

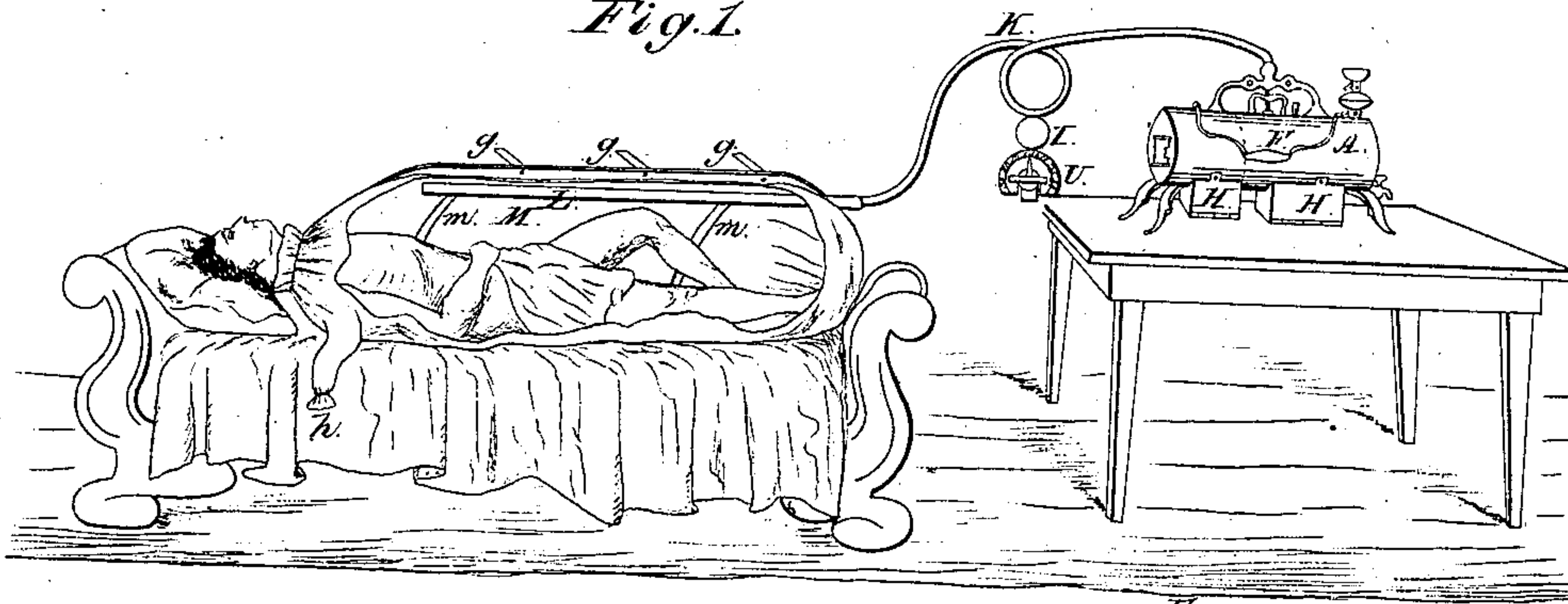
*L. H. Lefebvre,*

*Vapor Bath.*

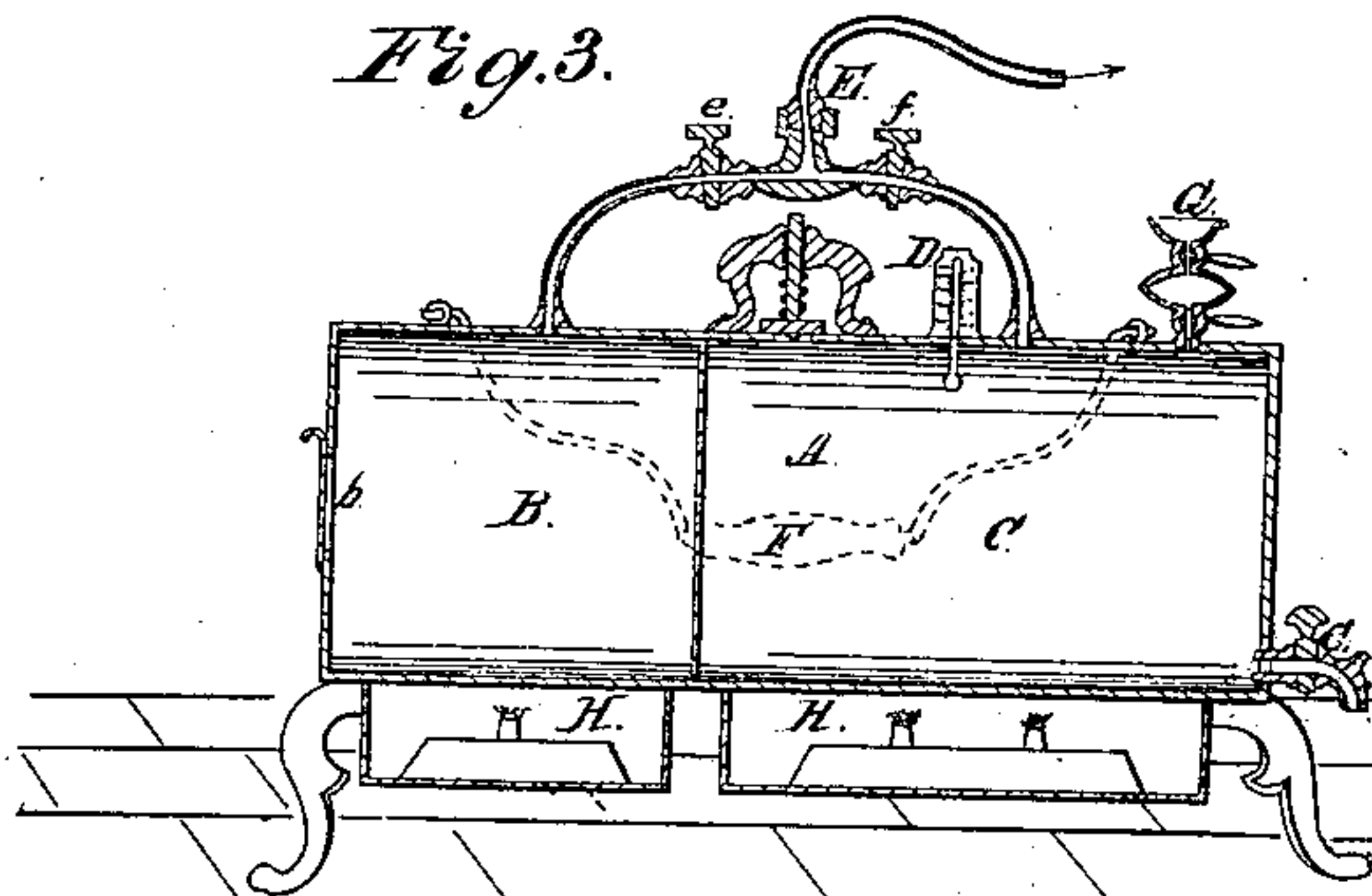
*N<sup>o</sup> 13,467.*

*Patented Aug. 21, 1855.*

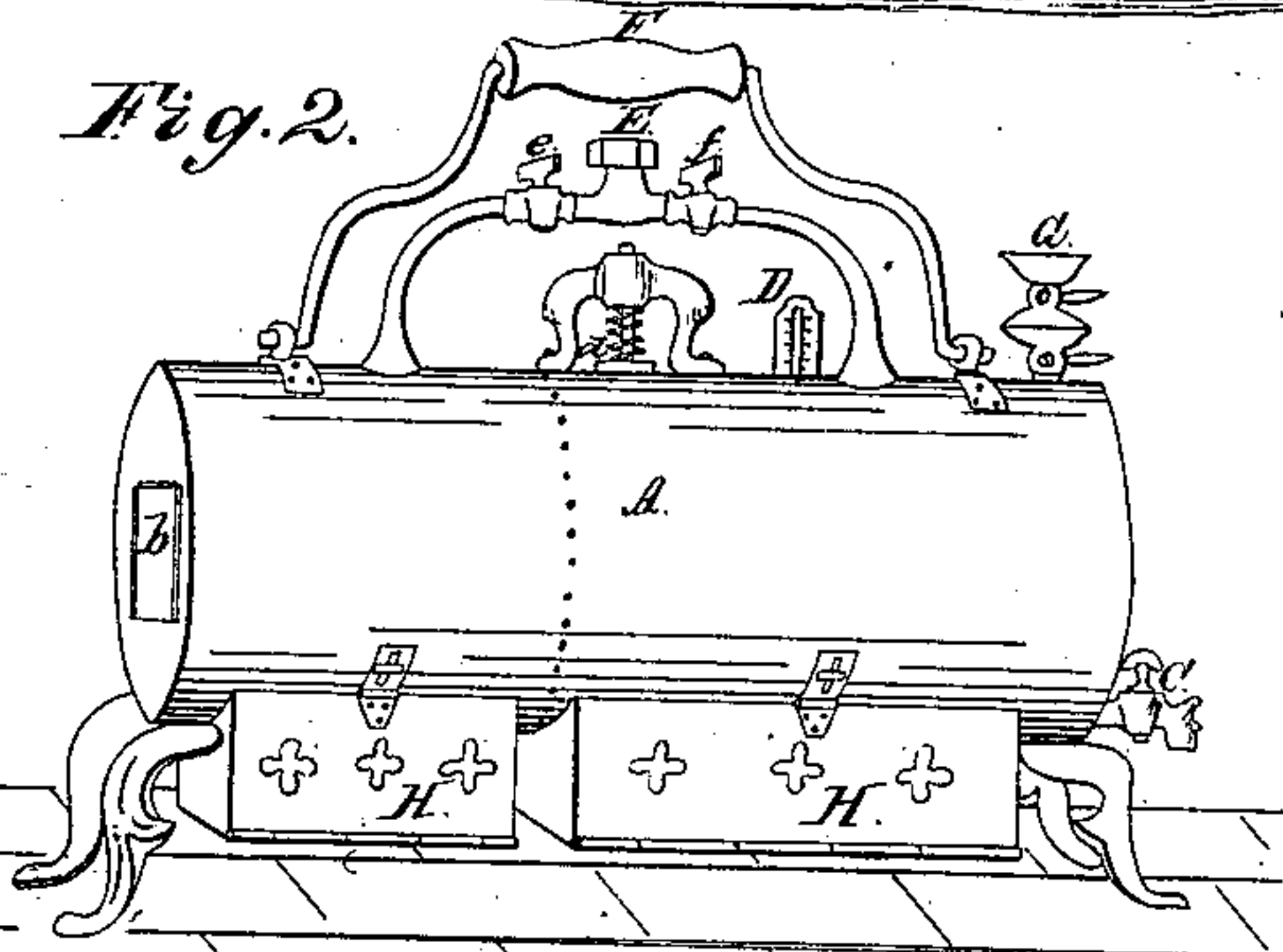
*Fig. 1.*



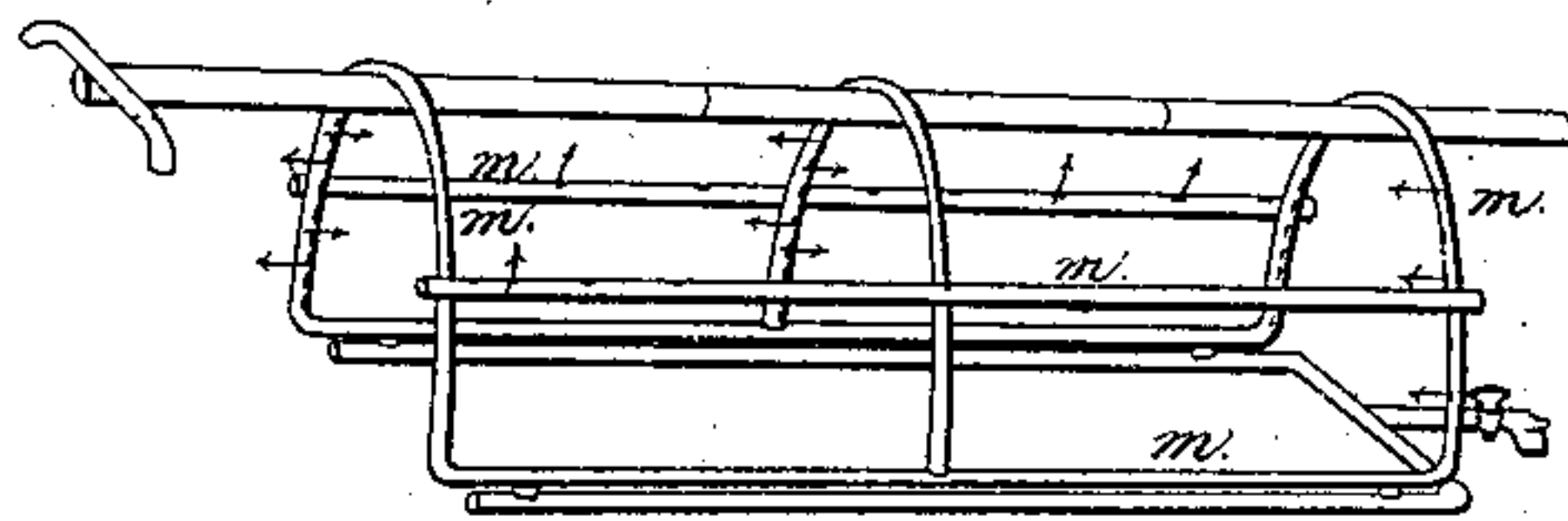
*Fig. 3.*



*Fig. 2.*



*Fig. 5.*



*Fig. 4.*

*Inventor.*

*L. H. Lefebvre*



# UNITED STATES PATENT OFFICE.

LOUIS H. LEFEBVRE, OF NEW ORLEANS, LOUISIANA.

## VAPOR-BATH APPARATUS.

Specification of Letters Patent No. 13,467, dated August 21, 1855.

*To all whom it may concern:*

Be it known that I, LOUIS H. LEFEBVRE, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Apparatus for Administering