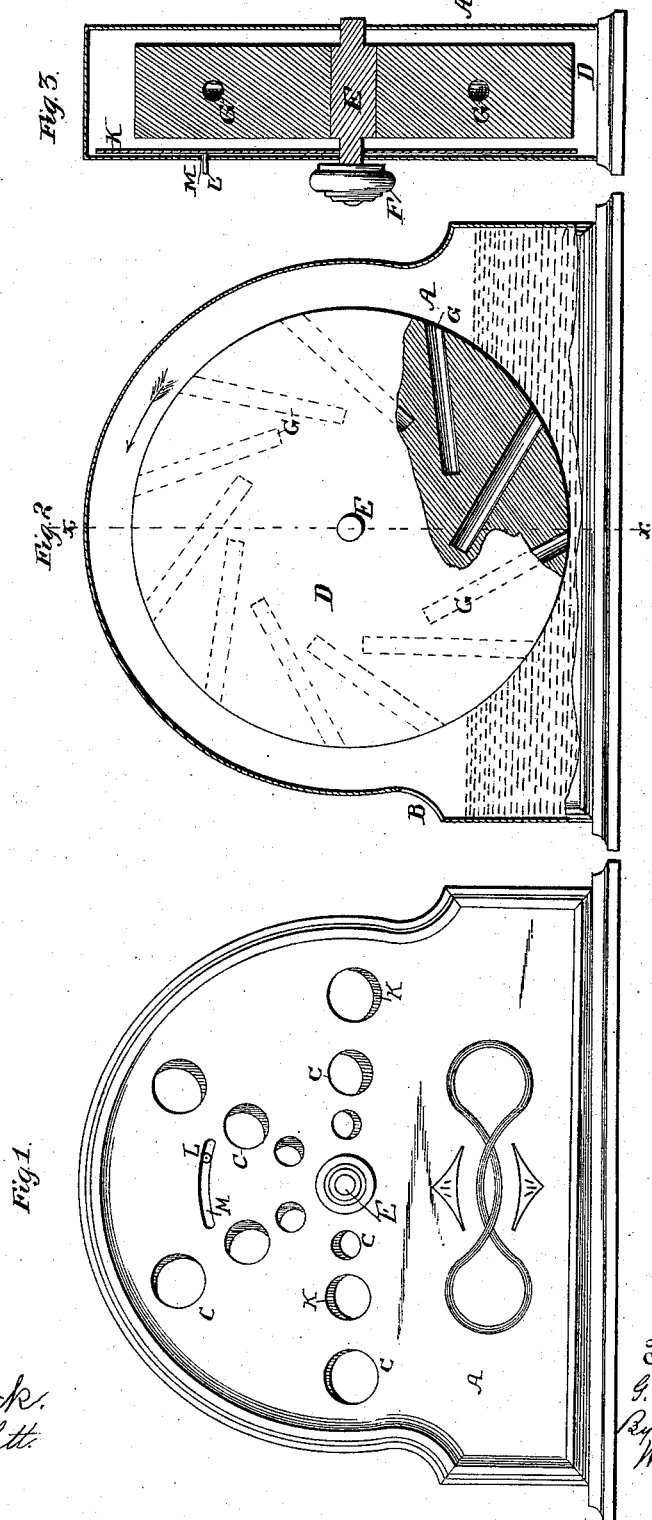


(No Model.)

G. M. SHERMAN.
VAPORIZER.

No. 384,794.

Patented June 19, 1888.



Witnesses,

Chas. Brock.
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UNITED STATES PATENT OFFICE.

GARDNER M. SHERMAN, OF SPRINGFIELD, MASSACHUSETTS.

VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 384,794, dated June 19, 1888.

Application filed July 29, 1887. Serial No. 245,611. (No model.)

