B. H. WOOLMAN.

CARBURETER.

No. 176,395. Patented April 18, 1876.

Fig. 1.

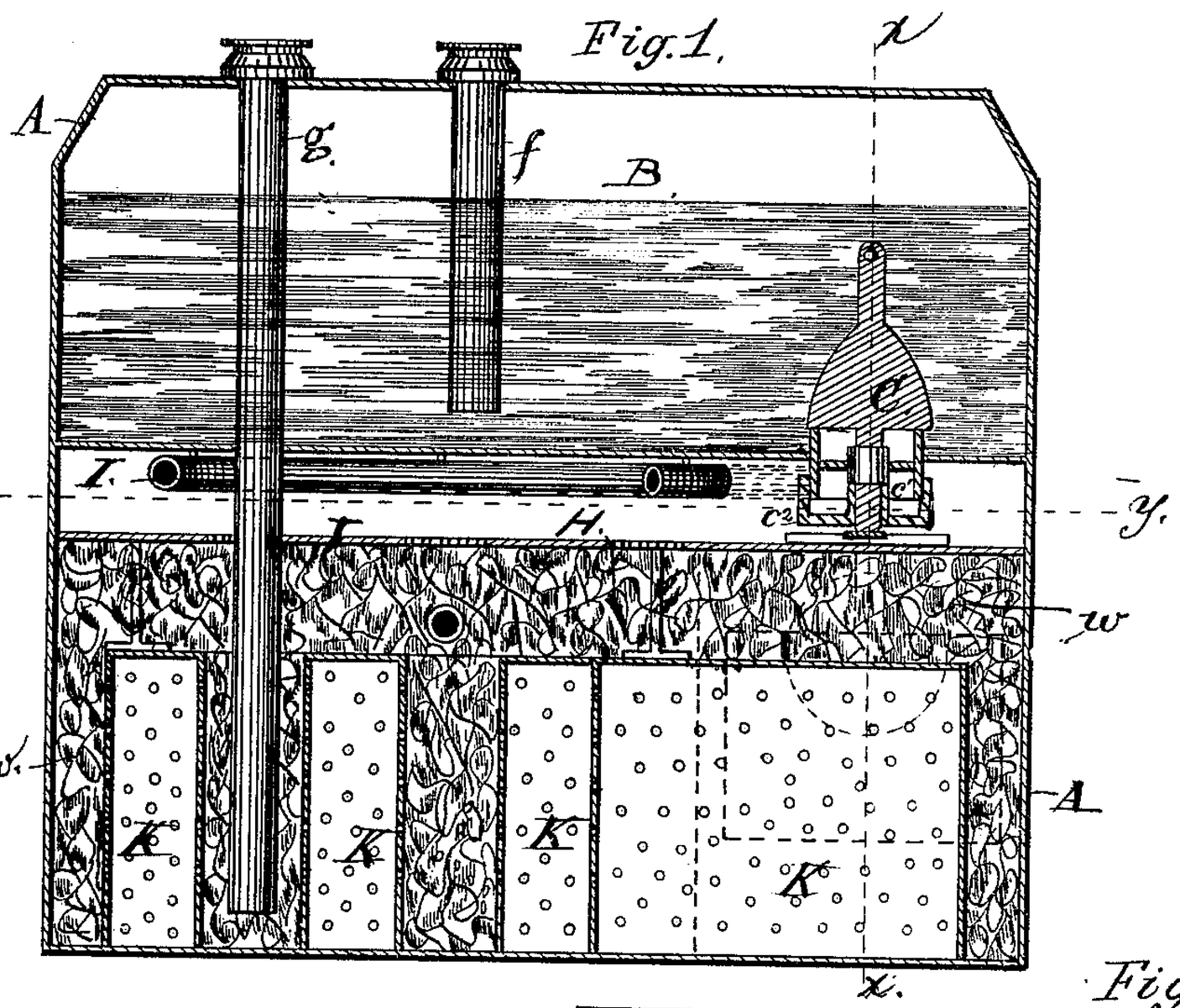


Fig. 2.

