

(No Model.)

W. & J. FALLEY.
CARBURETOR.

No. 488,881.

Patented Dec. 27, 1892.

Fig. 1.

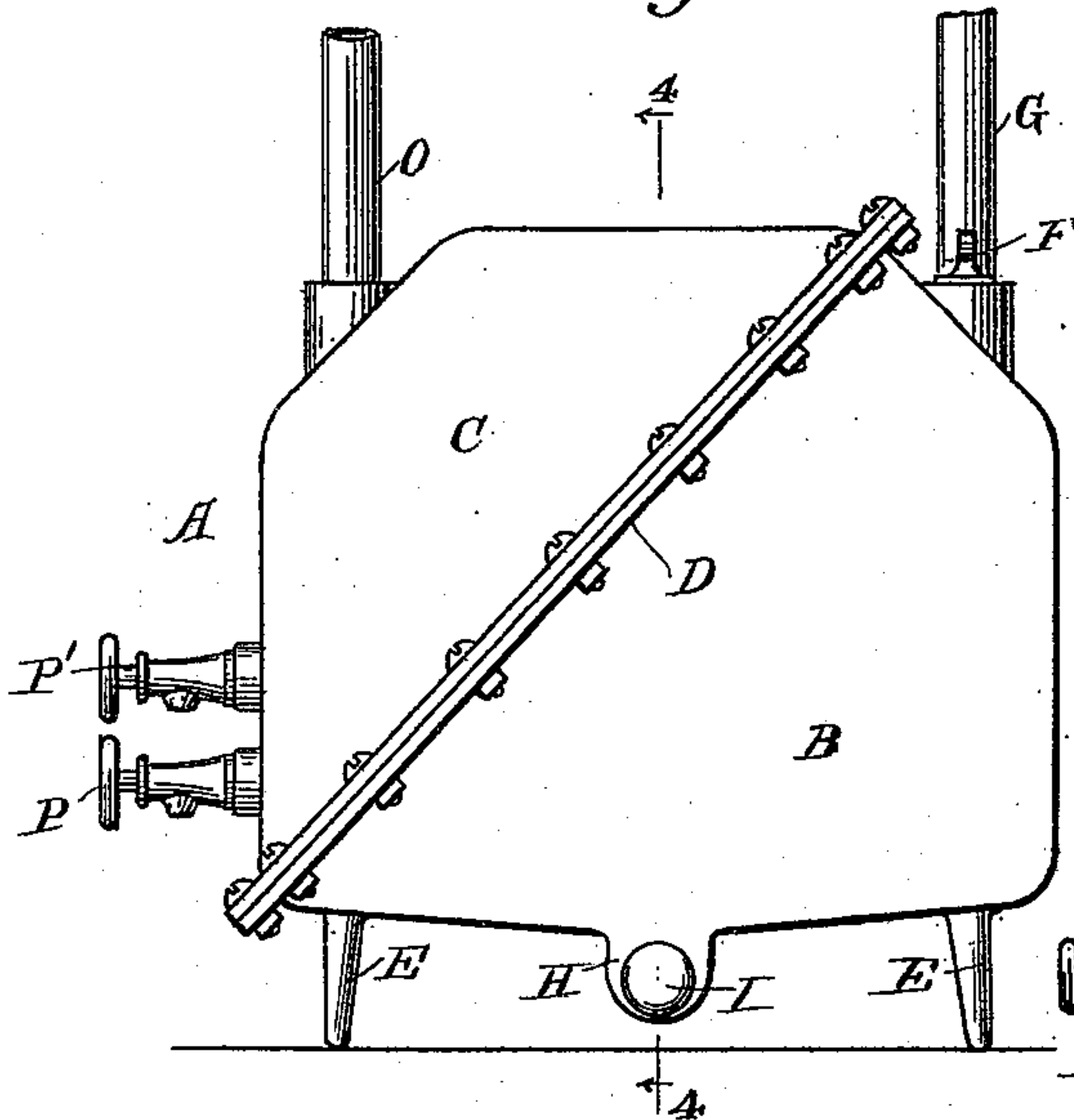


Fig. 2.

