

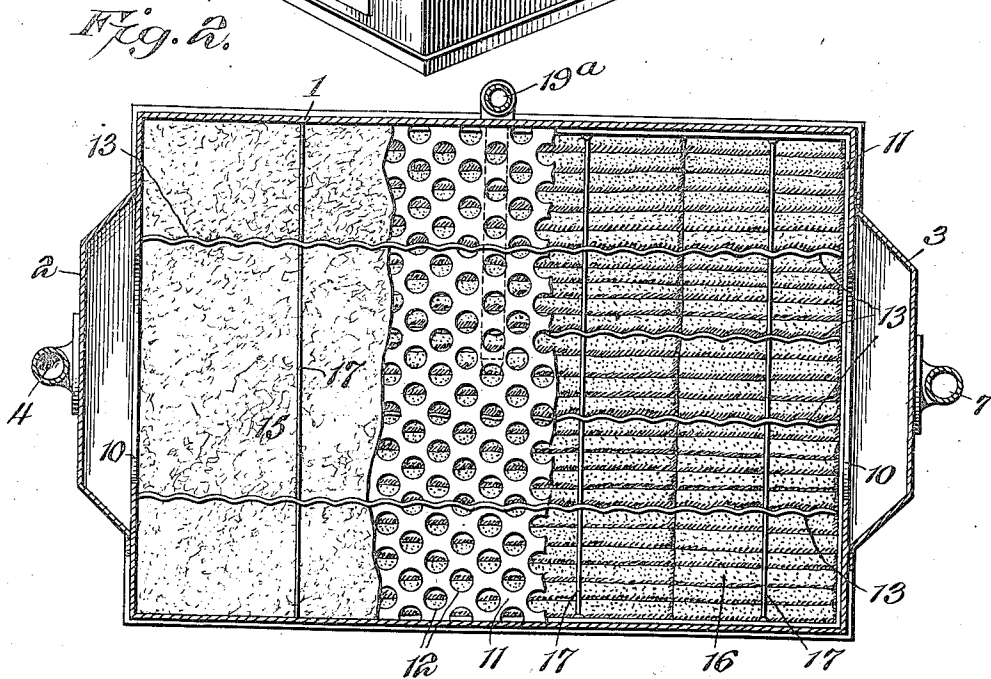
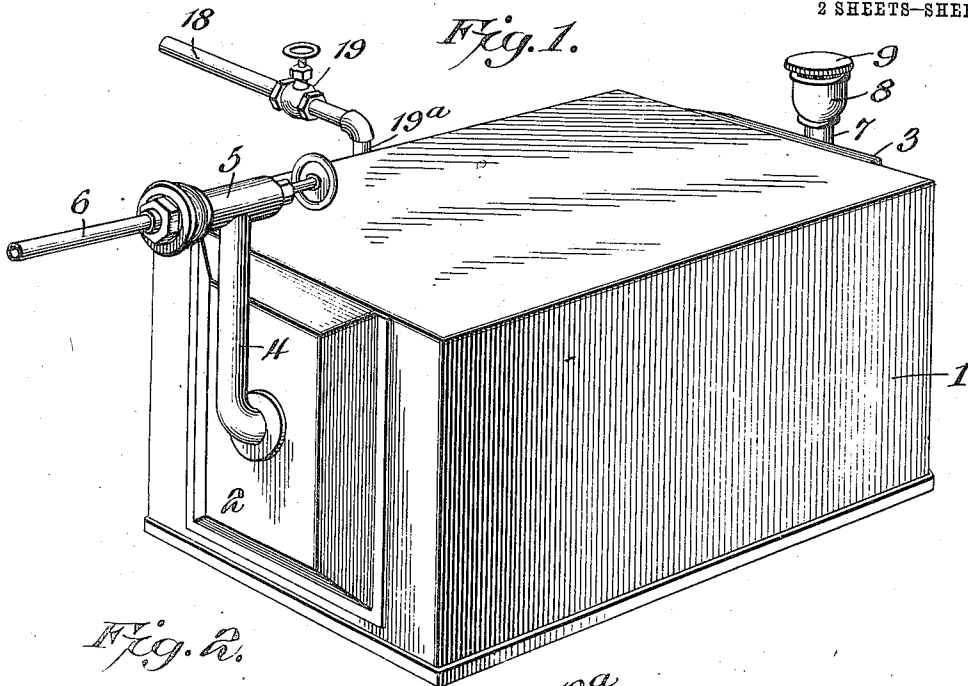
C. H. MYERS.
CARBURETER.

APPLICATION FILED FEB. 24, 1910. RENEWED OCT. 12, 1912.

1,062,180.

Patented May 20, 1913.

2 SHEETS—SHEET 1.



Charles H. Myers, Inventor,

Witnesses

Howard D. Orr.

R. W. Bishop

By

E. J. Siggers

Attorney

APPLICATION FILED FEB. 24, 1910. RENEWED OCT. 12, 1912.

