

No. 681,902.

Patented Sept. 3, 1901.

A. H. WOLYN.

SUPPLY TANKS FOR GASOLENE OR THE LIKE.

(Application filed Apr. 6, 1901.)

(No Model.)

Fig. 1.

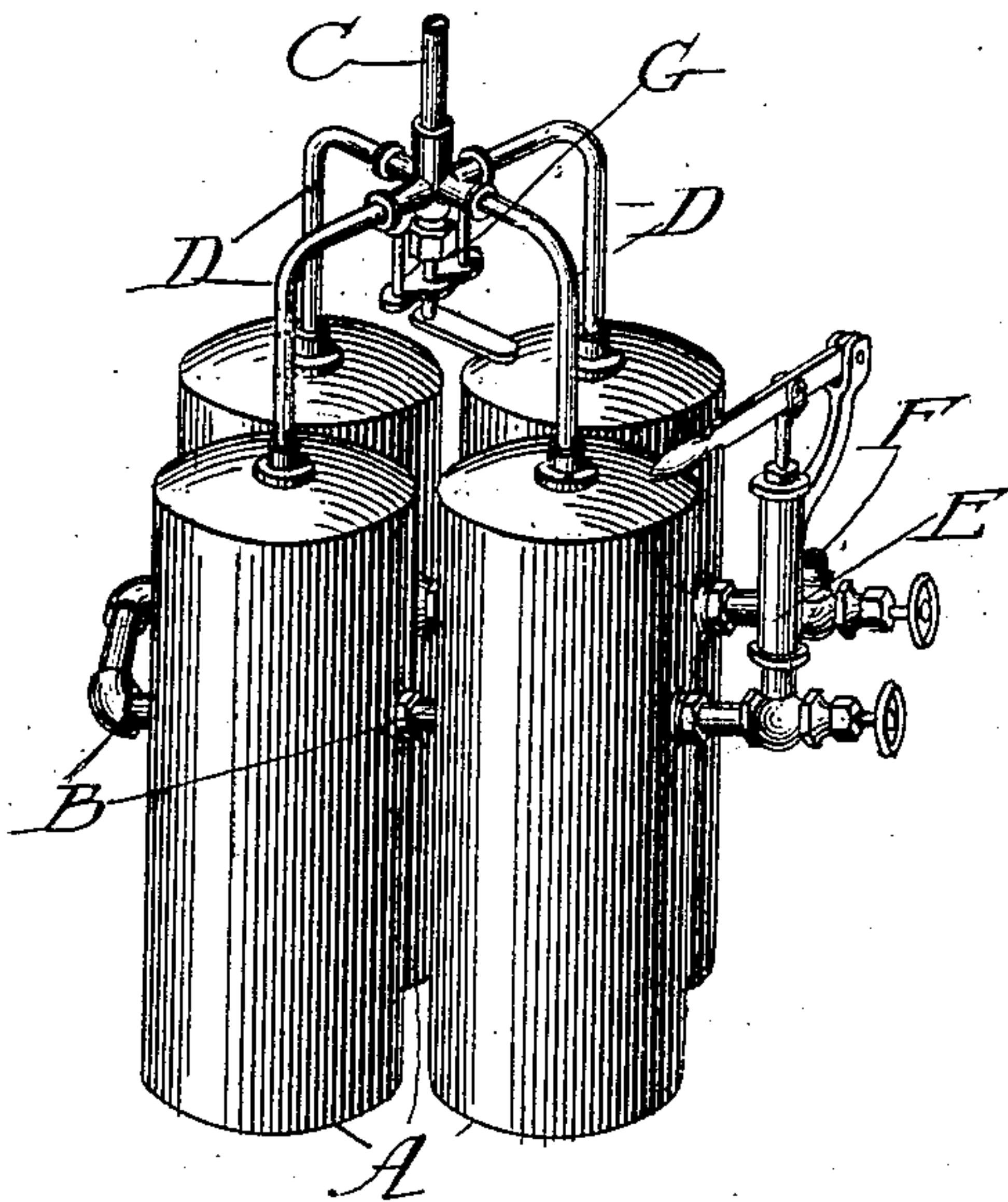


Fig. 2.

