

A. JUDEVINE.
TANK OR CONTAINER.
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965,634.

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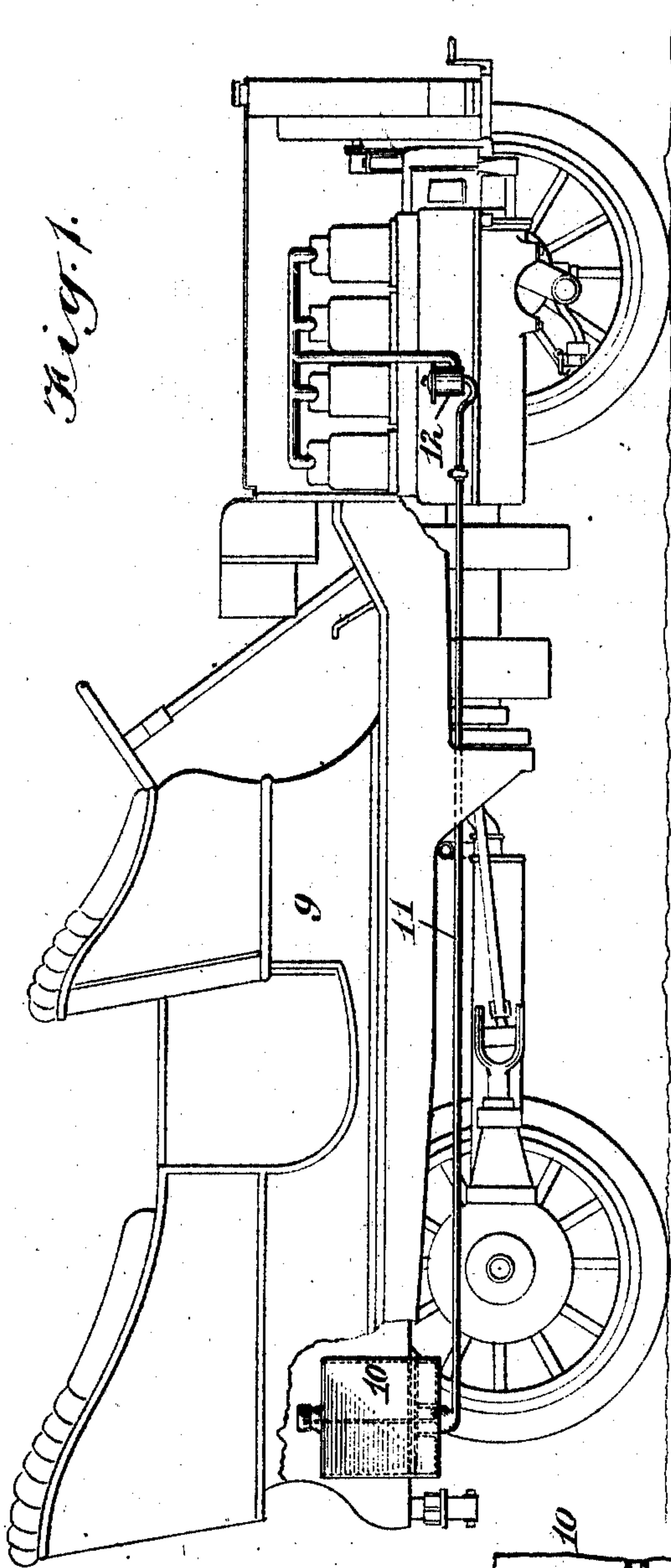


Fig. 3.

