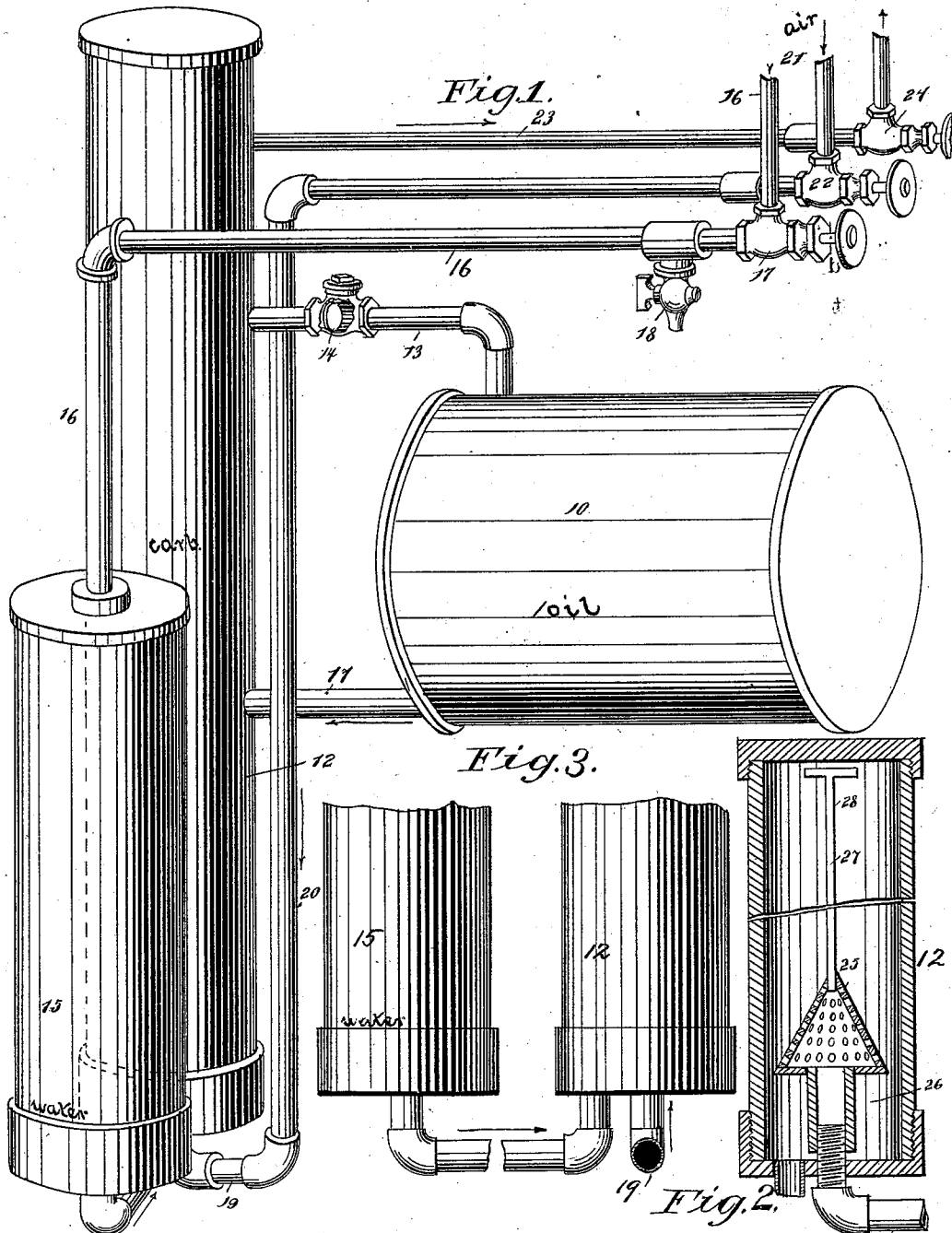


(No Model.)

E. M. WESTCOTT.
CARBURETOR.

No. 527,639.

Patented Oct. 16, 1894.



WITNESSES:

E. M. Westcott
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INVENTOR 19

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UNITED STATES PATENT OFFICE.

EUGENE M. WESTCOTT, OF HAMPTON, IOWA.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 527,639, dated October 16, 1894.

Application filed July 10, 1894. Serial No. 517,060. (No model.)

To all whom it may concern:

Be it known that I, EUGENE M. WESTCOTT, of Hampton, in the county of Franklin and State of Iowa, have invented a new and Improved Carburetor, of which the following is a full, clear, and exact description.

My invention relates to an improvement in so-called gas machines, although my machine is intended to make carbureted air which burns like ordinary illuminating gas.

The objects of my invention are to produce a machine of great simplicity, which is arranged in such a manner that the depth of gasoline through which the air is forced to be carbureted may be readily controlled; also to provide a means for regulating the air supply, to construct the apparatus so that it may be readily, quickly and thoroughly cleaned, and further it has for its object to provide a machine of the character stated in which the water supply to the carburetor can be regulated as to cover the distributor held therein and protect it from becoming clogged by freezing.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a perspective view of the apparatus embodying my invention; and Fig. 2 is a broken longitudinal section through the carburetor proper or generator, showing the arrangement of the air distributor and the means for removing it. Fig. 3 is a detail elevation of the lower ends of the carburetor and the water tank and the connecting pipe.

