(No Model.)

G. DOUGLASS.

VAPOR GENERATOR FOR BATHS AND BATH APPARATUS.

No. 327,539. Patented Oct. 6, 1885.

Fig. 1.

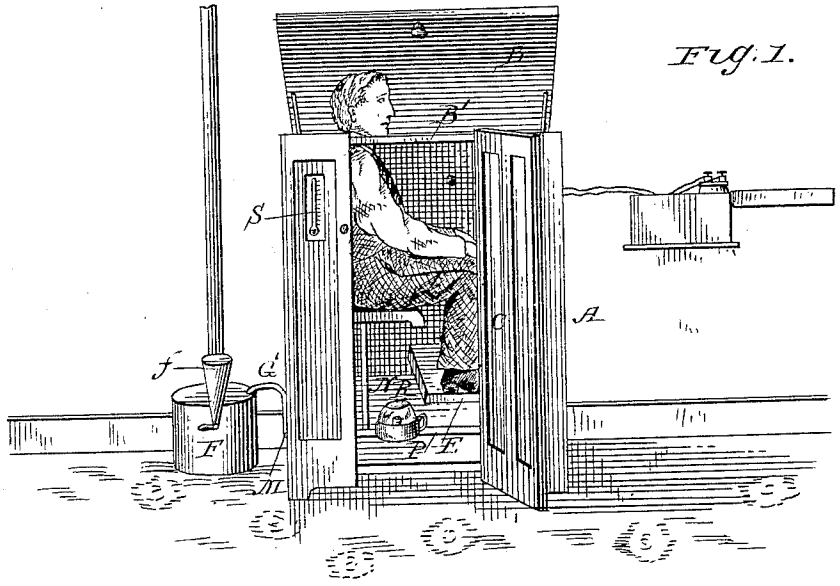


Fig. 2.

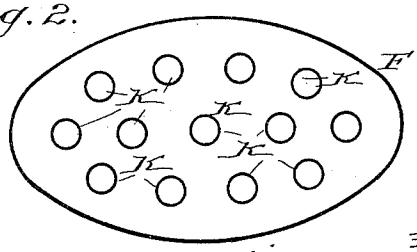
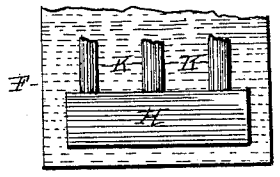
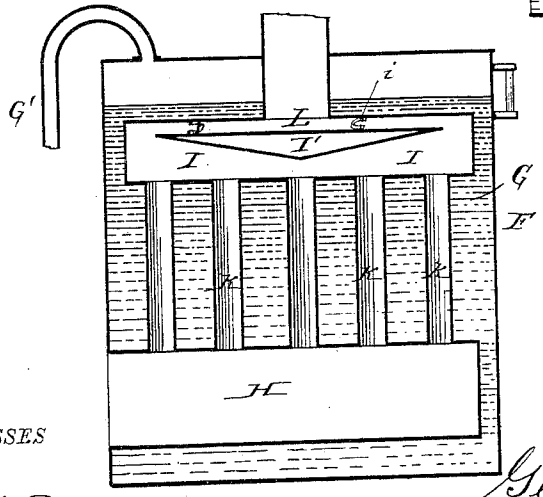


Fig. 3.

Fig. 4.





WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE DOUGLASS, OF SIOUX CITY, IOWA.

VAPOR-GENERATOR FOR BATHS AND BATH APPARATUS.

SPECIFICATION forming part of Letters Patent No. 327,539, dated October 6, 1885.

Application filed April 18, 1884. Serial No. 128,407. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DOUGLASS, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Vapor-Generators for Baths and Bath Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to portable vapor-baths; and the novelty consists in the construction, arrangement, and adaptation of a peculiar vapor-generator in its relation to the bath-closet, as will be more fully hereinafter set forth, and specifically pointed out in the claim.

The invention is illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is an elevation showing the relative arrangement of the generator and closet; Fig. 2, a horizontal section of the generator; Fig. 3, a vertical section of the same; Fig. 4, an end view of the fire-box, showing it surrounded by water.

I will briefly describe the bath-closet, although it forms only a relative feature of the invention.

A designates the body of the closet, having a seat, a foot-rest, E, a side door, C, a hinged top, B, and a sectional top, B′, adapted to closely embrace the neck of the person being treated. A lamp, R, may be employed to produce chemical or medicinal fumes or vapor, and an attachment may be provided, if desired.

I desire to inject into the interior of this closet, when closed, a proper quantity of steam. To this end I provide the generator F. This is essentially a sheet-metal vessel having a fire-chamber, H, a deflecting-chamber, I, a water chamber connected with the exterior by a passage, *f*, and an escape-flue, as L. The water-chamber entirely surrounds the heat-flues, except the front of the fire-box, and the said fire-box is connected to the deflecting-chamber by a series of pipes, as K.

Suspended in the chamber I is a deflector, I′, which is held in position by small cleats or brackets *i*. The lower surface of the deflector is inclined outwardly, and the exit from the chamber for the products of combustion is located at the top and, approximately, the center of the deflector, as seen at L.

The rising products of combustion meet the deflector in their passage to the exit, and are thrown toward the sides and along the top of the chamber. The reverberations of the heat products thus caused by the deflector allows the maximum of heat to be given off to the surrounding water. A pipe, G′, connects the interior of this generator above the water-level with the interior of the closet A through a pipe, M, or other proper coupling means.

I deem it important that the water-chamber G so nearly surrounds the several fire-flues in order to quickly generate steam, and that the deflector checks the draft to allow the surrounding water to collect a maximum quantity of the heat.

I am aware that fire-flues arranged in a water-chamber have been used for other purposes, and that deflectors have been employed to change the direction and check a draft, and therefore claim only the devices of the specific construction and combination as hereinafter pointed out.

What I claim as new is—

The portable steam-generator consisting of a vessel with a horizontal fire-box located in the interior thereof and entirely surrounded by water, except at the exterior opening, a series of flues passing therefrom, a chamber to which the flues pass in the upper portion of said vessel and over the fire-box, a deflector suspended in said chamber, an escape-pipe leading therefrom, and a steam-connecting pipe projecting from the top of said vessel, the whole combined and adapted to serve in connection with a bath-closet, substantially as and for the purpose specified.

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

GEO. DOUGLASS.

Witnesses:

A. L. HUDSON,

FRANK B. TUFTS.