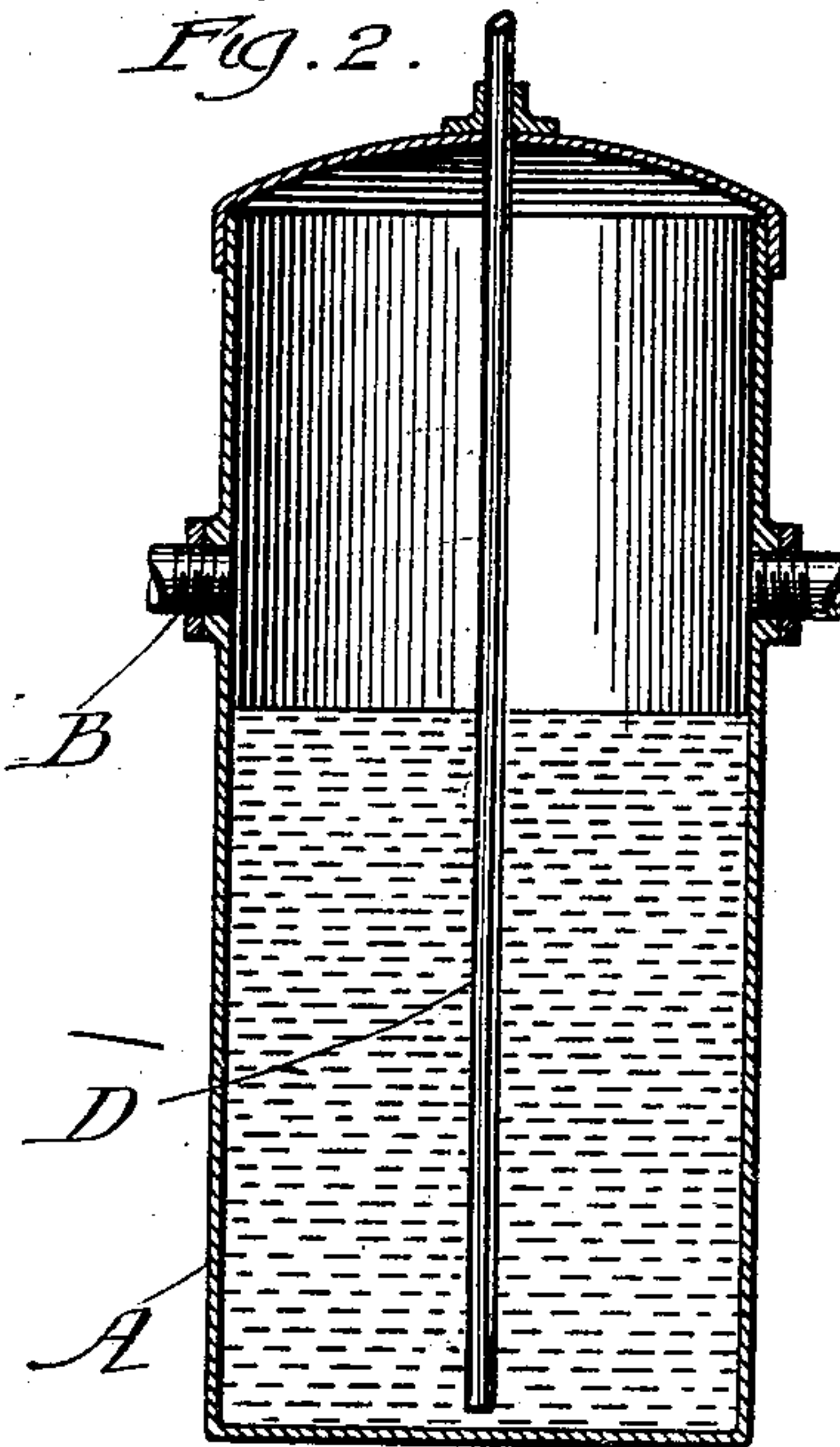
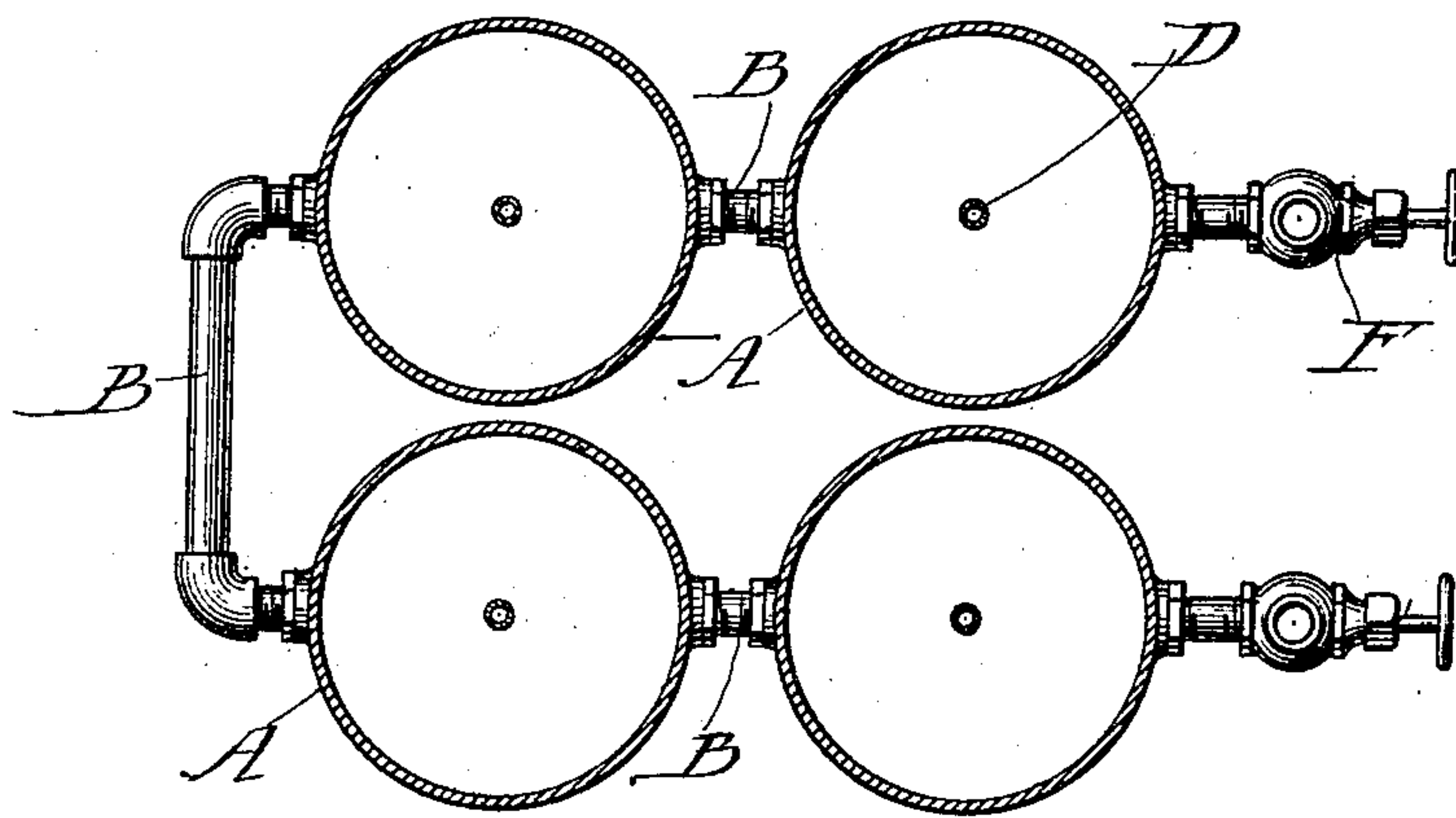