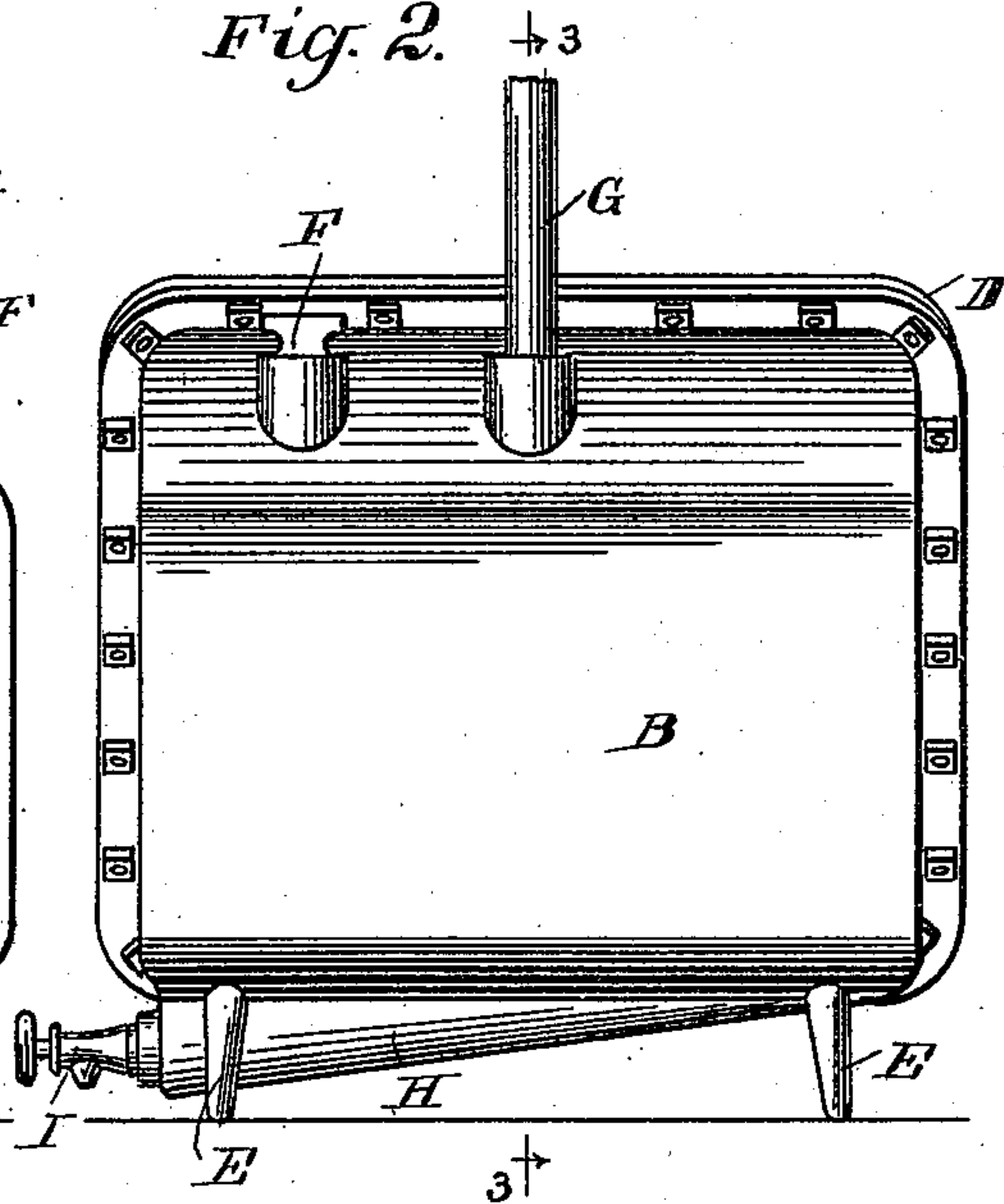


Fig. 3.

