

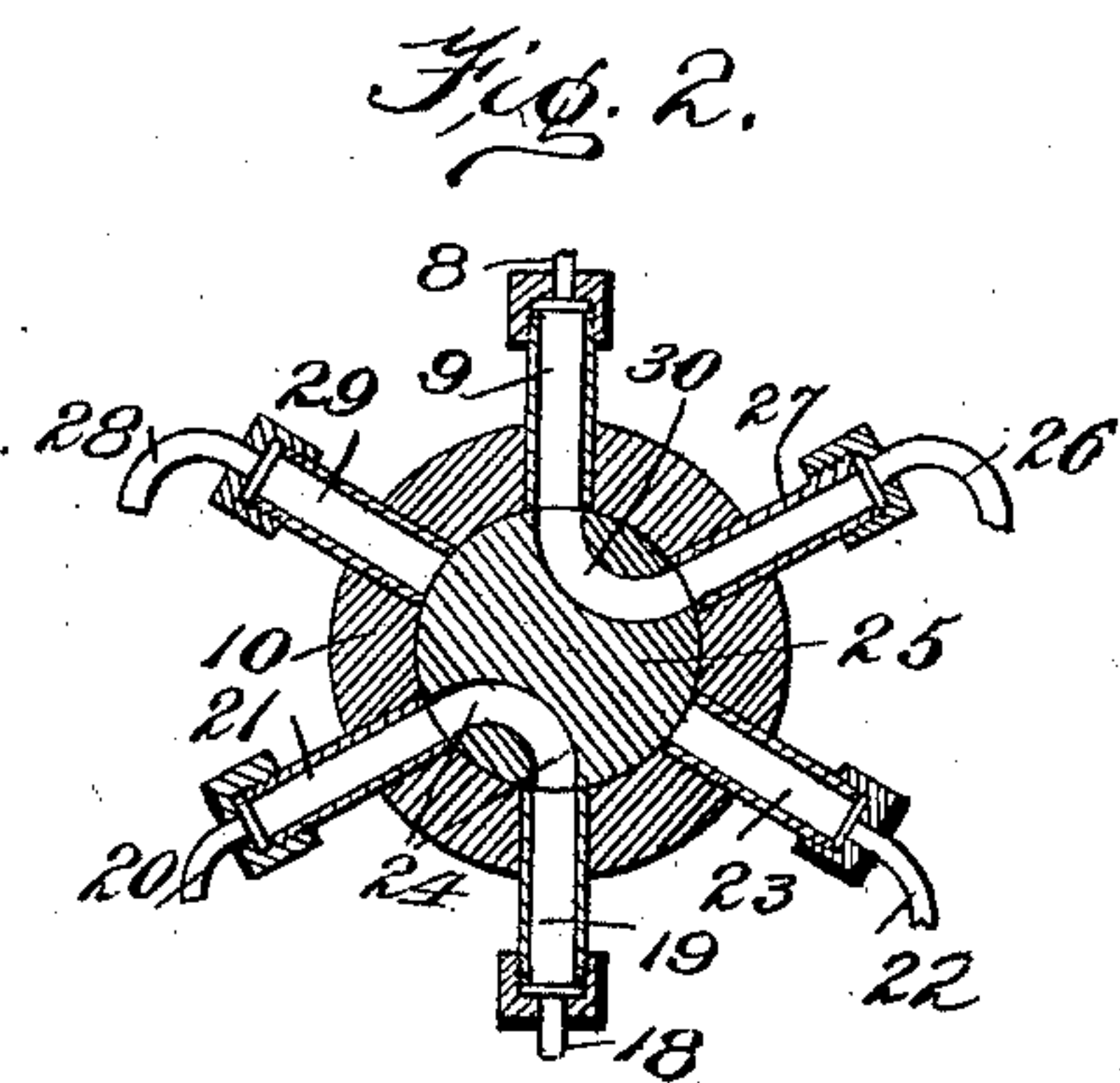
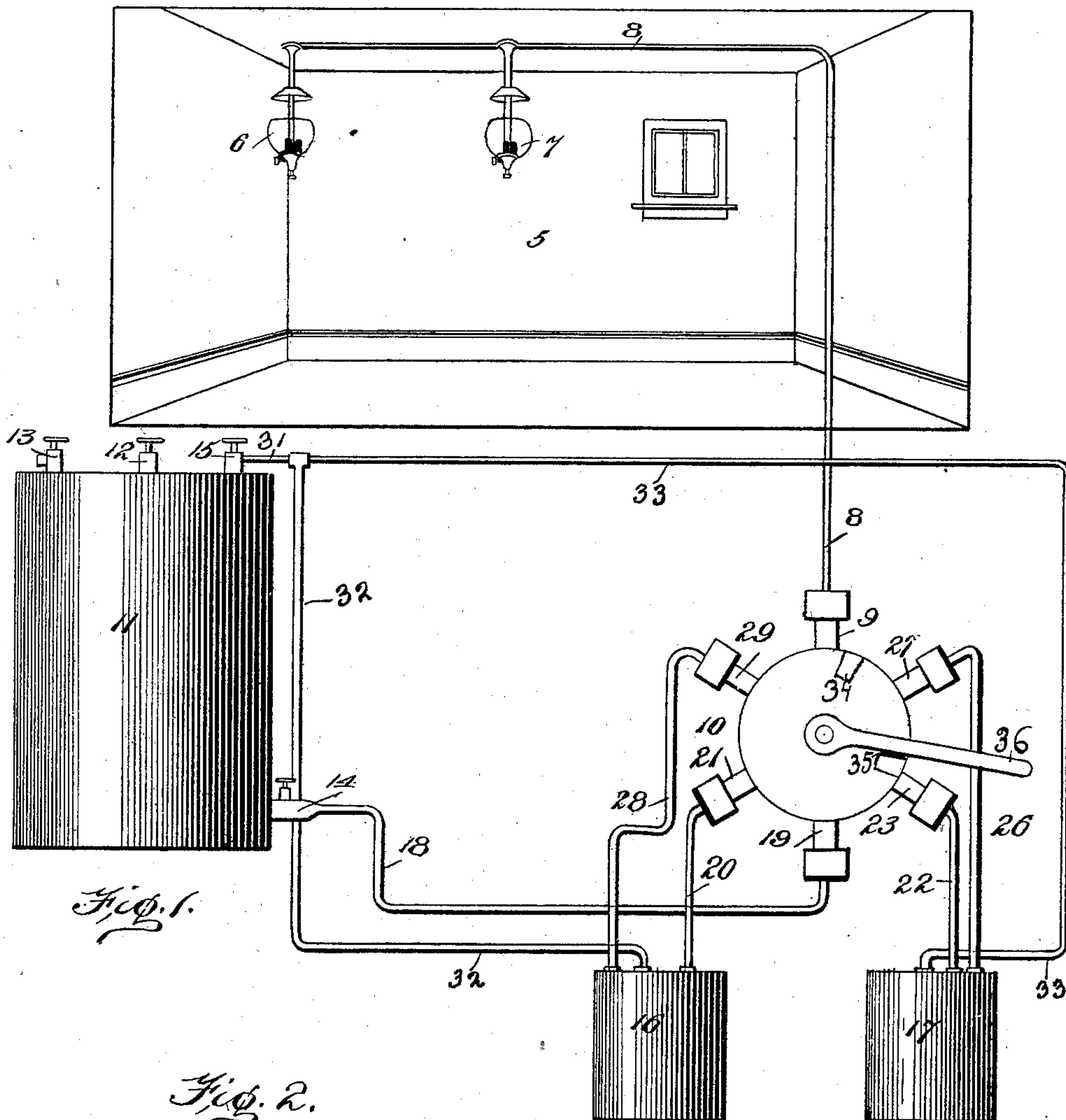
No. 702,406.