Fig. 3.



Witnesses:

Frank Blanchard
J. J. Le Moyne

Inventor:

A. H. Wolyn
By Louis V. Le Moyne
Attorney.

UNITED STATES PATENT OFFICE.

AXEL H. WOLYN, OF CHICAGO, ILLINOIS.

SUPPLY-TANKS FOR GASOLENE OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 681,902, dated September 3, 1901.

Application filed April 6, 1901. Serial No. 54,691. (No model.)

To all whom it may concern:

Be it known that I, AXEL H. WOLYN, a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Supply-Tanks for Gasolene or the Like, of which the following is a full, clear, and exact description.

In systems now in use gasolene, hydrocarbon oils, and the like are supplied directly from large tanks, and when such tanks are connected directly to lighting systems, explosive-engines, and the like a dangerous quantity of the gasolene or hydrocarbon will be exposed in case of fire or accident. For this reason the insurance underwriters in most places have required that a gasolene-tank connected directly to the supply for a lighting system or to an explosive-engine shall only contain a limited amount of gasolene or hydrocarbon, thus necessitating frequent refilling of the supply-tank.

The object of my invention is to provide a series of closed supply-tanks each adapted to contain only a certain predetermined amount of oil under pressure and provided with a valve mechanism by which only one of the tanks can be connected to the main supply at one time.

The invention consists in the features set forth in the following description, illustrated in the drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of my improved battery of supply-tanks. Fig. 2 is a view in vertical section of one of the tanks. Fig. 3 is a view in cross-section of the battery of tanks.