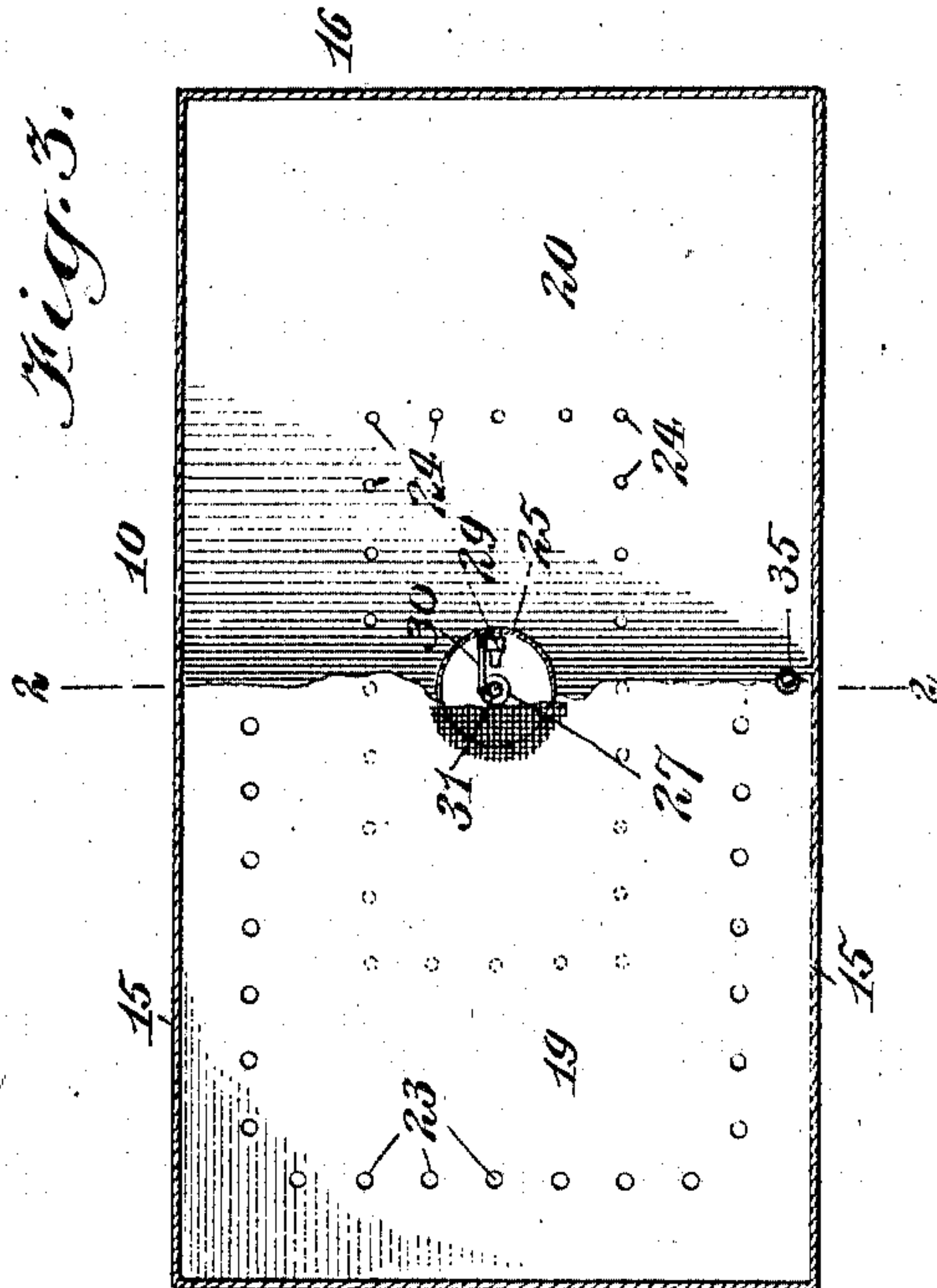


Fig. 2.