Patented June 17, 1902.

F. A. & R. D. CODY.  
HYDROCARBON LIGHTING SYSTEM.

(Application filed May 29, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

FREDERICK A. CODY AND ROBERT D. CODY, OF CHICAGO, ILLINOIS.

## HYDROCARBON-LIGHTING SYSTEM.

SPECIFICATION forming part of Letters Patent No. 702,406, dated June 17, 1902.

Application filed May 29, 1901. Serial No. 62,383. (No model.)

*To all whom it may concern:*

Be it known that we, FREDERICK A. CODY and ROBERT D. CODY, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Hydrocarbon-Lighting Systems; and we do hereby declare the following to be a full, clear, and exact description of the same.

10 This invention relates to hydrocarbon-lighting systems of that class which are designed to light houses by the aid of local burners, a reservoir for the hydrocarbon, and conducting-pipes between them. The kind  
15 of hydrocarbon for which this invention is at present intended is gasoline, and insurance companies have placed a limit of one gallon as the greatest amount of this fluid that will be permitted to be in a house at one  
20 time while the house is insured.

The object of our invention is, therefore, to supply each house with gasoline to the amount permitted and means for connecting the house-supply with a reservoir for unlimited supply located at a safe distance from  
25 the house in such a manner that an unskilled person may operate the device with certainty and safety.

To this end our invention consists in the  
30 hydrocarbon-lighting system hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I represents an open room of a house, a reservoir which should properly be  
35 located some distance from the house, and our hydrocarbon-lighting system, shown in a somewhat diagrammatic style, connecting the reservoir with burners in the house. Fig. II represents in longitudinal vertical section  
40 our double two-way cock.

Numeral 5 represents a room in a house provided with burners 6 and 7, adapted for burning gasoline and connected by a distributing-pipe 8 with the outlet-port 9 of our  
45 double two-way cock 10. 11 represents a reservoir, that may be located at a distance from the house to be safe, for containing a large supply of gasoline.

12 represents the filling-plug; 13, the valve  
50 for attaching an air-pump; 14, the outlet for gasoline, and 15 the outlet for air.