Medicated and Vapor Baths, which I denominate a "Steam-Bath-Bag Apparatus"; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a perspective of the entire apparatus; Fig. 2, a perspective of the vapor generator on a larger scale; Fig. 3, a longitudinal vertical section of the same; Figs. 4 and 5, views of parts detached.

Like letters designate corresponding parts in the several figures.

The vapor generator consists of a hollow cylindrical vessel A, of convenient size, say about 18 inches in length by 8 inches in diameter. This is divided, by a transverse partition, into two compartments B and C, the former occupying one third of its capacity, or thereabout, (as represented,) for generating sulfurous acid gas; and the other compartment C, occupying the remainder of its capacity, to be employed in producing the vapors of water, spirits, or medicinal substances. There is a box, or space, H, under each compartment of the generator, where heat is to be applied by the use of an alcohol lamp or other convenient means. A small lid, or door, *b*, opens into the compartment B, through which sulfur is inserted, for being converted into sulfurous acid gas by the heat of the lamp below. On the top of the compartment C, is a device G, for introducing water, or substances to be vaporized therein; consisting of an exterior cup, or funnel, leading by an aperture, which is controlled by a valve, or spigot, into a chamber below; from which there is a passage, also controlled by a spigot, into the interior of the generator. The water, or other liquid, is first allowed to flow from the exterior cup into the chamber, by opening the aperture between; which aperture is then closed by its spigot, and the lower aperture opened, thereby allowing the liquid to flow into the compartment without the escape of vapor therefrom. This compartment is also provided with a cock *c*, for blowing off vapors, &c., when necessary; a safety valve *a*, kept down by a coiled spring, or its equivalent, so adjusted that it will