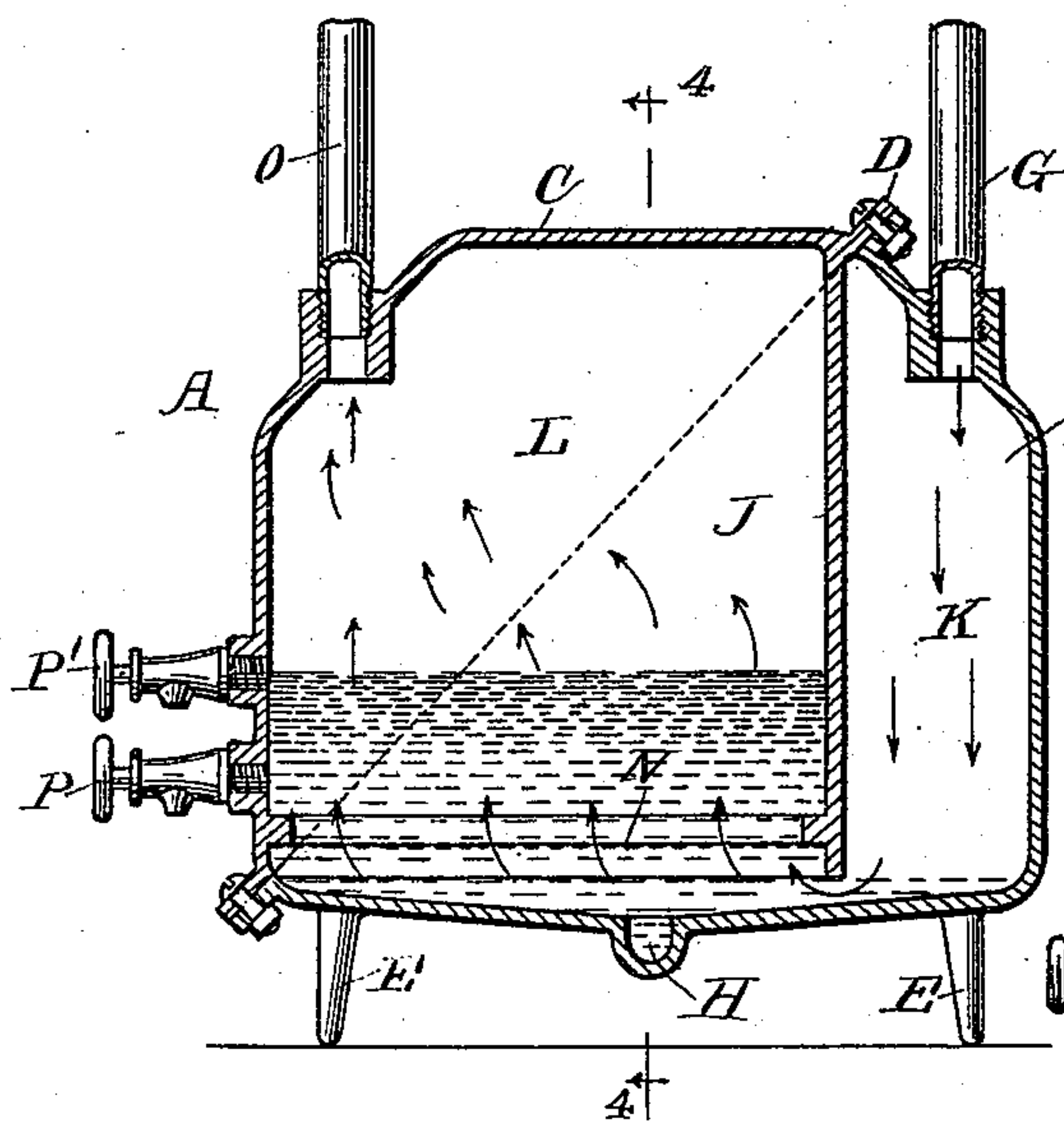