As shown in the drawings, the tanks A are preferably cylindrical in form and permanently closed at their upper and lower ends. Any number of tanks may be used (in the drawings I have shown four) in sufficient number to contain a quantity of gasolene or hydrocarbons sufficient to furnish a supply of oil for a reasonable length of time. The tanks are connected in series, as shown by the pipes B. These pipes open into the tanks intermediate their ends and serve to divide the same into oil-retaining and air spaces at the bottom and top, respectively. One of the end tanks of the battery is provided with a valved inlet-pipe E, located at the same height as

the connecting-pipes B, and the other end tank is provided with a valved vent-pipe at the same height, to which is removably connected an air-pump F. Supply-pipes D pass through the tops of the several tanks A of the battery and extend downwardly adjacent the bottom thereof. The upper ends of these pipes are bent together and connected to the casing of a four-way valve G. The valve-casing is also connected to the main supply-pipe, and the valve is of ordinary four-way construction, so that any one, but only one, of the tanks may be connected to the main supply at one time.

The oil is admitted to the tanks through the valved inlet E, fills the first tank, and overflows through the pipes into the remaining tanks of the battery in succession, the valved vent-pipe at the opposite end of the battery being opened to permit the tanks to be so filled. The connecting-pipes B thus serve as overflow-pipes and prevent the tanks from being filled with gasolene or hydrocarbons to a level above the heights of these pipes, so that the tanks can only each be filled with a predetermined quantity of oil. At the same time spaces are left at the upper ends of the tanks for containing the air under pressure, which is supplied thereto by the air-pump F to a pressure of about twenty-five pounds to the square inch. The inlet-pipe and vent-pipe are then closed by means of the valves provided for this purpose, and the several tanks may be connected one at a time to the main supply until all are emptied. As the tanks are being emptied the pipes B serve to equalize the pressure among the several tanks, so that the charge of air is sufficient to force the oil from each tank of the battery in succession. It will thus be seen that the pipes B, connected to the closed tanks intermediate their ends, serve to perform three important functions, namely: First, they divide the tanks into air and oil-retaining spaces of definite capacity; second, they act as overflow-pipes as the battery of tanks is being filled and prevent any one of the tanks from being filled with more than a predetermined amount of gasolene or hydrocarbons in accordance with the requirements of the insurance underwriters, and, third, they act as equalizing-pipes as the tanks are being emptied, so that

the air-pressure will act equally throughout the battery to force the oil out of the tanks in succession. Moreover, by measuring the diameter of the tanks and the height of the
 5 pipes B from the bottom thereof the insurance inspector can readily ascertain the fact that the tanks cannot receive more than the permitted amount of gasolene or hydrocarbons. By the use of a four-way valve con-
 10 nected to each of the tanks it is rendered impossible to connect more than one of the tanks directly to the lighting systems, explosive-engines, or the like. Therefore by this arrangement all the requirements of the in-
 15 surance underwriters are complied with and still the supply is furnished in sufficient quantity to last a reasonable length of time.

It is obvious that changes may be made in the details of construction without departure
 20 from the essentials of the invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a battery of supply-tanks for gaso-
 25 lene, hydrocarbons and the like, comprising two or more tanks, overflow and pressure-equalizing pipes connecting said tanks intermediate their ends and dividing the same into oil-retaining spaces of predetermined capacity and air-spaces, supply-pipes leading from
 30 the bottom of each of the tanks and a multiple-way valve connected to said supply-pipes and to the main supply, by which one only of the tanks may be opened to the main supply at a time.
 35

2. In a battery of supply-tanks for gaso-

lene, hydrocarbons and the like, comprising two or more closed tanks, overflow and pressure-equalizing pipes connecting said tanks intermediate their ends and located at a defi-
 40 nite height to divide the tanks into oil-retaining spaces of predetermined capacity and air-spaces, supply-pipes leading from the bottom of each of said tanks, a multiple-way valve connected to said supply-pipes and to
 45 the main supply, by which only one of said tanks may be opened to the main supply at a time and liquid-supply and vent pipes connected respectively to the end tanks of the battery.
 50

3. In a battery of supply-tanks for gasolene, hydrocarbons and the like, comprising two or more closed tanks, overflow and pressure-equalizing pipes connecting said tanks intermediate their ends and located at a defi-
 55 nite height to divide the tanks into oil-retaining spaces of predetermined capacity and air-spaces, supply-pipes leading from the bottom of each of said tanks, a multiple-way valve connected to said supply-pipes and to
 60 the main supply, by which only one of said tanks may be opened to the main supply at a time, liquid-supply and vent pipes connected respectively to the end tanks of the battery at the height of said overflow and
 65 pressure-equalizing pipes and an air-pump movably connected to said vent-pipe.

AXEL H. WOLYN.

Witnesses:

CHARLES J. DRIEVER,
 LOUIS V. LE MOYNE.