E. J. MEREDITH.
Carbureters.

No. 196,304. Patented Oct. 23, 1877.

Fig. 1.

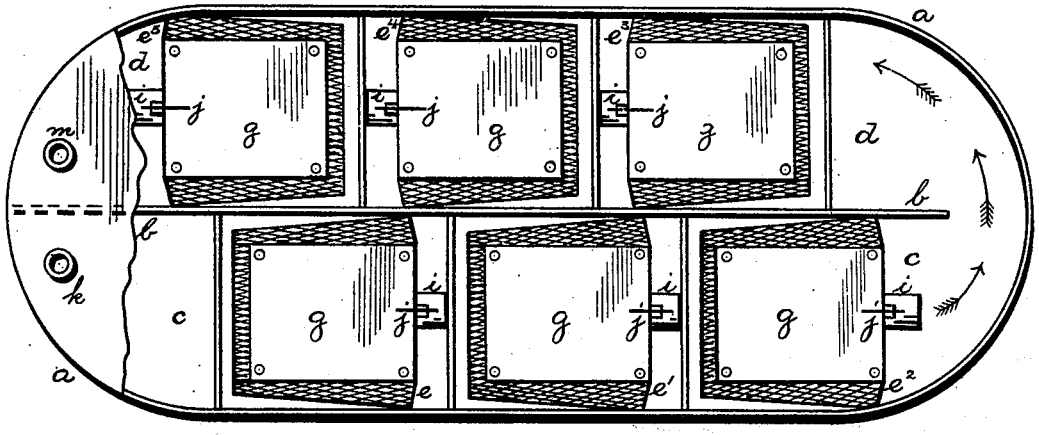


Fig. 2.

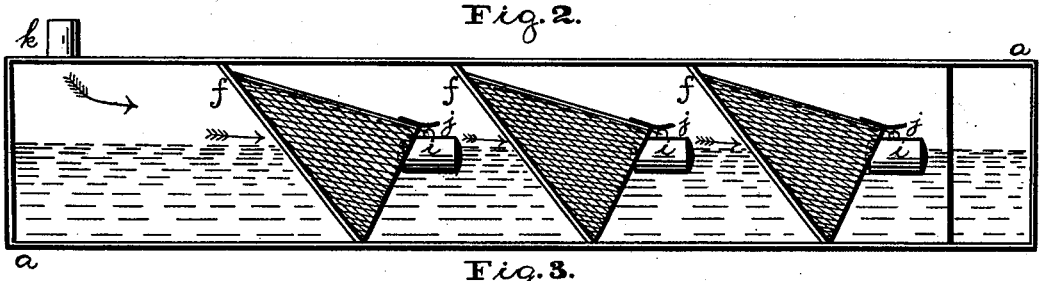


Fig. 3.

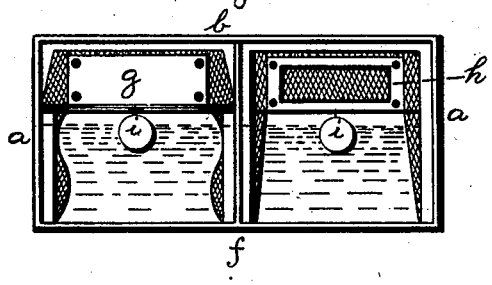
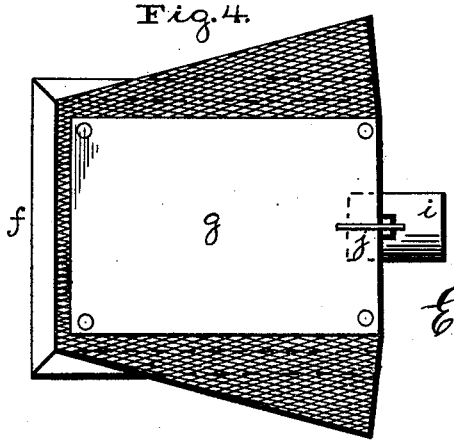


Fig. 4.



Witnesses:
John A. Wiedersheim.
Louis F. Brous?