Patented May 20, 1913.

The image contains two technical drawings, Fig. 3 and Fig. 4, of a mechanical device, likely a steam engine or pump component.

Fig. 3 is a cross-sectional view of a rectangular chamber. It features a top cover (1) with a central valve (19) and a side pipe (4) with a valve (6). The interior is divided into four horizontal sections (10, 11, 12, 13) by horizontal partitions (14). Each section contains a series of vertical tubes (15) with circular openings (16). A bottom section (17) is filled with a hatched material. A side pipe (7) with a valve (8) is on the right. The bottom of the chamber is labeled 18.

Fig. 4 is a cross-sectional view of a similar rectangular chamber. It has a top cover (1) with a central valve (19) and a side pipe (4) with a valve (6). The interior is divided into four horizontal sections (10, 11, 12, 13) by horizontal partitions (14). Each section contains a series of vertical tubes (15) with circular openings (16). A bottom section (17) is filled with a hatched material. A side pipe (7) with a valve (8) is on the right. The bottom of the chamber is labeled 18.

Witnesses

R. W. Bishop

 $\mathbb{B}_Y$

E. G. Siggers.
Attorney

Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. MYERS, OF BUFFALO, NEW YORK.

CARBURETER.

1,062,180.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed February 24, 1910, Serial No. 545,778. Renewed October 12, 1912. Serial No. 725,537.

To all whom it may concern:

Be it known that I, CHARLES H. MYERS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Carbureter, of which the following is a specification.

This invention relates to means for producing gas from volatile fluids and is intended more particularly for use upon motor boats.

The principal object of the invention is to provide a constant supply of a large quantity of gas which will be automatically maintained. This object is attained by the use of the device illustrated in the accompanying drawings, and the invention consists in certain novel features of the same which will be hereinafter first fully described and then particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of my improved carbureter. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a longitudinal vertical section thereof. Fig. 4 is a transverse vertical section.

The body 1 of my device is preferably of a rectangular formation, although it may be of any desired shape and size. At its opposite ends, the body is provided with hoods 2 and 3 from one of which a discharge 4 leads to a throttle valve 5 from which a pipe 6 passes to the explosion chamber of the engine. The opposite hood 3 communicates with an air inlet pipe 7 equipped at its upper end with a cup 8, at the upper end of which is provided a hand-manipulated valve or controller 9 which is adjusted to admit the proper quantity of air to the cup and through the same to the pipe 7 for the successful operation of the apparatus.

In the ends of the body I provide a series of large openings 10 which are inclosed by the hoods 2 and 3, respectively, and these openings communicate directly with spaces between division walls or holders 11 which extend between the ends of the body and consist preferably of sheet metal plates provided with perforations 12. In order to reinforce the device and to aid in supporting these division walls or holders, I provide a series of vertically-disposed partitions 13 which are preferably constructed of sheet metal corrugated and provided with per-

forations 14, as clearly shown. The oil-holding bodies 15 may be of any desired absorbent material and are supported by division walls or holders 11 while on the bottom of the casing I place a number of wicks 16 having their capillary passages arranged vertically in order that every particle of the volatile fluid with which the wicks are saturated may be fed to the surface and acted upon by the air currents passing thereover. The perforations in the partitions 13 serve to reduce the weight of the said partitions and at the same time permit the oil or other fluid fed to the wicks to flow to all parts of the same while the corrugations in the said partitions serve to strengthen the same so that the device will withstand the strain placed upon it by the operation of the engine.

It will be noted that the absorbent bodies or pads rise to but do not extend above the level of the lower edges of the openings 10, and that these openings are quite large so that a very large volume of air will be admitted to the spaces between the adjacent superposed pads and, consequently, the fluid fed thereto will be rapidly vaporized and an unfailling supply of gas maintained at the engine. The body of wicks 16 is of considerable capacity and is adapted to receive and hold the fluid overflowing from the upper wicks, due to any possible vibration of the device during the travel of the boat. Transverse retaining rods 17 are secured within the device above this reserve oil-holder and serve to prevent the same being disturbed by the air passing over the same.

In order to supply the several oil-holding bodies with volatile fluid and to saturate the same, I provide an oil supply pipe which leads from the reservoir or tank disposed at the most convenient point of the boat and provided with a valve 19 in order that the flow of the fluid may be regulated to the requirements of the engine and may be cut off altogether if so desired. This oil feed 18 is provided with a vertical branch 19^a arranged adjacent one side of the body and terminating short of the bottom of the body. From this branch 19^a, a series of nozzles 20 pass into the body of the device and terminate at about the centers of the pads. These nozzles deposit the fluid continuously upon the upper surface of the pads so as to maintain a permanent satu-

rated condition of the same and, consequently, guard against sudden stoppage of the supply of gas to the engine.