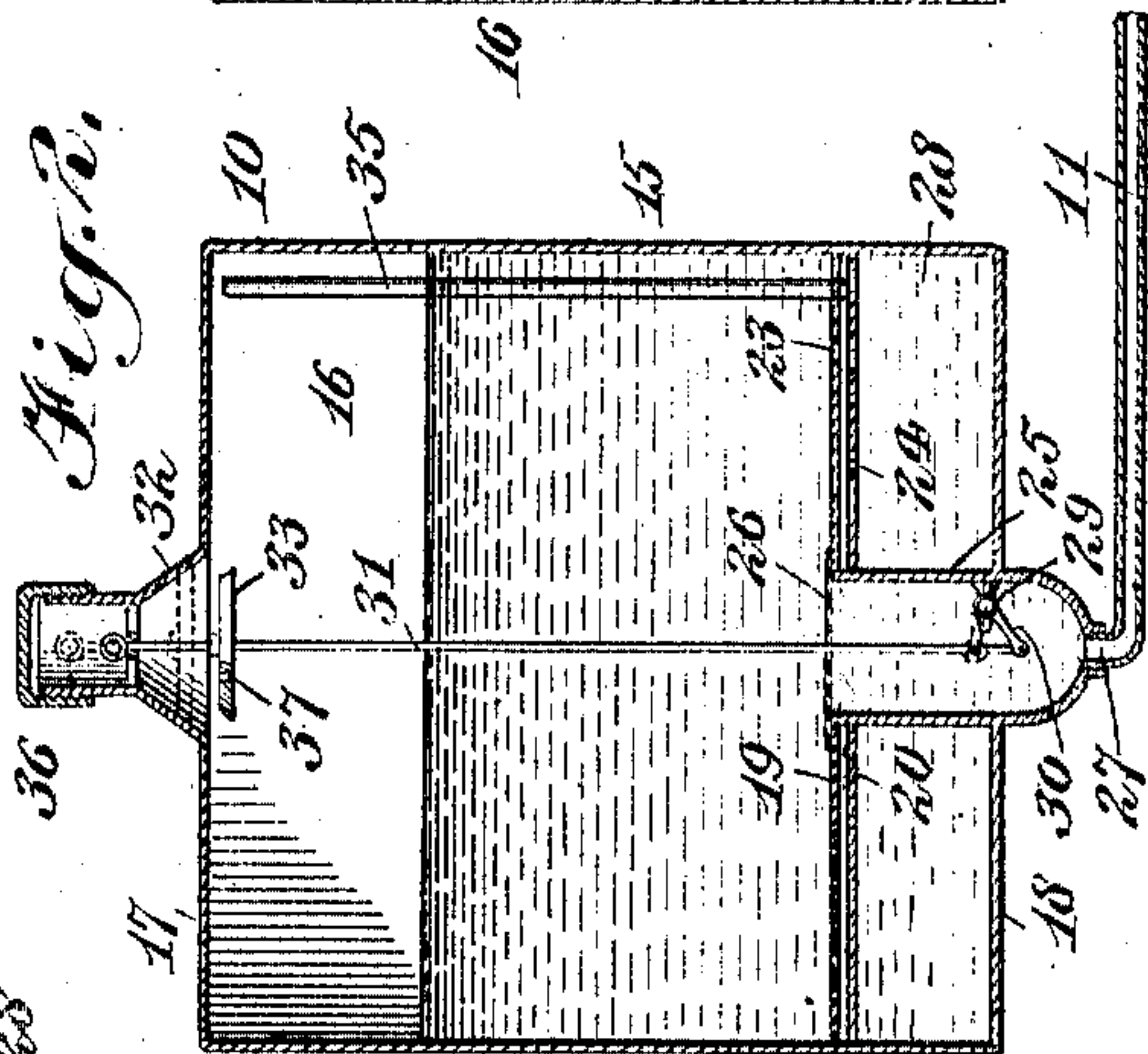
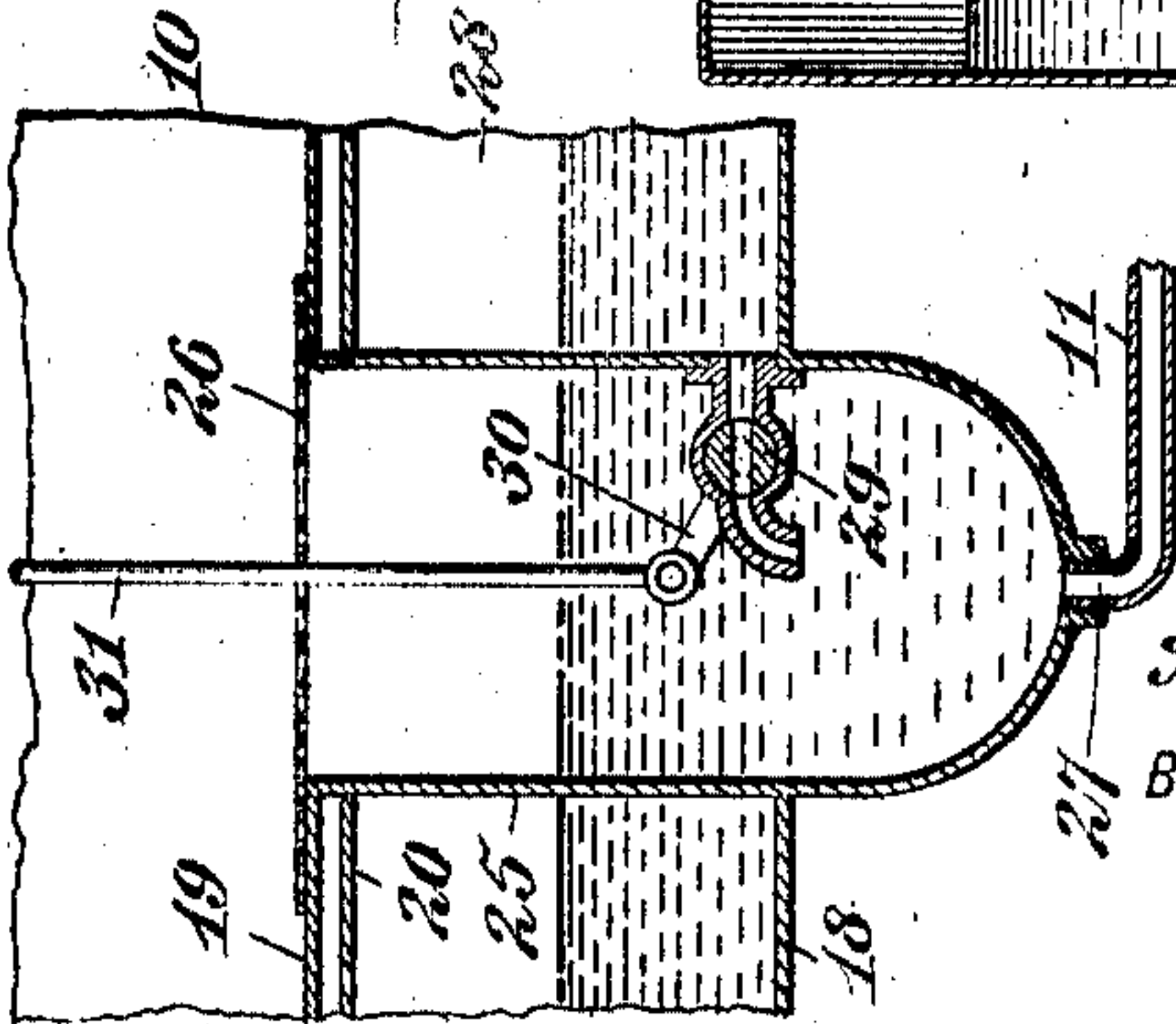