To all whom it may concern:

Be it known that I, GARDNER M. SHERMAN, residing at Springfield, in the State of Massachusetts, have invented certain new and useful
5 Improvements in Vaporizers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to vaporizers or evaporators for disinfecting purposes, and is specially intended for use in sick-rooms, hospitals,
10 or other places where the slow evaporation of a disinfecting-fluid is required.

The object of the invention is to produce a vaporizer in which the evaporation may be
15 regulated to a greater or less degree.

The invention consists in the construction of parts and combination of elements hereinafter set forth and claimed.

In the drawings, Figure 1 is a front elevation
20 of the vaporizer, showing in part the grating, the openings in which may be regulated. Fig. 2 is a longitudinal central section of the casing and inclosed disk. Fig. 3 is a vertical section on line *x x*, Fig. 2.

The reference-letter A indicates the frame or casing, which may be of metal, porcelain, or any non-porous material, and is preferably of such form as to conveniently inclose the disk or wheel D without leaving much space
30 around the disk. The casing is provided with an opening, B, in any suitable position, so that the lower part of the casing may be filled with liquid through said opening.

The front or rear face of the casing may
35 have a number of openings, C, behind which openings there is a plate, K, provided with similar perforations or apertures. Plate K is pivoted and has a pin, L, extending through a slot, M, in the casing, so that by sliding the
40 pin in said slot the openings may be made to open or close in a manner common in registers. Any other common form of register will answer the same purpose. The opening of the register may be made to turn the inclosed disk.

The register may be at the rear of the casing,
45 and the front be ornamented with any handsome or fanciful design, so that the device will look like an ornament for the mantel.

The casing A contains a wheel or disk, D,
50 of porous material, as plaster-of-paris, which

disk is mounted on an axle, E, extending through and journaled in the casings, and having a handle, F, outside the casing, by which the wheel may be turned.

The wheel D has a number of pockets or
55 buckets, G, which enter from the periphery of the disk in lines tangential to the circumference, or approximately so, so that the revolution of the wheel or disk in the direction of the arrow, Fig. 2, will fill the buckets and lift
60 some of the liquid to the upper part of the casing, or above the fluid-level, which will not generally be more than one-third of the way up the disk.

The operation of the device is as follows:
65 The casing having been filled for about one-fourth of its height with a disinfecting-fluid, if a very slow evaporation is desired the "register" is closed, or nearly closed. The escape of the fumes or vapor will then be very slow,
70 as the surface of the liquid exposed to atmospheric action is small and the escape from the register difficult. If a large vaporization is desired, the register is fully opened and the wheel D is given a partial rotation, so as to carry
75 some of the fluid above the axle. The liquid will immediately begin to percolate through the porous material of the wheel, and soon a very large evaporating-surface will be presented to the operation of the air, as the liquid exudes
80 from the pores of the material of which the wheel is composed.

The wheel will usually be so heavy that the slight preponderance of liquid at one side will not turn it, or the journals of axle E will be
85 tight enough to hold the wheel by friction.

It will be understood that mechanical equivalents are within the scope of my invention.

The disk or wheel may be renewed when desired, and the top of the casing may be re-
90 movable for the purpose.

I claim—

1. The combination, with the supporting casing, of a porous wheel pivoted therein, said wheel having buckets or pockets arranged to
95 lift a liquid when partially turned, substantially as described.

2. In a vaporizer, the combination of a casing, a register in said casing, and a porous disk within the casing having buckets ar-
100

ranged as described, and a handle connected to the disk and extending outside the casing.

3. A wheel of plaster-of-paris or similar porous material having buckets or pockets extending from the outside or periphery in lines crossing radial lines, substantially as described.

4. The combination, in a vaporizer, of the inclosing casing having an aperture for filling and orifices for the escape of fumes, a plate having corresponding orifices, a disk or wheel pivoted in the casing, the same being of por-

ous material and having buckets, as described, and a handle for rotating said wheel extending outside the casing, all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GARDNER M. SHERMAN.

Witnesses:

JOSEPH W. JOHNSON,
C. H. STEBBINS.