The apparatus is provided with a gasoline supply tank 10, from one end of which, at the bottom, leads a pipe 11 which delivers into the carburetor proper 12, this being preferably of cylindrical shape and its lower end is at a lower level than the tank 10, while its upper end extends above the tank top. This arrangement is in order that the gasoline may flow freely into the carburetor and will also flow back when the body of gasoline is raised in the carburetor, as hereinafter described. The tank 10 also connects

with the upper part of the carburetor by a vent pipe 13 having the usual check valve 14 therein. At one side of the carburetor 12 is a water tank 15, which, at its lower end, communicates with the carburetor and the upper end of the water tank connects, by means of a pipe 16, with the source of air supply, the air being forced in under pressure, and the pipe is controlled by a valve 17 and has also a pet cock 18 which may be opened to reduce the air pressure, if desired, as hereinafter described, and which may also be opened to permit the water and the gasoline residuum to be forced out, as will appear presently.

Leading into the bottom of the carburetor is an elbow pipe 19 which supplies air and is fed by pipes 20 and 21 connected by the usual couplings and controlled by a valve 22. The gas or carbureted air escapes from the upper part of the carburetor through a pipe 23 which is controlled by a valve 24. In the bottom of the carburetor is an air distributor comprising a conical rose 25, which has a nipple 26 on the under side to enable it to be screwed onto the pipe 19 which projects upward through the bottom of the carburetor, and this rose is provided with a stem 27 which extends nearly to the top of the carburetor, as shown clearly in Fig. 2, and terminates in a handle 28 by which it may be turned and the rose unscrewed from its seat and removed, thus enabling it to be easily cleaned when necessary.

The operation of the apparatus is as follows:—The gasoline is permitted to flow through the pipe 11 into the carburetor 12 and the air is turned on through the pipe 16 so as to press downward on the water in the tank 15 and force the water into the carburetor, and thus the gasoline is raised in the carburetor so as to make the necessary depth of gasoline, and if it is desired to increase the depth of the gasoline, the air pressure in the water tank is reduced by opening the pet cock 18, while if the depth of the gasoline is to be reduced the air pressure in the tank 15 is increased so as to force more water in the carburetor and raise the gasoline. The depth of the gasoline may thus be readily regulated by the water and air pressure, and as the water as it is forced into the carburetor covers the

air distributor, it serves to protect such distributor from becoming clogged by freezing. It will be understood that direct water pressure without the use of air may be used in substantially the manner indicated, if desired, without affecting the principle of the invention. The air is turned on through the pipe 21 and, rising through the water and gasoline, picks up sufficient hydrocarbon to render it fit for illuminating purposes and passes out through the pipe 23.

When it is desired to clean the apparatus, the valve 17 is closed, the pet cock 18 opened and the air pressure turned on through the pipe 21, which forces the water back through the tank, the pipe 16 and the pet cock 18, carrying with it the gasoline residuum.

When it is necessary to clean the air distributor it may be removed by taking off the cap of the carburetor 12 and then unscrewing the distributor, as specified above.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An apparatus of the kind described, comprising a gasoline supply tank, a carburetor extending above and below the supply tank and connected therewith, a water tank connected with the carburetor at the lower end of both tank and carburetor, an air supply pipe connected with the water tank at the top, an air supply pipe connected with the

lower end of the carburetor, and a discharge pipe opening from the upper end of the carburetor, substantially as described.

2. An apparatus of the kind described, comprising a gasoline supply tank, a carburetor extending above and below the level of the supply tank, pipes connecting the upper and lower portions of the tank with the carburetor, means for delivering water under pressure to the lower portion of the carburetor, an air supply pipe delivering into the bottom of the carburetor, and a discharge pipe leading from the upper portion of the carburetor, substantially as described.

3. An apparatus of the kind described, comprising a gasoline supply tank, a carburetor extending above and below the level of the tank, a pipe connection between the carburetor and tank, a water tank connected with the lower end of the carburetor, an air supply pipe provided with an escape cock and connected with the upper end of the water tank and an air supply pipe connected with the lower end of the carburetor, an air distributor at the discharge end of the air supply pipe in the carburetor, and a discharge pipe leading from the upper part of the carburetor, substantially as described.

EUGENE M. WESTCOTT.

Witnesses:

H. B. CORNISH,
W. E. PINCKNEY.

Affidavit having been filed showing that the name of the patentee in Letters Patent No. 527,639, granted October 16, 1894, for an improvement in "Carburetors," should have been written and printed *Eugene M. Wescott* instead of "Eugene M. Westcott," it is hereby certified that the proper correction has been made in the files and records pertaining to the case in the Patent Office, and should be read in the Letters Patent that the same may conform thereto.

Signed, countersigned, and sealed this 17th day of December, A. D. 1895.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.