

S. R. Ball,

Carburetor.

No. 98462.

Patented Jan. 4. 1870.

Fig. 1.

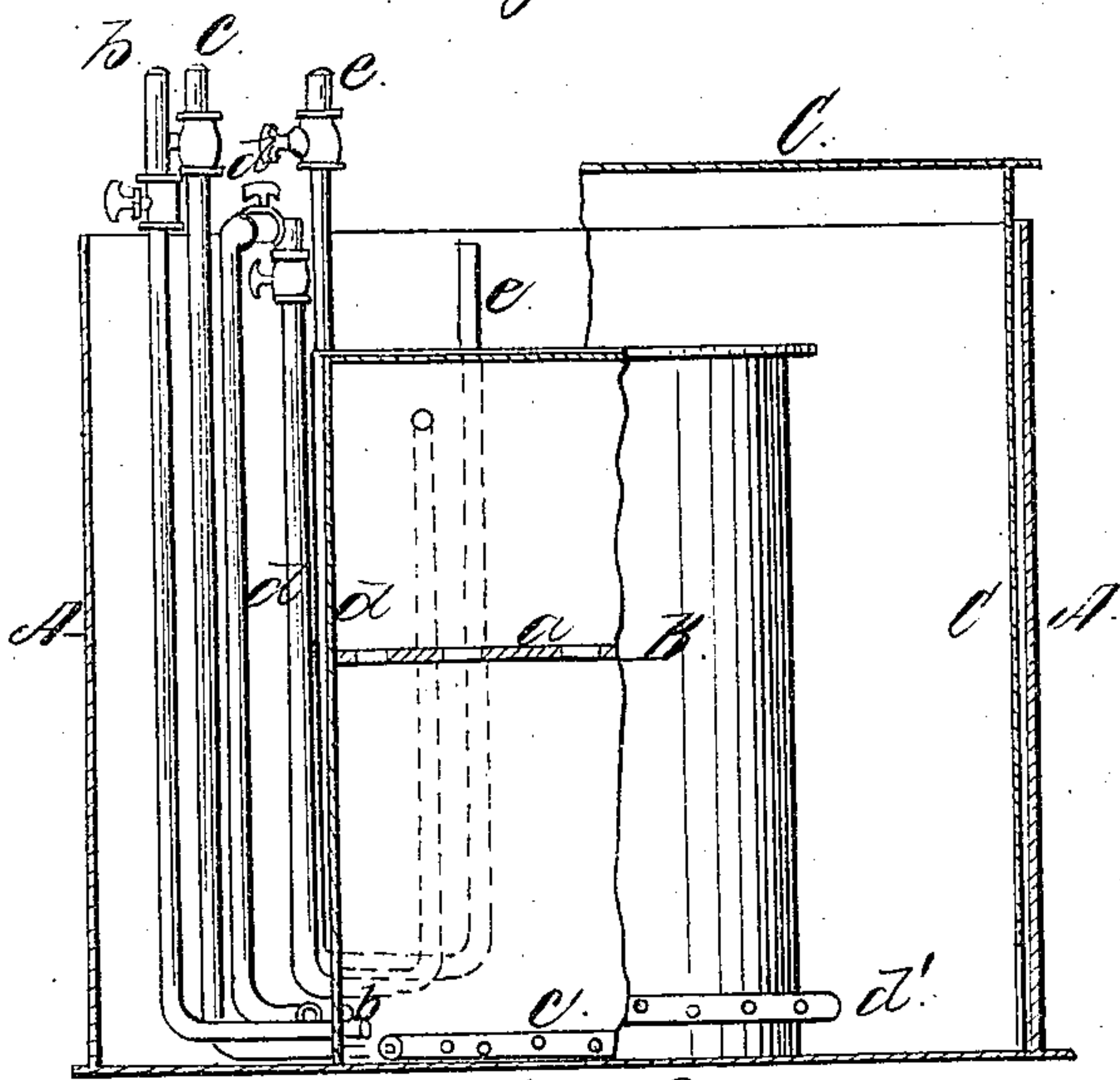
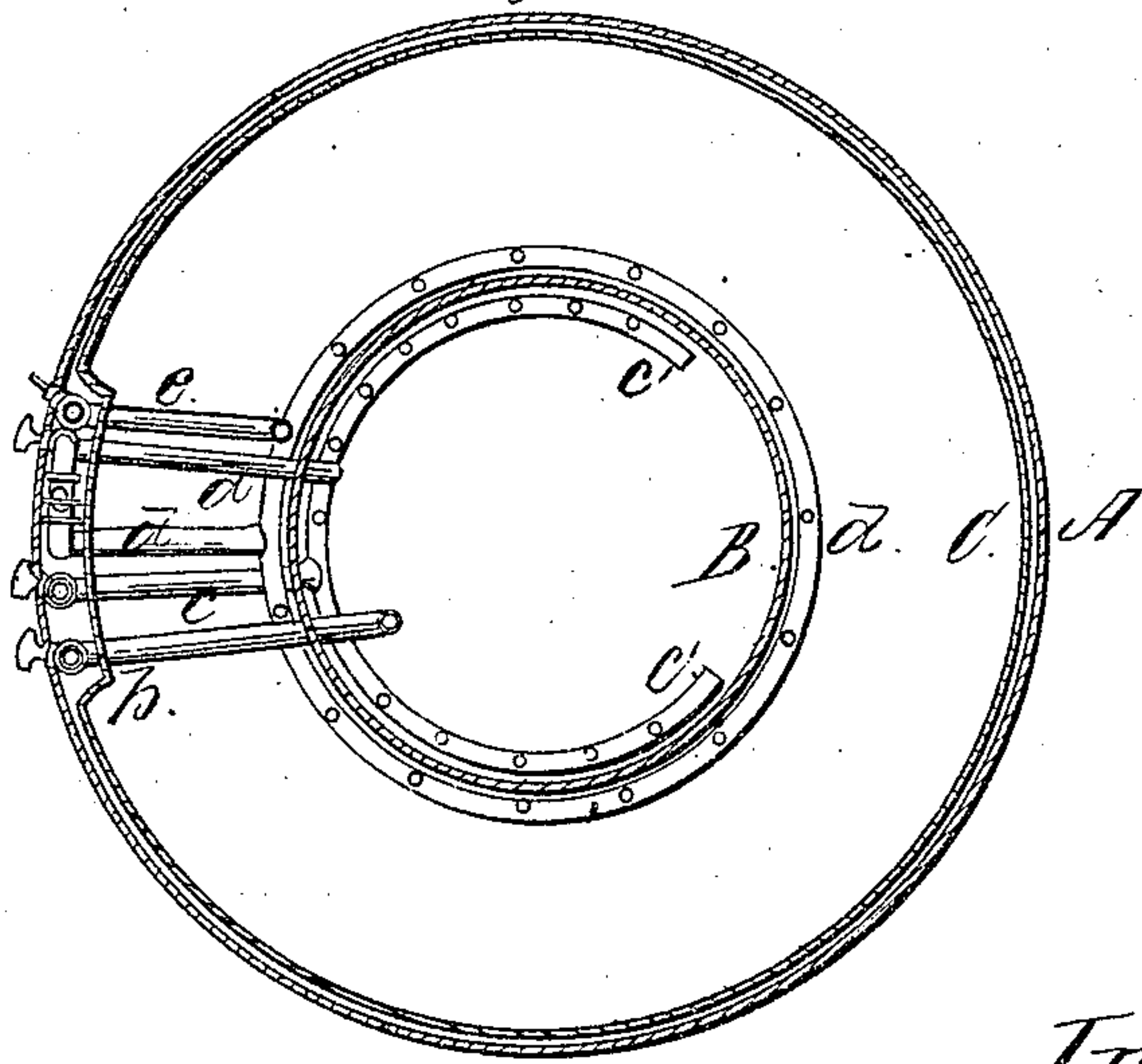


