H. M. Paine.

Hydrocarbon Evaporator.

No. 87,192. Patented Feb. 23, 1869.

Fig. 1.

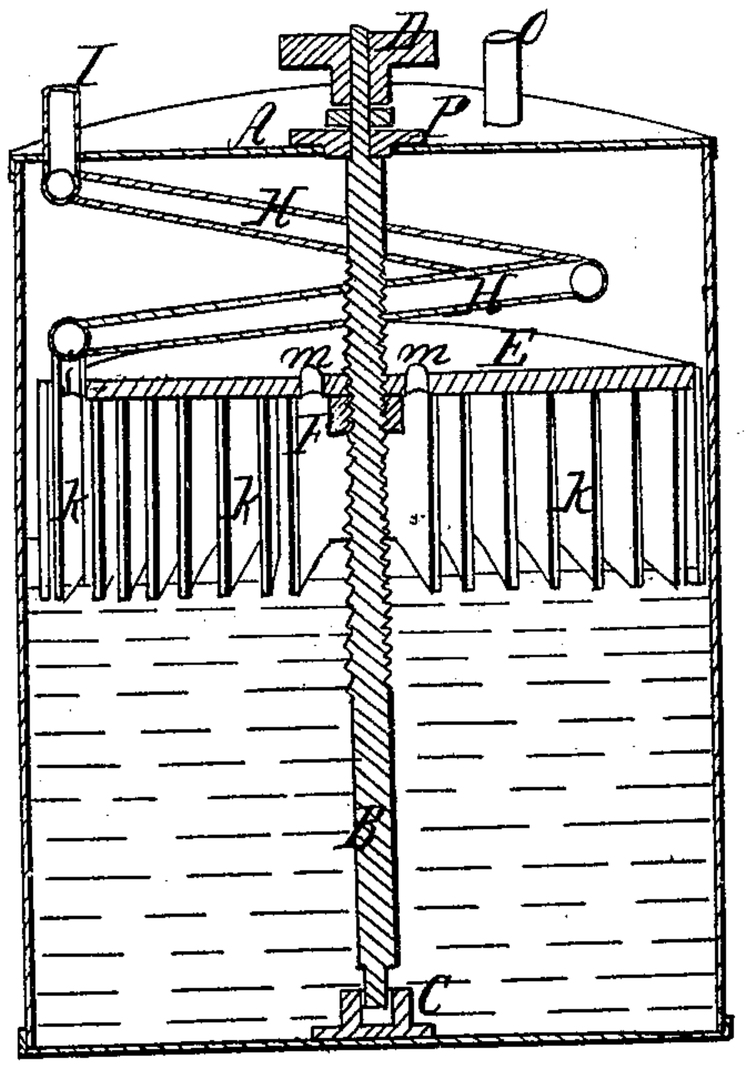


Fig. 2.

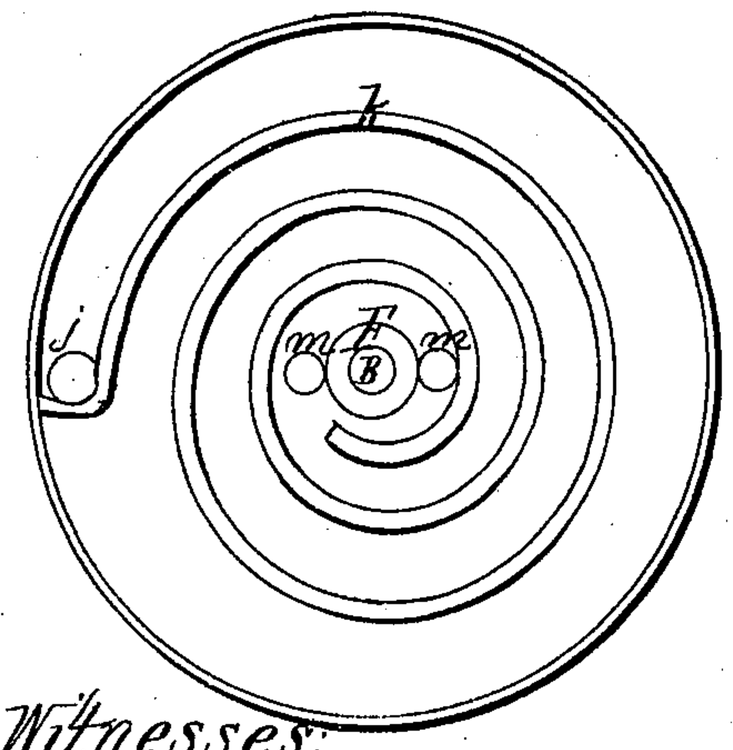
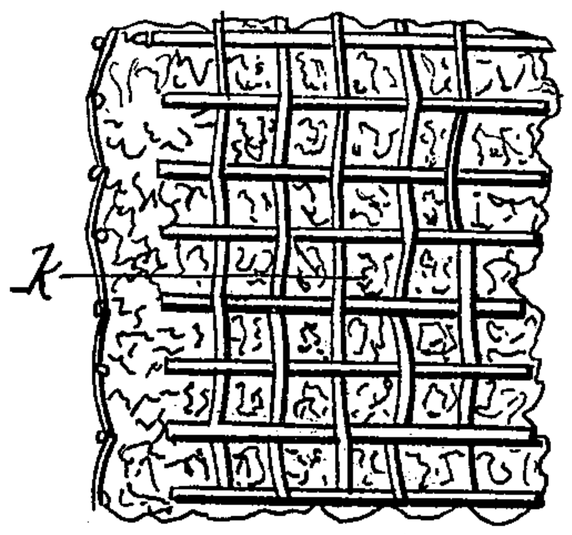