It will be noted that there is no supply nozzle directly over the lowermost oil-holding body 16 and this body serves as a receiver for any oil which may overflow from the pads during the travel of the boat. In order to prevent overcharging of the carbureter when the initial supply of volatile fluid is admitted thereto, I provide a drip-cock 21 which extends from the bottom of the device, so that when any oil passes into the absorbent body 16, it will at once escape through the said drip-cock 21, whereupon the operator will shut down the valve 19 and close the said drip cock. When the motor is operated, the valve 19 is opened so as to permit a steady continuous flow of the oil upon the pads and the valve may be readily adjusted to regulate the flow according to the consumption. Inasmuch as the inlet and outlet openings are alined and the oil-holding pads are arranged between them in the direct path of the air currents, a large volume of gas will be generated and fed constantly to the engine so that a high speed may be quickly reached and easily maintained.

The operation and advantages of my improved device are thought to be obvious from the foregoing description, taken in connection with the accompanying drawings, and detail reference thereto is deemed unnecessary.

In my copending application No. 545,773, filed Feb. 24, 1910, for carbureter for stationary engines and other purposes, there are shown superposed compartments with air passages between adjacent compartments, while within these compartments there are longitudinally disposed corrugated partitions provided with transverse openings, and within the compartments between the partitions are absorbent holders for the volatile liquid, these absorbent holders being made up of material having capillary passages terminating at the exposed surfaces of the holders with the ends substantially perpendicular to the direction of travel of the air over such surfaces, the device being also provided with means for admitting an air current to the spaces between the compartments and for carrying off the vapor laden air, together with means for supplying the volatile liquid to the holders within the compartments. These features are not claimed herein since they are embraced in claims in the aforesaid application.

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

1. A carbureter comprising a suitable casing having division walls separating the interior of the casing into a series of super-

posed compartments, a hood at each end of the casing opening separately into each compartment, one hood having means for connecting it to an air conduit and the other having means for connecting it to a gas conduit, absorbent material on the division walls and on the bottom of the casing stopping short of top wall of the respective compartment, and means for introducing a volatile liquid on to the absorbent material in each compartment above a respective division wall.

2. A carbureter comprising a suitable casing having pervious division walls separating the interior of the casing into a series of superposed compartments, a hood at each end of the casing opening separately into each compartment, one hood having means for connecting it to an air conduit and the other having means for connecting it to a gas conduit, absorbent material on the division walls and on the bottom of the casing stopping short of the top wall of the respective compartment, and means for introducing a volatile liquid on to the absorbent material in each compartment above a respective division wall.

3. A carbureter comprising a suitable casing having division walls separating the casing into a series of superposed compartments, perforated partitions in each compartment and extending from one division wall to the next thereabove and also engaging the top and bottom members of the casing, the partitions separating each chamber into longitudinal passages, hoods at the ends of the casing each communicating with all the superposed chambers, one hood having means for the inlet of air and the other hood having means for the outlet of gas, and means for exposing volatile liquid in each chamber to air currents passing there-through.

4. A carbureter comprising a suitable casing having division walls separating the casing into a series of superposed compartments, perforated corrugated partitions in each compartment and extending from one division wall to the next thereabove and also engaging the top and bottom members of the casing, the partitions separating each chamber into longitudinal passages, hoods at the ends of the casing each communicating with all the superposed chambers, one hood having means for the inlet of air and the other having means for the outlet of gas, and means for exposing volatile liquid in each chamber to air currents passing therethrough.

5. A carbureter comprising a casing with spaced division walls separating the interior of the casing into superposed compartments, the ends of the casing adjacent to the division walls having openings there-through, hoods at the ends of the casing

each communicating with all the chambers through the passages in the walls of the casing, an air inlet conduit communicating with one hood, a gas conduit communicating with the other hood, absorbent material on each division wall and on the bottom wall of the casing of a depth to leave a free air passage thereover from one hood to the other between the exposed surface of the absorbent material and the top member of the respective compartment, supporting partitions within the casing dividing the compartments into longitudinal passages, and a feed pipe for a volatile liquid having branches entering each compartment above a division wall and discharging on to the surface of the absorbent material therein.

6. A carbureter comprising a casing with spaced perforated division walls separating the interior of the casing into superposed compartments, the end of the casing adjacent to the division walls having openings therethrough, hoods at the ends of the casing, each communicating with all the cham-

bers through the passages in the walls of the casing, an air inlet conduit communicating with one hood, a gas conduit communicating with the other hood, absorbent material on each division wall and on the bottom wall of the casing of a depth to leave a free air passage thereover from one hood to the other between the exposed surface of the absorbent material and the top member of the respective compartment, supporting perforated, corrugated partitions within the casing dividing the compartments into longitudinal passages, and a feed pipe for a volatile liquid having branches, one entering each compartment above a division wall and discharging on to the surface of the absorbent material therein.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. MYERS.

Witnesses:

JOHN H. SIGGERS,
DAVID R. WAGNER.