Fig. 2.



Witnesses:

Geo. Manchester
H. S. Sprague.

Inventor:

S. R. Ball
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United States Patent Office.

SILAS R. BALL, OF HYDE PARK, ILLINOIS.

Letters Patent No. 98,462, dated January 4, 1870.

IMPROVED GAS-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, SILAS R. BALL, of Hyde Park, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Gas-Machines; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a vertical section, taken on the line $x x$ in fig. 2, of the tank, with the gasometer and carburetting-chamber partially broken away, to show their internal arrangement.

Figure 2 is a plan of the apparatus.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in the construction of machines for carburetting atmospheric with the vapor of gasoline or other liquid hydrocarbons, and consists in the peculiar arrangement, within a proper tank and gasometer, of a carburetting-chamber and a series of filling and perforated distributing-pipes, one of the latter delivering the air, forced through the same, in the form of jets, into the body of the liquid hydrocarbon contained in the carburetting-chamber, for the purpose of intimately mixing the air with said liquid, and in its passage through the same it becomes charged with its vapor. The mixture, being inflammable, is used for illuminating-purposes, after being rid of its impurities, which is effected by passing it through water into the gasometer, in the form of jets, through and by means of a perforated pipe provided for that purpose.

In the drawings—

A represents a suitable water-tank, within and on the bottom of which is placed a tight carburetting-chamber, B, divided into an upper and lower chamber by a perforated diaphragm, a , the latter of which is partially filled with gasoline or other volatile liquid hydrocarbon, through the filling-pipe b .

c is a pipe through which air is forced into the carburetting-chamber, by any suitable air-pump, and enters said chamber at the bottom, where it branches off into a pair of perforated pipes, c' , so that the air, in rising through the gasoline in numerous jets, becomes thoroughly charged with its volatile and inflammable vapor.

The mixture then passes into the upper chamber, or reservoir, whence it is taken, by the siphon-pipe d , to the bottom of the tank, and is discharged through the perforated pipe d' , which surrounds the carburetting-chamber, into the water with which the tank is partially filled.

Into this water the impurities are precipitated as the gas or inflammable mixture rises into the gasometer C, whence it is distributed, by the supply-pipe e , to the several burners.

Should it become necessary to empty the carburetting-chamber of its contents, they may be pumped out through the pipe b , or a pipe and stop may be connected with the chamber for that purpose.

The various pipes are provided with the necessary stop-cocks, as shown, which are preferably placed in them, above the top of the tank, for convenience of manipulation.

What I claim as my invention, and desire to secure by Letters Patent, is—

The construction of an air-carburetting device, wherein the carburetting-chamber B, pipes b , c , c' , d , d' , and e , and diaphragm a , are arranged with relation to each other and the tank A, gasometer C, and a suitable air-pump, substantially as and for the purpose set forth.

S. R. BALL.

Witnesses:

H. S. SPRAGUE,

GEO. O. MANCHESTER.