Fig. 4.



WITNESSES
George W. Taylor
William P. Goebel

INVENTOR
Arthur Judvine
BY *Mum & Co*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ARTHUR JUDEVINE, OF BARABOO, WISCONSIN.

TANK OR CONTAINER.

965,634.

Specification of Letters Patent.

Patented July 26, 1910.

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To all whom it may concern:

Be it known that I, ARTHUR JUDEVINE, a citizen of the United States, and a resident of Baraboo, in the county of Sauk and State of Wisconsin, have invented new and useful Improvements in Tanks or Containers, of which the following is a full, clear, and exact description.

In the operation of an auto-vehicle it is very essential that an available quantity of fuel be always maintained in the tank or container, for the purpose of generating the necessary power to propel the vehicle. Allowing the container to exhaust itself and neglecting to make provision whereby the container can be refilled, or providing in some other manner an additional supply of fuel, causes considerable inconvenience and trouble, particularly if such a condition should come about while the vehicle is traveling through a part of the country where no immediate supply can be obtained, or where the nearest supply station is located several miles away.

Containers of ordinary construction are not provided with means whereby the quantity of available fuel in the container can be known, and in order to ascertain what amount is in the container it is necessary to insert a stick of wood or other convenient article, into the container through the filling opening, and observe the depth of the fuel as indicated on the article used. There are however, some tanks provided with an indicating device applied to the filling opening, which will indicate on the face of the dial of the indicator, the amount of fuel in the container. If it is desired to ascertain what fuel is still available in the tank, while the vehicle is in motion, it is ordinarily required of the operator to bring the machine to a full stop and to dismount. To bring the vehicle to a stop and for the operator to dismount, is attended with considerable trouble and the loss of time, and therefore the examination of the tank is often neglected and sometimes forgotten, with the result that the tank becomes exhausted of fuel without the operator being warned.

My invention, while capable of broader application, is intended more particularly for embodiment in the tanks of motor vehicles, in order to obviate the mentioned objections. In carrying out my invention I make provision for holding the supply desired, and so arrange the means for con-

taining the supply that when the major portion of the fuel exhausts itself and results, for instance, in the sudden stoppage of the motor, a reserve supply of predetermined amount will be readily available after the warning due to the stoppage of the motor, with which to continue a journey or propel the vehicle to the nearest supply station. The invention results in a saving of the time required, and the trouble necessitated in occasionally bringing the vehicle to a stop to ascertain the amount of fuel in the tank.

In the preferred form, the invention provides a container which will be cheap and economical and will largely do away with the necessity of carrying emergency tanks on the vehicle.