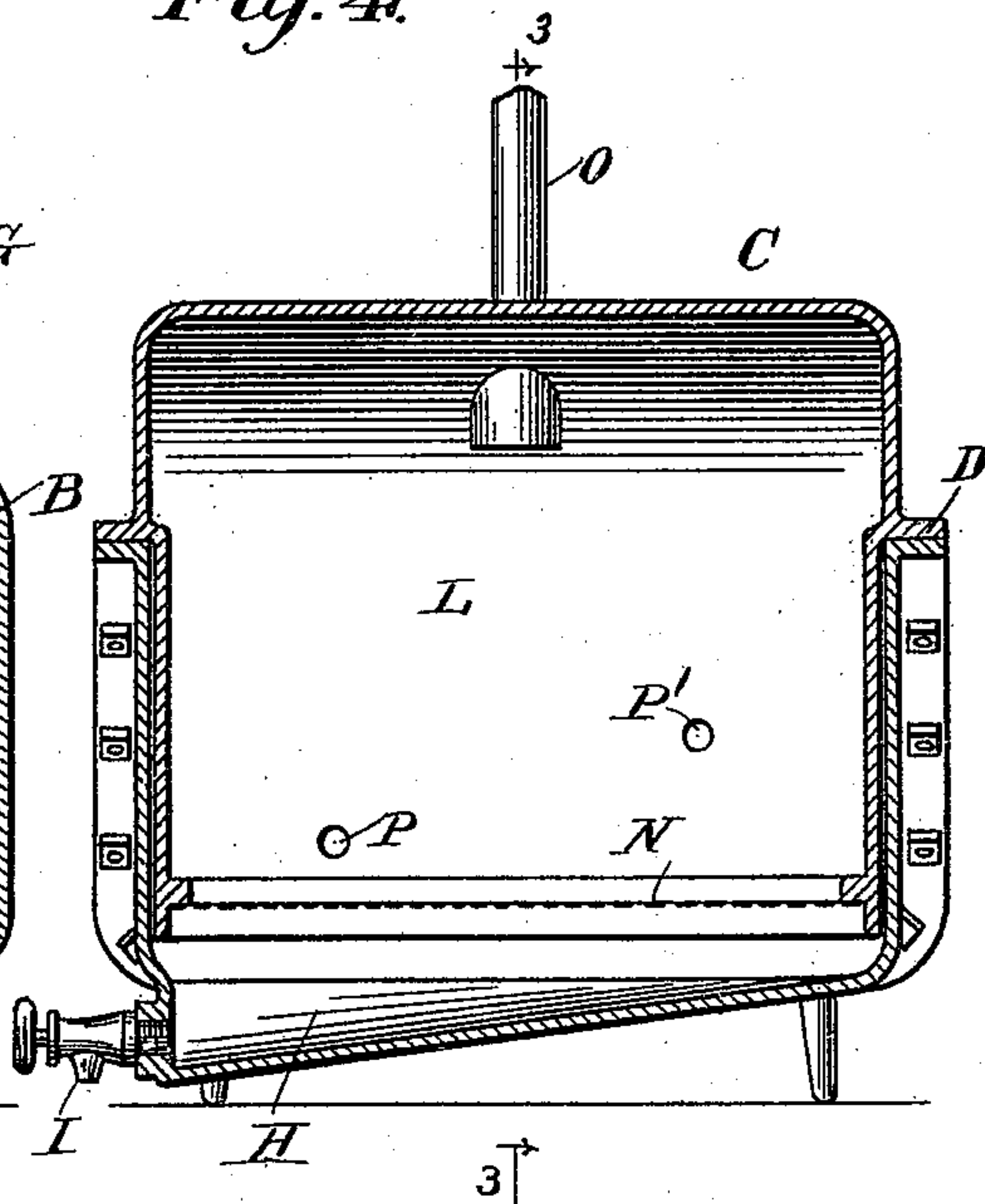