Fig. 3.



Witnesses;
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M. L. Brown

Inventor;
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UNITED STATES PATENT OFFICE.

HENRY M. PAINE, OF NEWARK, NEW JERSEY.

IMPROVED APPARATUS FOR CHARGING AIR WITH HYDROCARBON VAPORS.

Specification forming part of Letters Patent No. **87,192**, dated February 23, 1869.

To all whom it may concern:

Be it known that I, HENRY M. PAINE, of the city of Newark and State of New Jersey, have invented a new and useful Hydrocarbon-Evaporator; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to simplify and isolate that portion of portable gas-machines known as the "carbureter" from the pneumatic parts of the apparatus, and make it the vessel in which the hydrocarbons are transported from the place of manufacture to that of the consumer, ready for use with decanting the same, and thus filling the place occupied in domestic economy by the ordinary oil or kerosene can.

The nature of my invention consists in the construction of a can, A, Figure 1, with a screw, B, stepped in the bottom C, and passing out through the top, and operated by the milled head D. On the screw B traverses a hood, E, by means of the nut F. A jointed pipe, H, connects the hood E with the induction-pipe I in the head of the can, so that a free communication is maintained between the interior of the hood and the induction-pipe during the rise and fall of the hood. The interior of the hood contains a spiral capillary wall, K, Figs. 1 and 2, commencing at the point where the jointed pipe H, Fig. 1, connects with the hood, and terminating at the center of the hood, around the openings *m m*, Fig. 2. The capillary wall is made by pressing sponge, or its equivalent absorbent, between sheets of coarse wire-cloth, as shown in Fig. 3.

The operation of this arrangement is such that if the lower portions of the capillary walls be immersed in the volatile fluids, they will immediately become saturated with it; and if a current of air be introduced at I, Figs. 1 and 2, it will traverse between the walls till it reaches the center, and pass out at the openings *m m* into the top of the can, and from thence to the burners through the induction-pipe O, Fig. 1, charged with the vapors of the fluid.

The screw B is used not only to carry the hood down, so as to keep the capillary walls in contact with the fluid as it lowers by consumption, but it also performs the important function of regulating the amount of evaporating-surface, as may be desired. The screw B, Fig. 1, does not bottom on the step C, but hangs, with all its appurtenances of jointed pipe, hood, and walls, on a soft washer, P, Fig. 1, of leather, or other suitable material, from the top of the can, thus insuring a tight compensating joint.

The mode of using the evaporator is to send it as you would an oil or kerosene can, and have it filled with the hydrocarbon at the place of its manufacture or sale, and then attach it to the pneumatic apparatus by any convenient coupling. When all the volatile products have been exhausted, it is again detached, and sent, with the residuum, to be decanted by the distiller, and again refilled, thus avoiding all the danger and annoyance usually attending the use of hydrocarbon-machines.

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

1. The hood E, in combination with the jointed pipe H and screw B.

2. The spiral capillary wall K, of wire-cloth and sponge, or its equivalent absorbents.

3. The suspending of the movable parts on the washer P, all substantially in the manner and for the purpose specified.

HY. M. PAINE.

Witnesses:
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