The invention will be hereinafter more particularly described in connection with its embodiment in the fuel reservoir of the motor vehicle, and the preferred form as illustrated, and will be particularly pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 illustrates in side elevation a motor vehicle embodying my invention in fuel containers; Fig. 2 is a vertical sectional view of the fuel container, the section being taken on the line 2—2 of Fig. 3; Fig. 3 is a horizontal sectional view of the container with parts broken away; and Fig. 4 is an enlarged detail sectional view of the bottom portion of the tank or container.

Referring more particularly to the drawings, 9 represents a motor vehicle with my improved tank 10 shown as located under a seat of the machine. A pipe 11 connects with the bottom of the tank 10 and leads in this instance, to a carbureter 12. The tank 10 may be of any suitable general contour, but preferably is rectangular, as illustrated in the drawings—this form being more convenient to locate under the seat—and comprises sides 15, 15, ends 16, 16, a top 17, and a bottom 18. Within the tank 10 and located at a suitable distance from the bottom 18, are preferably provided and rigidly secured, two horizontal splashing plates 19 and 20. These plates will be fully described hereinafter. Suffice it to say here, that the plates 19 and 20, in the construc-

tion shown, mark the line of division between what is in effect a main container for the major portion of the fuel supply, and the auxiliary container or retaining means
5 for the auxiliary supply.

Rising from the bottom 18 to the height desired, according to the depth it may be desired to give the auxiliary retainer, is a neck or inner wall 25 which may be provided with a perforated top 26, the lower
10 portion of the neck or wall 25 extending through the bottom 18, and forming an outlet for the fuel at 27. To the bottom of the neck 25 is suitably attached the fuel delivery pipe 11. By this arrangement of the plates 19 and 20 and the lower portion of the walls 15 and the neck 25, a reservoir 28 is provided in the lower part of the tank, to contain the fuel to be used after the fuel in
15 the main portion of the tank 10 above the plates 19 and 20, is exhausted. Thus it will be seen from Fig. 2 that the fuel is divided into what are really two distinct bodies, one being a smaller body held by the bottom 18, the walls 15, up to the line of the plates 19 and 20, and the inner wall or neck 25; while the second body or major portion of the fuel is contained within the neck 25 and between the portions of the walls 15 that are above the line of the plates 19 and 20. The plates 19 and 20 are so arranged as to provide a slight space between them, and the upper plate 19 and the lower plate 20 have perforations 23 and 24 respectively,
20 and arranged in staggered relation to one another, as clearly shown in Fig. 3. By this construction, the auxiliary retainer can readily fill, but the arrangement of the perforations prevents the fuel from splashing out. The outlet from the container for holding the auxiliary supply may, with advantage, be arranged within the neck 25 as illustrated. In this form a cock 29 of ordinary construction, controls communication
25 of the auxiliary retainer with the interior of the neck 25 and with the outlet to the delivery pipe 11, to permit the fuel to flow from the auxiliary retainer 28 to the delivery pipe, when the cock is opened. To the valve stem of the cock 29 is attached one end of a lever 30, the opposite end having attached thereto an operating rod 31 adapted to open and close the cock. In connection with the operating rod 31 or any equivalent that may be employed in practice, I provide
30 any suitable means for preventing access to the filling opening. An efficient means of controlling the opening in connection with the said rod 31, is a suitable valve for closing said opening when the rod is in a raised position and when the cock 29 controlling the outlet from the retainer for the auxiliary supply is open. Thus, as illustrated, the lower portion of the neck 32, forming the
35 filling opening, is of conical shape to pro-

vide a seat for a conical valve 33 attached to the rod 31. The purpose of this arrangement is to close the filling opening and to prevent entrance of a new supply of fuel until the valve is opened by pushing the
40 operating rod 31, which will close the cock 29 controlling the outlet from the auxiliary reservoir 28. By thus requiring the operator to close the cock 29 controlling the reserve supply, said reserve supply cannot be used up without the cock 29 being deliberately opened and the operator thus made ware of the limited amount of fuel remaining. The rod 31 in the form illustrated, extends upwardly into the neck of
45 the filling opening and is provided with a ring or other device by which the rod 31 can be easily manipulated.

A vent pipe 35 attached to the lower plate 20 and rising to a point near the top of the tank, permits the escape of air from the auxiliary retainer provided by the described structure of the bottom portion of the tank 10. It will be understood from the foregoing, that in filling the tank the parts are
50 positioned as shown in Fig. 2. The cap 36 for the filling opening is removed and the fuel is then poured into the tank 10 and passes through the perforations 23 and 24 in the plates 19 and 20, first filling the reservoir 28 and the neck 25, and then the main portion of the tank. The cap is then screwed on and the tank is ready for use.