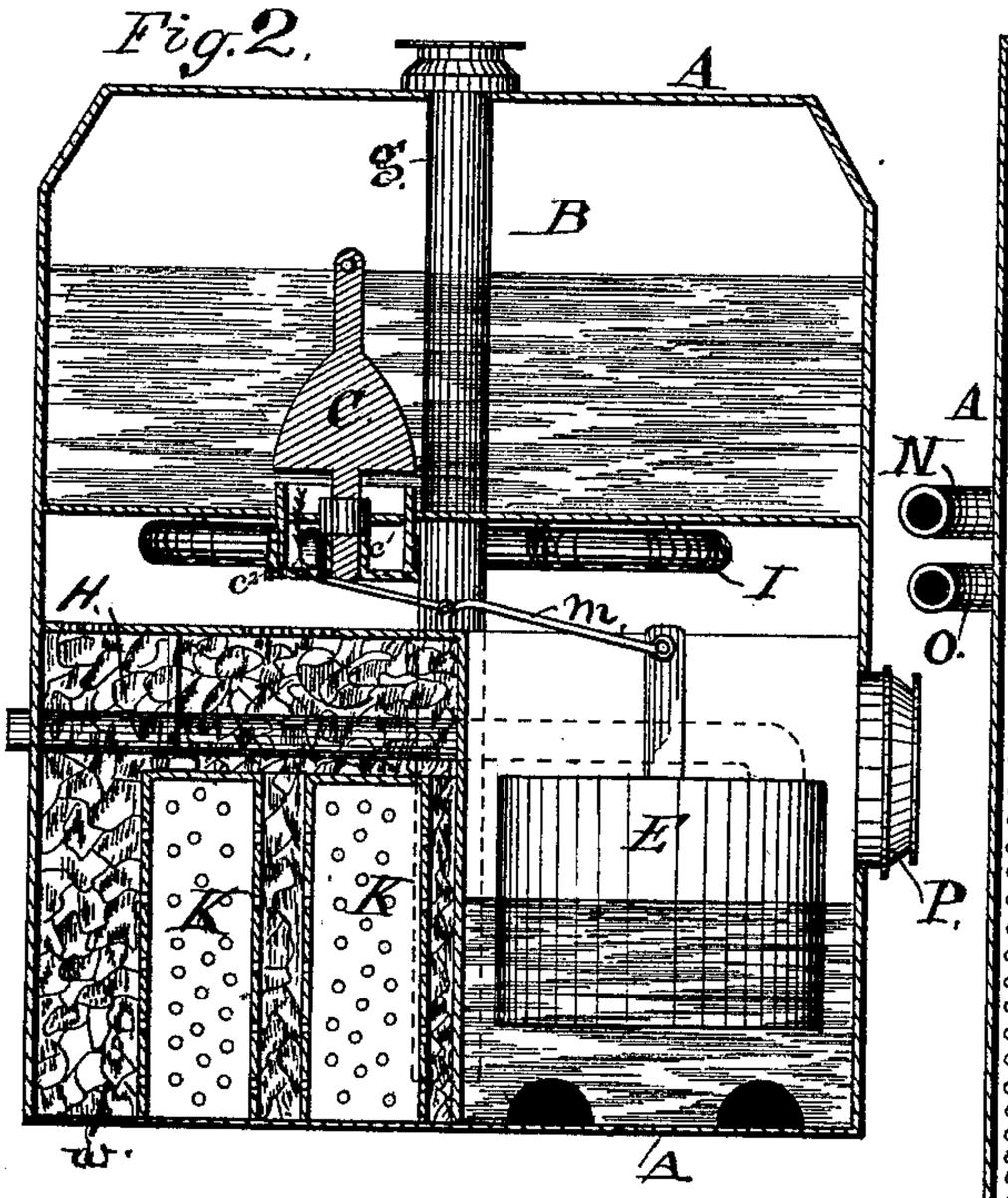
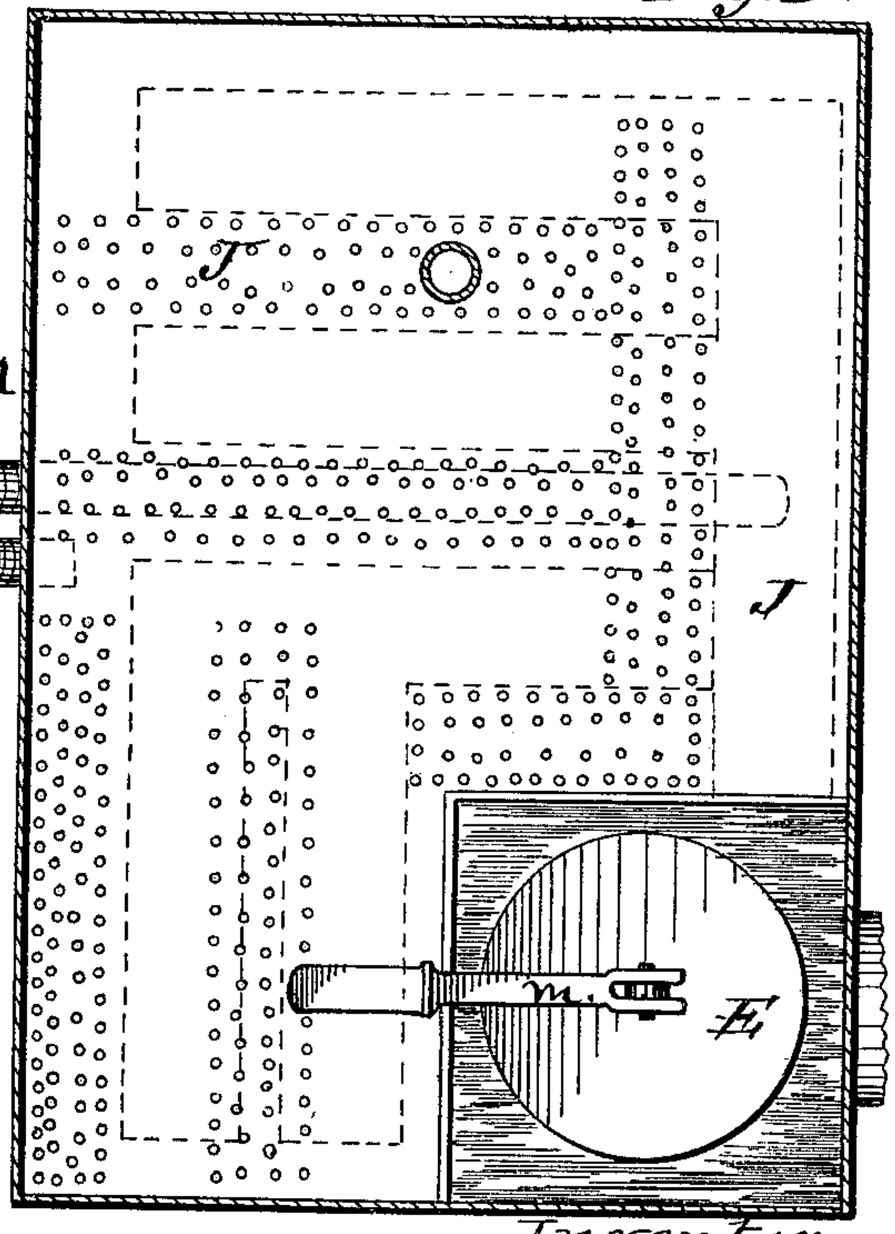


