

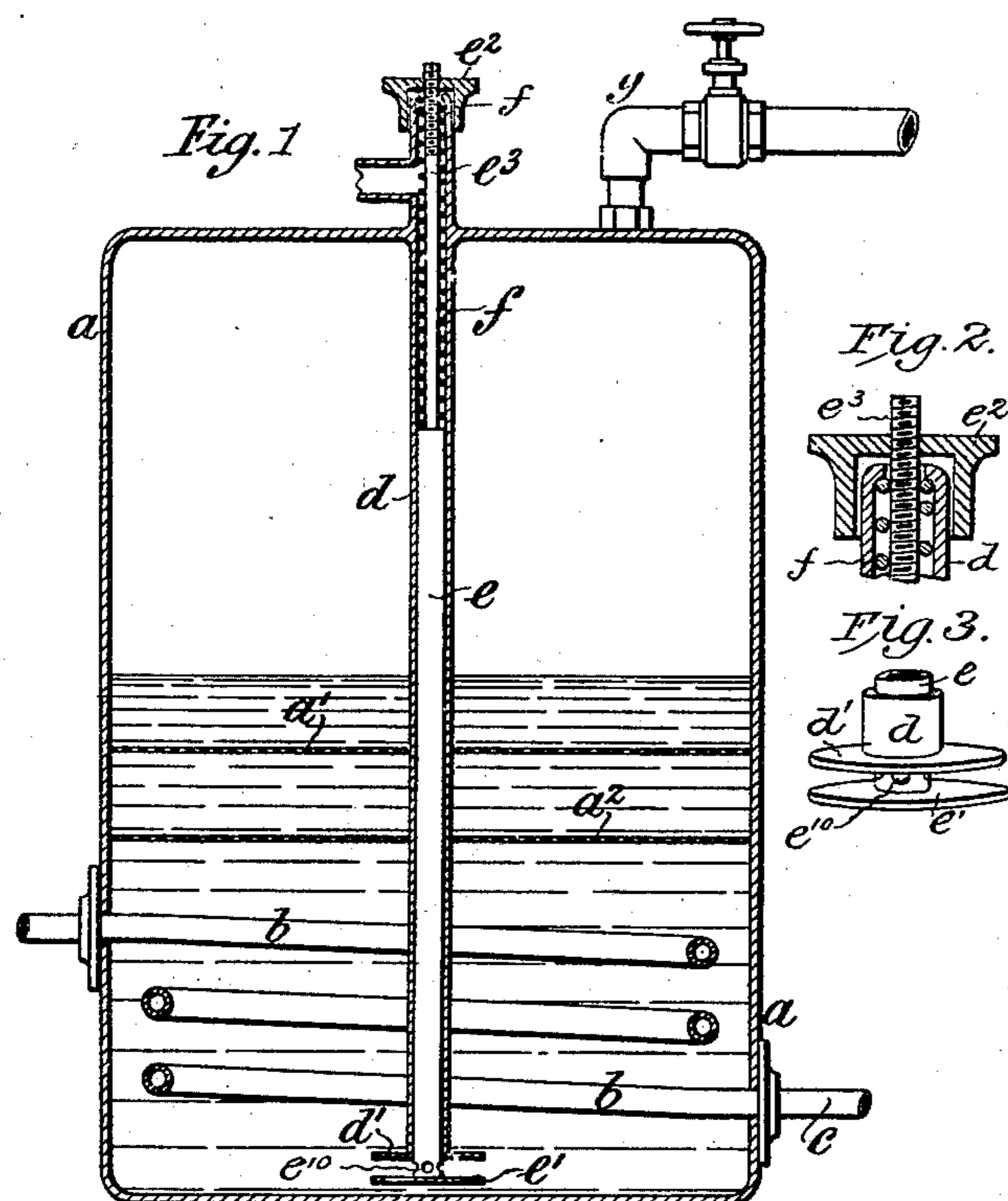
No. 664,457.

Patented Dec. 25, 1900.

J. F. BENNETT.  
CARBURETER.

(Application filed May 24, 1900.)

(No Model.)



Witnesses.  
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# UNITED STATES PATENT OFFICE.

JAMES FREDERICK BENNETT, OF SHEFFIELD, ENGLAND.

## CARBURETER.

SPECIFICATION forming part of Letters Patent No. 664,457, dated December 25, 1900.