When the engine which the tank supplies is in operation, the fuel in the neck 25 and the main tank is first consumed, as is obvious, and should this main body of the fuel become exhausted, the vehicle will come to a stop, thus positively warning the operator that only the fuel in the auxiliary retainer
55 28 is available. To continue the journey, all that is required is to unscrew the cap, and raise the rod 31, which opens the cock 29 and allows the reserve fuel to flow into the neck 25 from which it passes to the delivery pipe 11.

I desire to explain here, that by extending the operating rod 31 to a point adjacent to the main inlet, said rod 31 has the function of indicating to the operator the closed
60 or open position of the cock 29 controlling the auxiliary supply, aside from the provision, such as the valve 33, for actually preventing access to the main inlet, and it also locates the operating rod 31 in a protected position and a convenient one for its ready manipulation.

The valve 33 has an opening 37 as shown in the drawings. Through this opening may be passed an ullage rod or other form of
65 gage, to ascertain at any time the quantity of fuel remaining in the tank.

To illustrate the operation of my device, I have shown in the accompanying drawings a container in connection with an auto-ve-
70 130

hicle to carry the necessary liquid fuel to generate the power for propelling the vehicle. It will be understood that by the term "fluid" I do not confine myself to exclusively employing the container for liquid fuel: it may be adapted for containing a fluid of denser consistency, or even grain.

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

1. A container for holding a material, having an inlet and an outlet, means in the container adjacent to the said outlet for retaining a portion of the material in reserve, the retaining means being provided with an outlet valve to permit the reserve material to flow into the outlet when the said valve is open, and means for controlling the valve, said controlling means including an operating rod which extends to a point within the inlet of the container.

2. A container for holding a material, having an inlet and an outlet, means in the container adjacent to the said outlet for retaining a portion of the material in reserve, the retaining means being provided with an outlet valve to permit the reserve material to flow into the outlet when the said valve is open, and means for controlling the valve, said controlling means including an operating rod which extends to a point within the inlet of the container, said rod being provided with a valve for closing the filling opening of the container.

3. A container having an inlet and outlet, comprising means for retaining a portion of its contents in reserve, plates arranged horizontally in the container on a line with the upper portion of the outlet means, said plates being provided with holes in staggered relation to prevent the splashing of the retained portion of the material while the latter is being consumed, a valve connected to the outlet, means to permit the retained material to flow therein, and means for controlling the valve.

4. A fluid container having an inlet and an outlet, a cap closing said inlet, a walled inclosure within the container leading to the outlet, a valved outlet in the wall of said inclosure, and means for operating the valve, said means comprising a rod extending to the inlet of the container and provided with a valve for closing said inlet, said valve being additional to the mentioned cap.

5. A fluid containing means, comprising members serving to hold a main supply and an auxiliary supply of the fluid, a filling opening and an outlet for the main supply said filling having a closure and an inlet and outlet for the auxiliary supply, and a controlling device for the outlet of the auxiliary supply, said controlling device including an operating rod which extends to a point adjacent to the point of inlet to the main supply, said rod being provided with a valve for closing the filling opening of the container.

6. A fluid container having an inlet and an outlet, and comprising side walls, a top and a bottom, the upper portions of the side walls and the top defining the content of a main container, while the lower portions of the side walls and bottom and a neck or inner retaining wall serve to form a reserve container, said neck or retaining wall serving to discharge the main supply and the reserve supply to the outlet, a cock controlling the escape of the reserve fluid, a rod for operating said cock, a valve attached to said operating rod adapted to close the filling opening, and an inlet provided with a conical portion adjacent to the filling opening, said conical portion providing a seat for the valve.

7. A fluid container having an inlet and an outlet, and comprising side walls, a top and a bottom, the upper portions of the side walls and the top defining the content of a main container, while the lower portions of the side walls and bottom and a neck or inner retaining wall serve to form a reserve container, said neck or retaining wall serving to discharge the main supply and the reserve supply to the outlet, a cock controlling the escape of the reserve fluid, a rod for operating said cock, a valve attached to said operating rod adapted to close the filling opening, an inlet provided with a conical portion adjacent to the filling opening, said conical portion providing a seat for the valve, a screw cap for closing the inlet, means for preventing the splashing of the fluid, and means for the escape of air from the reserve container.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR JUDEVINE.

Witnesses:

D. RUGGLES,

B. G. RUGGLES.