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

BENJAMIN H. WOOLMAN, OF PORTLAND, MAINE.

IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **176,395**, dated April 18, 1876; application filed February 12, 1876.

To all whom it may concern:

Be it known that I, BENJAMIN H. WOOLMAN, of Portland, in the State of Maine, have invented certain new and useful Improvements in Carbureters, and which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section; Fig. 2, a transverse section in the line *x x* of Fig. 1; and Fig. 3, a horizontal section in the line *y y* of Fig. 1.

The object of my invention is to effect an extensive and rapid vaporization of the fluid, and to facilitate the charging of the air or gas with this vapor.

A is a case or vessel for containing my improved apparatus; B, a reservoir or chamber in its top for receiving and holding a supply of any suitable hydrocarbon; C, a weighted valve for automatically supplying liquid to the parts below the chamber B, and actuated, as hereinafter described, by the agency of a float, E. The top or cover of the case A has leading downward therefrom two pipes—one of these, marked *f*, for indicating the depth of the fluid in the reservoir B, and the other or longer one, *g*, for indicating the depth of the fluid in the lower or carbureting chamber H, this tube *g* being also available for pumping out the fluid from H, when desired. On the under side of the reservoir B is a coiled tube, I, perforated, and connected, at its receiving end, with the opening to which the feed-valve C is applied, the rod of this valve passing through a sleeve, c^1, of cap or cup c^2, the function or duty of this perforated coil being to distribute or shower the fluid over the perforated partition J, which separates the reservoir from the carbureting-chamber. The perforations in this partition J are so grouped or arranged that the liquid, in passing through it, shall drop directly upon and keep constantly wet the absorbent material, but especially upon that portion lying in and above the passages or channels between the walls or windings of the branched or circuitous distributer or conveyer K, through which the air or gas is distributed in the carbureting-chamber, it being understood that the absorbent material, which may be sponge, sawdust, or any other suitable article, *w*, should preferably be packed in high enough to reach to and be kept in place by this perforated partition J.

The air or gas distributer K is fixed in the lowermost part of the apparatus, as shown, and its side and end walls throughout its whole length, and that of its branches, are perforated with slots or small holes, or both, this distributer occupying and extending over most of the area of the case A, but leaving room for the absorbent packing between the walls, and also for a small compartment in which the float E may rise and fall. This float I connect to a lever, *m*, fulcrumed on the partition J, leaving the other end of the lever free to act upon and operate the valve C, to let down the fluid from the reservoir B when needed—that is, supposing that it has been ascertained that for a given-sized machine a depth of three inches of fluid is requisite to be kept in the bottom of the machine, then the float and its lever will be so arranged that when the fluid in H is below this depth the float will lower accordingly, and thereby raise its free end and lift the valve-cock C, and let down more liquid from the reservoir B into the coil I and upon the perforated partition, and thence through it to the absorbent, and to the carbureting-chamber. Upon the rising of the liquid to the required height in the carbureting-chamber the lever relieves the valve-cock, which then, by its own weight, falls again and cuts off, till needed, any further supply.

The air or gas is supplied to the distributer K by means of a pipe, N. The carbureted air or gas may pass out through a pipe, O, located at any convenient point. P is a trap door or screw, upon opening which the float may be inspected to ascertain whether it is in order.

I claim—

The fluid-reservoir B, provided with a horizontal tubular perforated coil, I, secured to its under side and communicating with its outlet-passage, controlled by the weighted feed-valve C, within the reservoir, these parts operating as and for the purpose set forth.

BENJAMIN H. WOOLMAN.

Witnesses:

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