Inventor:
E. J. Meredith.

UNITED STATES PATENT OFFICE.

EDMUND J. MEREDITH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **196,304**, dated October 23, 1877; application filed June 2, 1877.

To all whom it may concern:

Be it known that I, EDMUND J. MEREDITH, of Philadelphia, Pennsylvania, have invented an Improvement in Carbureters, of which the following is a specification:

My invention consists of a vessel for containing gasoline, in combination with a series of floated or self-adjusting diaphragms constructed and arranged within said vessel, as hereinafter described, said diaphragms being respectively provided with floats, which rest on the gasoline, and keep the diaphragms at all times in the same relative positions with respect to the surface of the gasoline, and thus cause the air intended to be carbureted to come into contact with the gasoline, whether the carbureter is full or much depleted of the same.

In the annexed drawings, Figure 1 is a plan of a carbureter embracing my improvement, the top plate being broken away; Fig. 2, a side elevation of the same, the side plate being removed; Fig. 3, an end view of the same, the end plate being removed; Fig. 4, a plan, on an enlarged scale, of one of the several similar diaphragms, with its frame and float.

a represents a vessel to contain gasoline. *b* is a partition, partially dividing the same into two compartments, *c* and *d*, which communicate at one end. *e* e^1 e^2 are diaphragms, of muslin, Canton flannel, or other like spongy and pliable material, attached to frames *f*, which are soldered tightly to the sides of the compartment *c* in the inclined positions shown in Fig. 2; and e^3 e^4 e^5 are similar diaphragms, similarly arranged, but inclined in the reverse direction in the compartment *d*. *g* is a light plate of sheet metal on the upper, and *h*, Fig. 3, a frame or plate of similar metal on the under, side of the respective diaphragms, the plate and frame being held together in place by rivets, as shown in Fig. 3. Floats *i* are attached to the diaphragms, respectively, by links, which allow the floats to rest horizontally on the surface of the gasoline. The floats *i* have sufficient buoyancy to keep the mouths or outlets of the diaphragms open to the extent of about an inch or inch and a half above the surface of the gasoline. *j* are guards, to prevent the floats from turning over on top of the diaphragms.

It is preferable to employ as many of the diaphragms as will work without the interference of one with another.

k is the air-inlet pipe. *m* is the carbureted-air-exit pipe.

Air from a blower enters the compartment *c* through pipe *k*, passing under the diaphragms in this compartment, and thence in the direction of the arrows, under the diaphragms in compartment *d*, and is thus uniformly charged with gasoline-vapors, and is drawn off through pipe *m* when required for illuminating purposes.

It will be seen that the diaphragms, being supported by the floats, rise and fall according to the quantity of gasoline in the carbureter *a*. They thus operate to cause the air intended to be carbureted to come into contact with the surface of the gasoline, and produce carbureted air having uniform illuminating-power, whether the carbureter contains a full or only a scant supply of gasoline.

The carbureter is practically constructed in a variety of forms. Thus, when a small amount of carbureted air is required, the vessel *a* may be made without the dividing-partition, the atmospheric air being admitted at one end and drawn out carbureted at the other end; or the capacity of the carbureter may be increased by extending its length or by employing any number of carbureters, each constructed as above described, all joined together as a series, the atmospheric air being admitted at one end and drawn off carbureted at the other end of the series.

I claim—

1. A series of floated diaphragms, respectively constructed of muslin, Canton flannel, or other like spongy and pliable material, shaped or kept in the required form by top plates or frames *g h*, and attached to fixed side frames *f* set in inclined positions, and also flexibly attached to a float, *i*, in combination with an inclosing-vessel, *a*, in the manner and for the purpose substantially as set forth.

2. The diaphragm *e*, constructed of muslin, Canton flannel, or other like spongy and pliable material, shaped or kept in the required form by means of top plates or frames *g h*, and attached to the side frames *f*, in combination with the float *i*, substantially as set forth.

E. J. MEREDITH.

Witnesses:
JOHN A. WIEDERSHEIM,
LEWIS F. BRONS.