H. C. APPLEBY.

CARBURETER.

No. 79,048. Patented June 23, 1868.

Fig. 1

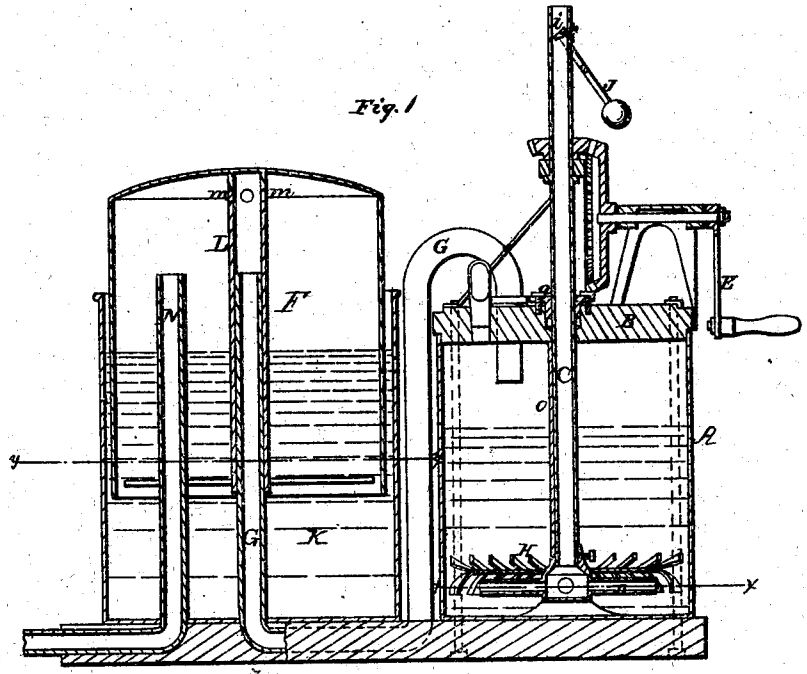
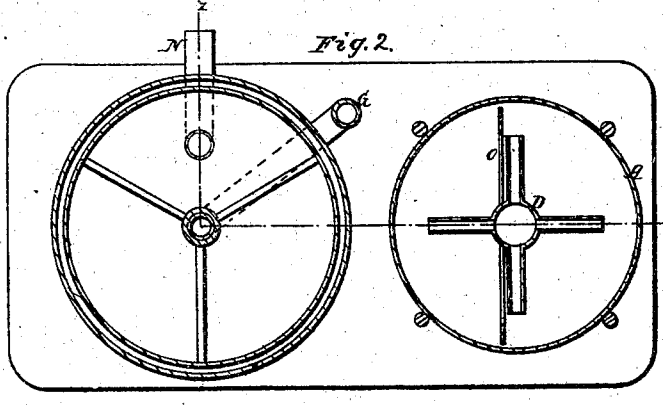


Fig. 2.



Witnesses

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HENRY C. APPLEBY, OF CONNEAUT, OHIO.

Letters Patent No. 79,048, *dated June* 23, 1868.

IMPROVED CARBURETTER.

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, HENRY C. APPLEBY, of Conneaut, in the county of Ashtabula, and State of Ohio, have invented a new and useful Improvement in Carburetting Air; 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 improvement in apparatus for carburetting or charging atmospheric air with the vapor of hydrocarbon liquid for illuminating purposes.

And it consists in the construction and arrangement of parts hereinafter described.

Figure 1 represents a vertical section of the apparatus, showing the parts of which it is composed, and the manner in which they are arranged, the section being through the line *z z* of fig. 2.

Figure 2 is a horizontal section through the lines *x x* and *y y* of fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a tank or vessel, which is filled with gasoline, (or some other hydrocarbon liquid,) to a sufficient height, and made air-tight by means of a cover, B, securely fastened on with bolts or screws, as represented in the drawing.

C is a vertical tube, which passes through the cover, the joint being rendered tight by a stuffing-box, *a*, and with its lower end resting on the bottom of the tank or on a step to keep it in place.

This tube communicates with the gasoline by means of a transverse tubular cross, attached to the tube C, marked D, representing four (or any other suitable number of) horizontal arms with open ends, as seen.

A revolving motion is given these arms through gearing attached to the tube C, and to the cover, by a crank marked E.

A rapid rotating motion being imparted to the tube C, the centrifugal force of the arms D in the liquid creates a partial vacuum, inducing thereby, a current of air to descend through the tube C, and be discharged from the arms into the liquid, which air ascends through the liquid, and occupies the upper portion of the tank A, from which it escapes into the gasometer.

F represents the gasometer, and

G is the tube which conveys the carburetted air from the tank to the gasometer.

Above the arms D in the tank, I place a serrated horizontal disk, H, which serves to prevent a too rapid rotary motion in the liquid, and also serves, by the agitation which it causes, to separate the air from the liquid.

For the purpose of preventing the evaporation of the liquid through the tube C, I place a valve, *i*, which is hung on pivots, near the upper end of the tube, which valve is controlled by a weighted lever, J.

When the apparatus is not in motion, the valve is closed by the weighted lever.

When the tube is in motion or the apparatus is in operation, the weighted lever is raised by centrifugal force, and the valve is opened thereby.

The tube G extends up into the tank K of the gasometer, and the gasometer F has a central tube, L, which slips over the tube G, thus forming a telescopic joint.

This joint supports the gasometer in an upright position, without pulleys or weights.

The tank K is filled or nearly filled with water, in the ordinary manner.

The carburetted air is discharged by the pipe G into the tube L, from which it passes into the gasometer through apertures in the tube seen at *m*.

From the gasometer the carburetted air is conveyed to the burner by the pipe N.

Within the carburetting-tank or vessel A, there is an open vertical partition-plate, *o*, which serves as a support for the serrated disk H.

By the use of this apparatus, as above described, the air becomes thoroughly laden or charged with the vapor, or with the more volatile particles of the carburetting-liquid, and rendered thereby highly inflammable and valuable for illuminating purposes.

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

1. Discharging a current or currents of air into hydrocarbon liquid by centrifugal force, substantially as and for the purposes described.

2. In combination with a carburetting-apparatus, the valve *i*, operated by the weighted lever J, and the serrated disk H, substantially as and for the purposes described.

HENRY C. APPLEBY.

Witnesses:

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