G. SMYERS.

Carbureting Apparatus.

No. 226,122 Patented Mar. 30, 1880.

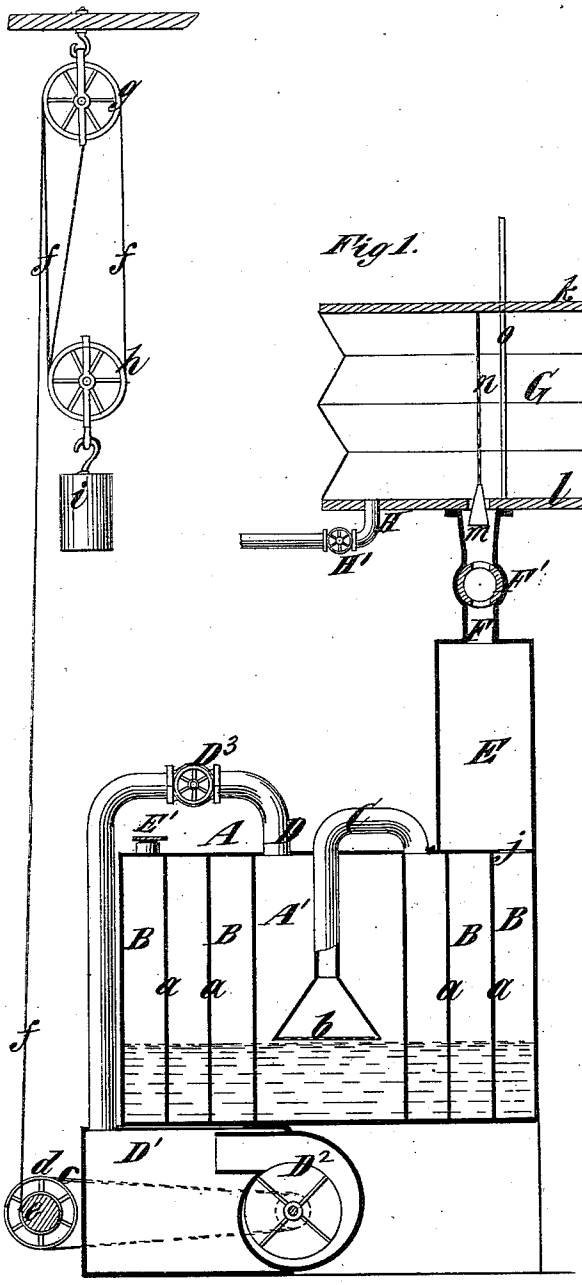
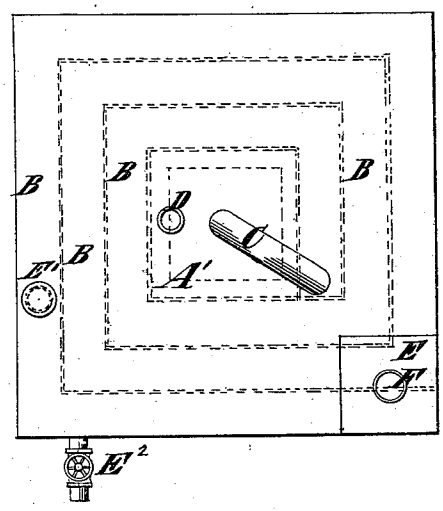


Fig 1.

Fig 2.



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UNITED STATES PATENT OFFICE.

GUILLAUME SMYERS, OF BRUSSELS, BELGIUM.

CARBURETING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 226,122, dated March 30, 1880.

Application filed November 4, 1879.

To all whom it may concern:

Be it known that I, GUILLAUME SMYERS, of the city of Brussels, in the Kingdom of Belgium, have invented certain new and useful Improvements in Carbureting Apparatus, of which the following is a specification.

My invention relates more especially to small gas apparatus which are designed for lighting single buildings.

In the accompanying drawings, Figure 1 represents a vertical section of an apparatus embodying my invention, and Fig. 2 represents a plan of the carbureter detached from the other parts.

Similar letters of reference designate corresponding parts in both figures.

A designates the carbureter, which consists of a chamber having a central compartment, A′, and a circuitous passage, B, extending from the compartment A′ outward, formed by a continuous vertical partition or diaphragm, *a*.

The central compartment, A′, communicates with the inner end of the passage B through a pipe, C, which is provided at its lower end, in the compartment A′, with a strainer, *b*, by which the air passing through the carbureter is prevented from carrying dirt or dust outward from the carbureter.

The carbureter is intended to be partially filled with naphtha or any other similar carbureting-liquid, and the air may be supplied thereto by means of a blower, or in any other way, through a pipe, D. In the present instance this pipe extends from a reservoir, D′, which is kept supplied with air by a blower, D^2, arranged underneath the carbureter A. The blower is operated through a belt, *c*, from a pulley, *d*, to which is attached a drum, *e*. A chain or cord, *f*, passes from said drum around pulleys *g h*, which form a tackle, and are actuated by a weight, *i*.

D^3 designates a valve arranged in the pipe D for regulating the supply of air passing to the carbureter. Air entering by the pipe D passes through the pipe C, thence through passage B to the outer end thereof, and through an opening, *j*, into the chamber E, where the carbureted air expands and becomes thoroughly homogeneous.

E′ designates a filling-mouth for supplying the carbureter with liquid, and E^2 an outlet through which the carbureter may be emptied of liquid when desirable.

Although the carbureter is here shown as rectangular, it might be cylindrical, and the passage B be made in the form of a spiral extending from the center thereof.

From the chamber E the carbureted air passes through the pipe F, under control of a valve, F′, to the gasometer G, which consists of a bellows-like chamber formed of two boards, *k l*, connected at the edges by cloth, rubber, or other material.

To render the cloth or rubber impervious to air a coating composed of one part of sweet aloes, one part of glue, and three parts of treacle may be applied thereto.

In order to maintain a uniform pressure in the gasometer G, I have represented a cone, *m*, slightly larger at its base than the opening from the pipe F, as suspended in said opening by means of a cord or chain, *n*, attached to the upper board, *k*. As the pressure in the gasometer increases the said board is raised, lifting the cone and decreasing the size of the opening for the entrance of gas. As the pressure therein decreases the cone falls and increases the size of the gas-inlet. It will be understood that by this means the pressure in the gasometer is automatically regulated and the gas maintained at a uniform pressure.

The top board, *k*, is guided in its movement by a rod, *o*, attached to the bottom board, *l*, and passing through the board *k*.

H designates a service-pipe, through which gas passes from the gasometer for use under control of a valve, H′.

If desirable, two or more gasometers may be connected with one carbureter.

I am aware that a carbureting apparatus has been constructed in which the air or gas is forced through a circuitous passage in contact with carbureting material, and passes from said passage to an expansible gasometer, controlling by its movement its inlet-valve, and I do not claim this construction broadly.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the central chamber,

A′, the circuitous passage B, surrounding said chamber, the pipe D, leading from the condensed air-chamber D′ into said central chamber, the pipe C, provided with the strainer *b* and connecting the chamber A′ with the inner end of the circuitous passage, the chamber E, connected with the other end of said circuitous passage, and the expansible gasometer, connected with said chamber E by a passage provided with an automatic pressure-regulating valve, substantially as described.

GUILLAUME SMYERS.

Witnesses:
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