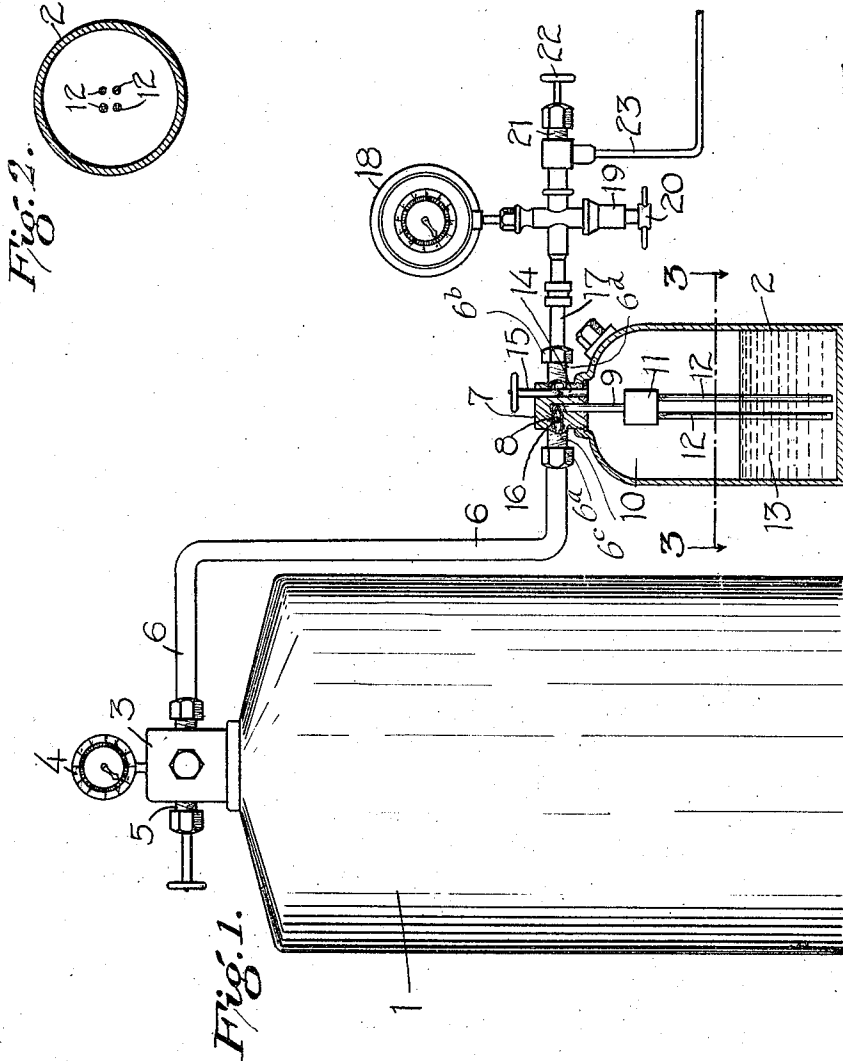


H. A. FREDERICK.
 CARBURETING APPARATUS.
 APPLICATION FILED DEC. 23, 1913.

1,237,190.

Patented Aug. 14, 1917.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY A. FREDERICK, OF NEW ROCHELLE, NEW YORK.

CARBURETING APPARATUS.

1,237,190.

Specification of Letters Patent. Patented Aug. 14, 1917.

Application filed December 23, 1913. Serial No. 808,413.

To all whom it may concern:

Be it known that I, HARRY A. FREDERICK, a citizen of the United States, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Carbureting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to carbureting apparatus, and one of the principal objects of the invention is to provide reliable and efficient means for mixing air and gasolene, and to providing safe and efficient means for leading the product to its point of consumption for lighting or heating purposes or for being used as a motive force.

The foregoing and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation and partial section of an apparatus made in accordance with this invention,

Fig. 2 is a sectional view taken on the line 3—3 of Fig. 1.

Referring to the drawing the numeral 1 designates a compressed air tank and 2 is a carbureter. These two containers may be of any desired relative capacities depending upon the purposes for which the gas to be used may be required, or the condition under which the apparatus is to be used. At the top of the compressed air tank 1 is a cap or container 3 and communicating with said cap is a pressure gage 4. A valve 5 in the cap 3 serves to regulate the quantity of compressed air to be fed through the pipe 6 to the carbureter 2 and for entirely cutting off the flow of air whenever desired.

The compressed air from the tank 1 is led into a brass plug 7 from the generator 2. The discharge end of the compressed air pipe 6 communicates with the plug 7 and discharges into a smaller air passage 8 in the plug 7 which passage communicates with a branch pipe 9 extending down into the carbureting chamber 10 from the plug 7 and communicating with a hollow expanding chamber 11. A plurality of air tubes 12 extend from the expanding chamber 11 to a point near the bottom of the carbureter 2 through a body of gasolene 13 which occupies about one half of the space within the

generator 2. The outlet passage 13 in the plug 7 from the gas chamber 10 is provided with a needle valve 15. The air inlet passage 8 is provided with a ball-check valve 16 to prevent back pressure when the pressure in the carbureting chamber 10 is sufficient to overcome the pressure in the air tank 1.

The gas service pipe 17 is provided with a pressure gage 18 and a suitable needle valve 19 is utilized for regulating the pressure at this point by turning the valve stem provided with a hand wheel 20. At the outer end of the gas pipe 17 is a needle valve 21 operated by means of the hand wheel 22 connected to the valve stem. The supply pipe 23 leads to the point of consumption.

From the foregoing it will be obvious that a carbureting apparatus made in accordance with this invention is perfectly safe, since the product may be led at any suitable distance from the apparatus, and since the gasolene is never subjected to the proximity of heat. The air supply pipe 6 and the service pipe 17 are detachably connected to the plug 7 by couplings 6^a and 6^b, respectively, which are swiveled on the pipes and which have screw threaded engagement with nipples 6^c and 6^d, respectively. The nipples 6^c and 6^d are formed on the plug 7 above the generator 2. The transverse dimension of the receiver 11 is smaller than the diameter of the cap receiving opening in the generator 2, and it is connected to and suspended from the plug 7 by the branch pipe 9. By unscrewing the couplings 6^a and 6^b from the nipples 6^c and 6^d, the plug 7, branch pipe 9, receiver 11 and air tubes 12 may be removed from the generator 2 by exerting an upward pull on the plug 7. After being removed from the generator 2, these parts and the generator may be readily and quickly cleaned or repaired.

My invention may be utilized for many purposes, since it will provide a carbureted product to be used for illuminating, for power, for heat, or for any of the purposes for which a product of this character is adapted to be used.

What is claimed is:—

The herein described carbureting apparatus comprising a carbureter casing having an opening in the top thereof, a plug removably fitted in the opening and having inlet and outlet passages, an air supply pipe detachably connected to the plug and commu-

nicating with said inlet passage, a check
valve in said inlet passage, a service pipe de-
tachably connected to the plug and commu-
nicating with said outlet passage, an expand-
5 ing chamber located within the casing and
smaller transversely than the opening in
which the plug is fitted, a branch pipe at-
taching the chamber to and suspending it
from the plug, said branch pipe communi-
10 cating with the chamber and with said inlet
passage, air tubes secured to and depending

from the under side of the chamber, and a
valve in said outlet passage, said air and
service pipes being connected to the plug at
a point above the casing. 15

In testimony whereof I affix my signature
in presence of two witnesses.

HARRY A. FREDERICK.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."