16 and 17 represent two tanks of the ca-

capacity permitted, say one gallon each, to be located in the house, and they are arranged to be filled from the reservoir 11 one at a  
55 time, as follows: A pipe 18 connects the outlet 14 of the tank with port 19 of the cock-casing 10, a pipe 20 connects the port 21 of the casing 10 with tank 16, a pipe 22 similarly connects the port 23 with the other tank  
60 17, and a passage 24 in the multiway valve-plug 25 of the cock 10 may be turned to communicate between the port 19 and either of the ports 21 or 23. 26 is a pipe communicating between the tank 17 and the port 27 of  
65 the cock-casing 10. 28 is a pipe communicating between the tank 16 and the port 29 of the casing 10, and the valve-plug 25 may be turned to bring the two-way passage 30 in communication with the port 9 and either of  
70 the ports 27 or 29. 31 is a pipe communicating by means of branches 32 and 33 between the upper portions of the reservoir 11 and the two tanks 16 and 17. These pipes are always open for free transmission of air-pres-  
75 sure from the reservoir to the tanks. The pipes 26 and 28, being discharge-pipes for the tanks 16 17, extend nearly to the bottom thereof, so that they may conduct away nearly all the gasoline therefrom. The pipes 20  
80 and 22, being inlet-pipes for the tanks, may have their open ends near the top or anywhere else in the tanks. The relative arrangement of the passages 24 and 30 in the valve-plug 25 is such that when the plug is  
85 set to admit gasoline from the reservoir 11 through the pipe 18, port 19, passage 24, port 21, and pipe 20 to the tank 16 its passage 30 sets to communicate between the ports 27 and 9, whereby gasoline is permitted to flow from  
90 the other tank 17 through its discharge-pipe 26, the port 27, passage 30, port 9, and circulating-pipe 8 to the burners 7 in the house. The tanks 16 17 must be located enough below the level of the reservoir 11 to permit the  
95 gasoline to run by gravity from the reservoir to the tanks, because the pipe communications described render the pressure of air equal at the inlet and outlet of either tank, so that air-pressure would not deliver the  
100 gasoline to the tanks if they were on a higher level than the reservoir, and if the pipe connections 31, 32, and 33 between the top or air space of the reservoir and the tanks were



omitted so as to produce air-pressure in the tanks in one direction only—that is, through pipe 18—then the tanks 16 17 would be mere enlargements in the pipes and would never  
 5 be emptied as long as a supply of gasolene lasted, so that they would not be measures for the gasolene.

The operation is as follows: The reservoir 11 is to be partly filled with gasolene at plug  
 10 12. Then the required amount of air-pressure is to be produced by pumping in air at the valve 13. Now the plug 25 is to be turned to fill one of the tanks—say 16—with gasolene. When that is full, the flow will stop of itself,  
 15 as there is now no outlet for it. Then if the plug be turned the opposite way the inlet-passage 24 will connect the ports 19 and 23 and gasolene will begin flowing into tank 17 and at the same time the passage 30 will open  
 20 communication between ports 29 and 9, and the gasolene in tank 16 will be forced by the air-pressure into the distributing-pipe 8 for consumption. Now whether a gallon of gasolene is consumed in a day or a year makes  
 25 no difference with this system. Nothing further has to be done but to use the burners when they are required until the gasolene gets low in tank 16. Then plug 25 should be turned back to allow it to refill through pas-  
 30 sage 24, and this will also turn passage 30 to connect tank 17 with the distributing-pipe 8. It may thus be seen that the greatest amount that can be admitted into the house at once by this system is the contents of the two tanks  
 35 16 17 and no skill is required to operate it. The plug-lever 36 has stops 34 35, fixed to limit its movement, so that the operator has only to move it as far as it will go when more

gasolene is needed and to keep a sufficient pressure of air in the reservoir by occasion- 40 ally pumping in some.

Having thus fully described our invention, what we believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination of a reservoir, a plu- 45 rality of tanks arranged below said reservoir, a valve-casing, a distributing-pipe connected to such casing, and pipes connecting said reservoir and tanks to such casing, a multiway valve-plug in the casing arranged to be turned 50 to connect either of said tanks to the distributing-pipe and the other tank to the reservoir, and a connection between the upper end of each tank and the reservoir.

2. In fluid-delivery apparatus, the combi- 55 nation with a supply-tank, of plural delivery-tanks, suitable pipes for passage of gasolene or like liquid connecting said delivery-tanks to said supply-tank and with a discharge-main, equalizing-pipes extending between 60 said supply-tank and said delivery-tanks, and suitable valve mechanism whereby when the supply of gasolene or like liquid is admitted from the supply-tank to one of said delivery-tanks connection between said supply-tank 65 and the other of said delivery-tanks is cut off and said delivery-tank thus cut off from the supply-tank is placed in communication with the delivery-main.

In testimony whereof we affix our signa- 70 tures in presence of two witnesses.

FREDERICK A. CODY.  
 ROBERT D. CODY.

Witnesses:

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