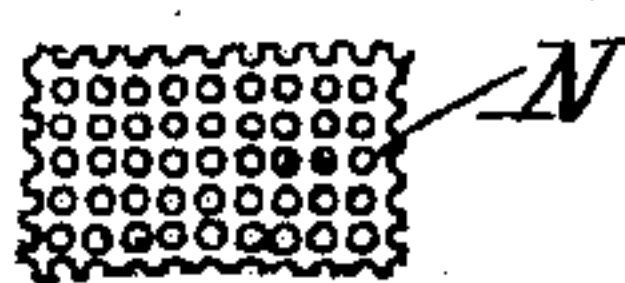
Fig. 4.



WITNESSES:

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Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM FALLEY AND JAMES FALLEY, OF LAFAYETTE, INDIANA.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 488,881, dated December 27, 1892.

Application filed August 9, 1892. Serial No. 442,569. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM FALLEY and JAMES FALLEY, both of Lafayette, in the county of Tippecanoe and State of Indiana, have invented a new and Improved Carburetor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved carburetor, which is simple and durable in construction, very effective in operation, and more especially designed to enrich natural gas by supplying it with sufficient hydrocarbon to render the gas fit for illuminating purposes.

The invention is an improvement in the class of carburetors in which the gas or air to be carbureted, *i. e.* enriched with carbon, is directed over the surface of the carbureting liquid or through perforated absorbent partitions saturated with such liquid. We have devised an improved construction of the carbureting vessel in which the gas enters at the top of the casing, passes downward, and then up through a perforated plate, and through the body of the liquid hydrocarbon employed as the carbureting liquid, to the outlet at the top.

The invention is embodied in the construction and combination of parts, as hereinafter specified.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of the improvement; Fig. 2 is a side elevation of the same; Fig. 3 is a transverse section of the same on the line 3—3 of Figs. 2 and 4; Fig. 4 is a longitudinal section of the same on the line 4—4 of Figs. 1 and 3; and Fig. 5 is a plan view of part of the perforated plate.

The improved carburetor is provided with a casing A made in two sections B and C jointed together by flanges D, bolted or otherwise fastened, the said joint extending preferably at an angle of forty-five degrees, as plainly shown in Figs. 1 and 3. On the under side of the section B are secured or formed legs E for conveniently supporting the apparatus on a suitable foundation.

On the top of the section B is formed an

inlet F for introducing the necessary liquid hydrocarbon into the apparatus, the said inlet being ordinarily closed by a screw cap or plug. Next to this inlet for the liquid hydrocarbon is arranged a gas inlet G, connected with the gas supply, so that the natural gas flows into the section B at the upper end thereof. In the bottom of this section B is formed an inclined trough or channel H, provided at its front end with a bib I and serving to draw off sediment or used-up liquid hydrocarbon. The other section C of the casing A, forms a square box J which extends partly into the section B, but does not reach with its lower end close to the bottom of the said section, so that the two sections are in communication with each other at their lower ends. This box J forms on its outside with the section B, the chamber K for the inlet of the gas and also a chamber L, within the box for the outlet of the gas, this chamber being provided at its open bottom with a perforated plate N attached to annular flanges formed in the inside of the box J, as will be readily understood by reference to Figs. 3 and 4. In the top of the section C is arranged an outlet pipe O for carrying off the carbureted gas, it being understood that this pipe opens into the upper end of the gas discharge chamber L. At the sides of the section C are arranged gage cocks P and P', located one above the other and serving to indicate the level of the liquid hydrocarbon within the casing.

The operation is as follows: When the sections B and C are fastened together, then the casing is partly filled with the liquid hydrocarbon introduced through the inlet F, the liquid hydrocarbon standing on the same level within the chambers K and L, as the lower end of the box J is in communication with the section B. When the casing has thus been charged with liquid hydrocarbon the inlet F is closed by the screw cap or plug and then natural gas is admitted to the chamber K through the inlet pipe G. The gas passing into this chamber K flows downward and forces the liquid hydrocarbon into the chamber L and passes finally through the liquid and at the same time through the perforated plate N held in the lower open end of the said box J. The gas finally rises in the

chamber L and passes from the latter in a carbureted state to the outlet pipe O from which it is led to the burners or to other devices for further use. Now, it will be seen
5 that the natural gas in passing through the perforated plate N is finely divided so as to be in a proper state to uniformly take up the hydrocarbon contained in the liquid, and at the same time the movement of the gas
10 through the liquid agitates the latter so that the said liquid retains its gravity throughout, and consequently the hydrocarbon taken up by the gas is of a uniform quality. It is understood that this agitation of the liquid hydrocarbon is of great importance, as the
15 heavier particles usually contained in the liquid hydrocarbon cannot be readily absorbed by the gas passing through the liquid, but when the latter is agitated the heavier
20 particles remain divided, and consequently the passing gas can readily take up the good

qualities of the liquid so that the gas is uniformly and thoroughly enriched.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent:— 25

A carburetor casing composed of the two detachable sections B, C, constructed as described, that is to say, the box-like flanged section C, having a gas outlet at the top and 30 an open bottom, and the flanged section B, having a gas inlet at the top and its sides embracing a portion of section C, and constituting the bottom and part of the sides of the latter, whereby chambers K and L for gas and 35 carbureting liquid are formed in the respective sections, as shown and described.

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Witnesses:

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