of the inlet branch 14 so that when the liquid is drawn into the valve it will be directed downwardly into the channel formed by the partition 17 and one of the side walls of the valve 10. The lower portion of the partition 17 is curved laterally to form a deflecting tongue 20 which causes the fuel to flow away from the air inlet opening 22 in the attaching portion 11 of the valve casing.

The upper portion of the valve casing 10 is provided with an opening into which an interiorly and exteriorly screw threaded opening 26 is threaded and a coupling 27 is threaded into the upper portion of the nut. An elbow 29 is in turn threaded onto the upper portion of the coupling 27 and is provided with a branch 30 to which a suction pipe 31 is connected. It will be seen by reference to Fig. 1 that the suction pipe 31 is connected to the intake manifold 7 so that the suction incident to the operation of the engine may be utilized as a means to draw the air from the pipe 7 and cause the oil or fuel to flow from the drum 8 into the fuel tank 9.

When it is desired to cut off the suction through the valve casing, it is merely necessary to advance the valve seating stem 33 to cause the check valve 34 to engage the seat in the upper side of the coupling 27.

When the tank is full or nearly full a float 36 is elevated and the stem 37 connected thereto is moved upwardly for engaging the float actuated valve 38 with the valve seat 39 in the under side of the coupling 27.

It is thus seen that when the tank is full or nearly full the float actuated valve 38 is seated to cut off the suction through the valve and further flow of fuel through the tank is stopped. The lower portion of the duct 26 is provided with a perforated guide 40 through which the air may freely pass and said guide 40 slidably receives a stem 37.

With reference to the foregoing description taken in connection with the accompanying drawing, it will be seen that a valve constructed in accordance with this invention may be used in connection with any motor vehicle without in any way altering the construction of the vehicle or impairing the

operation of the same. When it is desired to fill the tank, it is merely necessary to connect the hose 31 with the drum 8 and the elbow 29 and to subsequently start the engine. The suction created by the operation of the engine draws air from the tank and thereby creates a vacuum in the tank which draws the fuel from the drum. By the use of the improved valve a tank of 20 gallons capacity may be filled in approximately one minute.

Having thus described the invention, what is claimed is:—

1. A filling valve for fuel tanks of internal combustion engines comprising a casing adapted for attachment to the fuel tank and having a centrally arranged partition defining a fuel inlet passage and an air outlet passage, a coupling connected to said casing and having upper and lower valve seats, and an air outlet passage between the seats, means whereby the coupling may be connected to a source of suction, a float having a stem provided with a ball valve adapted to engage the lower valve seat whereby to automatically cut off the suction, the lower

portion of the partition being formed with a valve stem guide and with a curved terminal portion constituting a means to direct the incoming fuel away from the air outlet passage, a ball valve associated with the upper valve seat, and a manually controlled stem for seating said second valve.

2. A filling valve for tanks of internal combustion engines comprising a casing adapted for attachment to the fuel tank and having a centrally arranged partition defining a fuel inlet passage and an air outlet passage, a coupling connected to said casing and having upper and lower valve seats and an air outlet passage between said valve seats, an elbow connected to said coupling and having means whereby the same may be connected to a source of suction, a float having a stem provided with a ball valve adapted to engage the lower valve seat whereby to automatically cut off the suction when the tank is filled, a ball valve associated with the upper valve seat, and a manually controlled stem passing through said elbow for seating said second named valve.

JESSE MYRON CARR.