Application filed May 24, 1900. Serial No. 17,839. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES FREDERICK BENNETT, engineer, a subject of the Queen of Great Britain, residing at No. 18 Violet Bank, Sheffield, in the county of York, England, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

This invention relates to apparatus to be used in conjunction with a gas or oil engine of ordinary type in such a manner as to enable it to be worked with ordinary oils of high flashing-point.

The generator consists of a closed vessel provided with means for heating it. The heating means may consist of a coil of pipe arranged in the generator and adapted to circulate heated gases therein.

Inside the vessel there are one or more jets so arranged that air is forced or drawn through the liquid hydrocarbon and becomes carbureted. These jets are formed by admitting air between two parallel disks, whose distance apart is adjustable, so that the air-supply can be regulated. The jet or jets are preferably used in connection with a perforated plate, whereby air is caused to spread and become divided into minute streams or bubbles, thus causing the air to be readily carbureted. A convenient arrangement is to place one or more perforated plates above the jet in the vessel. Oil may be supplied to the air-feed pipe or to the generator in any suitable way.

In the accompanying drawings, Figure 1 shows a vertical section of the generator. Fig. 2 is a detail view, on an enlarged scale and in section, showing the manner of connecting the telescopic pipes at their upper ends. Fig. 3 is a detail view in perspective of the disks at the lower ends of the tubes.

The generator *a* consists of a closed vessel heated by coil *b*, which may be connected to the exhaust-pipe *c* of an engine. Air is drawn into the vessel *a* by air-pipes *d* and *e* through holes *e*<sup>10</sup> at the bottom of the latter pipe and between the disks *d'* *e'*, fixed to the pipes. The pipe *e* slides telescopically in the pipe *d*, being pressed downward by the spring *f* and its position regulated by the nut *e*<sup>2</sup>, working on a screw on the stem *e*<sup>3</sup>, fixed to it. *a'* *a*<sup>2</sup> are perforated diaphragms fixed in the vessel

*a* above the disks *d'* *e'*. The vapor or gas produced in the vessel *a* passes out by the pipe *g*. The arrangement is such that air may be forced or drawn through the liquid hydrocarbon in the vessel *a* and become thoroughly carbureted. The air passes down through the pipes *d* and *e* and out through the holes *e*<sup>10</sup> between the disks *d'* *e'* and then ascends through the hydrocarbon. In ascending it passes through the perforated plates *a'* *a*<sup>2</sup>, and thereby becomes divided into minute streams or bubbles before rising to the surface of the hydrocarbon.

I have shown two perforated plates. Only one need be employed, or the plates may be differently arranged, as long as the construction is such that air after passing out through the holes *e*<sup>10</sup> is made to pass through perforations before reaching the surface of the hydrocarbon.

The distance between the disks may be varied by the adjustments above referred to, and thus the size of the openings *e*<sup>10</sup> may be varied; but it is immaterial whether or not the distance apart of the disks affects the size of the holes *e*<sup>10</sup>, as the increased friction between the air and the disks when the latter approach each other is quite sufficient to regulate the supply.

I claim as my invention—

1. In a generator for hydrocarbon-motors, the combination of a vessel for containing liquid hydrocarbon, two parallel disks in the lower part of the vessel, means for supplying air between the disks, means for varying the distances of the disks apart, and an outlet for the carbureted air from the vessel.

2. In a generator for hydrocarbon-motors, the combination of a vessel for containing liquid hydrocarbon, an air-supply pipe terminating in the lower part of the vessel, two parallel disks at the bottom of the pipe, means for varying the distances of the disks apart, and an outlet for the carbureted air from the vessel.

3. In a generator for hydrocarbon-motors, the combination of a vessel for containing liquid hydrocarbon, two parallel disks in the lower part of the vessel, means for supplying air between the disks, means for varying the distances of the disks apart, a perforated plate

above the disks, and an outlet for the carbureted air from the vessel.

4. In a generator for hydrocarbon-motors, the combination of a vessel for containing liquid hydrocarbon, an air-supply pipe terminating in the lower part of the vessel, two parallel disks at the bottom of the pipe, means

for varying the distances of the disks apart, a perforated plate above the disks, and an outlet for the carbureted air from the vessel.

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Witnesses:

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