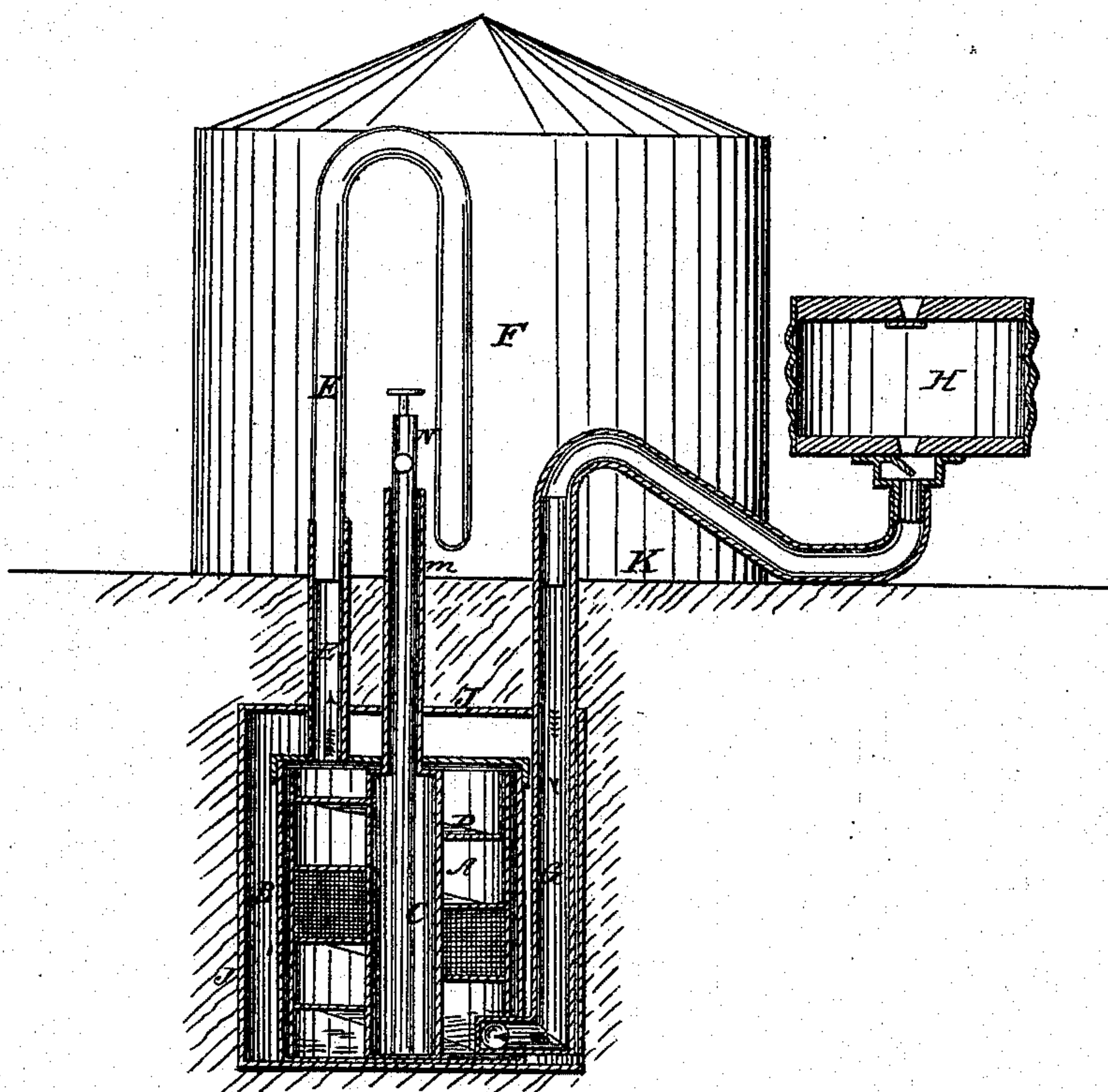


E. J. FRASER.

Carbureter.

No. 67,971.

Patented Aug. 20, 1867.



Witnesses:

Theo Fische
Wm Freun

Inventor:

E J Fraser
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E. J. FRASER, OF ERIE, PENNSYLVANIA.

Letters Patent No. 67,971, dated August 20, 1867.

IMPROVED CARBURETTING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, E. J. FRASER, of Erie, in the county of Erie, and State of Pennsylvania, have invented a new and improved Carburetting Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and useful method of charging atmospheric air with the vapor of volatile liquids or hydrocarbon oils, whereby the air is rendered inflammable and fitted for illuminating purposes; and the invention consists in forcing the air into the carburetting-chamber by means of a pump or blower of any description, and in passing it over inclined surfaces and through perforated retarding-plates or curtains when in contact with the vapor of such volatile liquids, as will be hereinafter described.

The drawing represents a vertical section of the apparatus, showing the parts of which it is composed, and the manner of their combination.

Similar letters of reference indicate corresponding parts.

A represents the carburetting vessel, which is placed within another vessel marked B. This vessel B contains benzine, gasoline, or some equivalent liquid. The vessel A is open at the bottom, with its lower edge cut away so as to allow free communication between the two. It is also shorter and of less diameter than B, so that there is a space above it, and also all around it. It also has a perforated top, through which the air is made to pass. This carburetting-chamber is annular in form, as seen in the drawing. C is a hollow cylinder, the interior of which has no connection with the carburetting-chamber A, but which is designed to contain hot water at certain seasons of the year, or on certain occasions. Around the cylinder C, in the annular space A, there is a plate scroll, marked D, which forms a sinuous passage for the air as it ascends through the carburetter. To retard the current of air, and hold it in contact with the vapor for a longer time, there is a number of perforated plates or curtains, D', placed in this passage, through which the air is compelled to pass, as seen in the drawing. The liquid which is carried up through the carburetter with the air can return through the space between the two vessels. After the air thus carburetted passes through the perforated top of the vessel A it is conducted into a gasometer through the pipe E. F represents the gasometer. G is the air pipe, and H is a bellows or blower by which the air is forced into the carburetter. The air is discharged into the bottom of the carburetter, as seen in the drawing. This whole carburetting apparatus is sunk into the ground, and is contained in a casing marked J. It will be noticed that this casing is deeper, and of greater diameter than the vessel B, so that there is space, L, and a stratum of dead air all around as well as on the top of the vessels A and B. K indicates the surface of the ground. By thus sinking the apparatus in the ground the temperature of the carburetting liquid is preserved nearly uniform throughout the year. In the coldest weather, or when the benzine or other liquid has in a measure lost its volatile properties, the cylinder C may be filled with hot water through the tube m which is connected therewith. N is the pump, by which the water may be withdrawn. It is the ordinary liquid-pump, and may be used to withdraw the benzine or other liquid from the carburetting vessel when it is desired to remove it.

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

The vessels A and B, the water-cylinder C, the plate-coil D, and the retarding-curtains D', when the same are constructed, arranged, and combined substantially as shown and described for the purposes set forth.

In combination therewith I claim the air pipe G and the space L, substantially as and for the purposes described.

Witnesses:

J. E. WILSON,
LEROY JUDD.

E. J. FRASER.