open when the pressure and heat of the vapor has reached the highest required degree; and with a thermometer D, to indicate the temperature, so that accidents may be avoided, should the safety valve, from any cause, not act properly. A small branch pipe leads from each compartment of the generator, and unites with the other in a coupling E, from which a pipe K, leads to the bag, in which the patient receives the bath. The pipe leading from the compartment B, is controlled by a stop-cock *e*, and that from the compartment C, by a stop-cock *f*; so that the vapors from both may be combined in any desired proportion, for supplying the bath bag; or either may be used separately. The entire generator is provided with a suitable handle F, to render it portable; and with suitable legs, or supports, by which it may be placed on a table, or stand, near the couch, or bed, whereon the patient lies.

The bath bag M, (Fig. 1,) is made of india-rubber, oil-cloth, or some other water-proof material, and of sufficient size to receive the body of a person, and leave considerable unoccupied space above him. It has a longitudinal opening nearly or quite its entire length, to enable the patient to enter it, and for the introduction of a light frame *m, m*, presently to be described. The edges of the bag at this opening, are furnished with metallic plates, or their equivalents, which are fitted together, so that they will make a tight joint, when closed. The joint is secured by clasps, *g, g, g*, which embrace the metallic plates, or borders, and hold them tightly together. The open end of the bag may be closed around the neck of the patient by tightening a cord strung in its edge, as shown in Fig. 1. The frame *m, m*, Fig. 1, is inserted in the bag, over the patient, for the purpose of spreading it apart, and away from the body, thus leaving a considerable space above him, in which an atmosphere of the vapor collects. The pipe K, through which the vapors, &c., are conducted from the generator, is extended some distance within the bag, as seen at L, Fig. 1; which portion is provided with fine holes to cause the vapor to flow out in small jets, and be distributed through all the interior of the bag, as represented. The frame, *m, m*, may conveniently be made of small tubes, communicating with said pipe, as shown in Fig. 4, with fine perforations on



the insides thereof, as represented, for distributing the steam in still finer jets and in greater number. To the lower tubes of this frame, is attached a waste-cock, for drawing  
5 off the water, or other products of the vapors, which condense in these tubes.

In order to further guard the patient from the effects of the hot vapors streaming from the apertures of the tubes against him, shields, or fenders, of cloth, or other material, are situated directly before these apertures, as shown at *i*, in Fig. 5, for the purpose of receiving the direct force of the jets, turning aside, and scattering them. The  
15 bag is provided with an orifice *h*, by opening which, the spent vapors may be allowed to escape, and a fresh supply introduced. By keeping this orifice open, a continued flow of vapor will be kept up through the  
20 bag.

To some part of the connecting pipe K is suspended a hollow globe, or chamber, I, communicating with the interior of said pipe, for receiving and discharging the  
25 water and other condensed vapors collected in the pipe. At the bottom of this chamber is arranged a regulator and indicator U, constructed as follows: A short pipe descends from the chamber, and is provided  
30 with a valve, which has a handle, also serving as an index in connection with a graduated arc, as represented in Fig. 1. When the valve is completely open the index points vertically, or to "100" marked on the

graduated arc; when it is entirely closed, 35 the index points horizontally, or to such a number, as may be shown on the arc; and the intermediate degrees of opening, are indicated by intermediate numbers, on said arc; thus if the full power of the vapors is 40 to be applied to the patient, the index is pointed vertically; if the vapors are to be entirely blown off, without being conducted to the bag, the index is pointed horizontally; and if any intermediate portions of 45 the vapor are to be let into the bag, the amount is regulated by turning the valve as the index may indicate.

This apparatus is compact and portable; and may be used in administering every 50 kind of medicated and vapor baths. It is especially valuable in treating cases of cholera, as I have proved by much successful experience.

What I claim is—

55

The portable steam bath apparatus, composed of a double generator, so arranged that the products generated in its two compartments may be conveyed to the bath mingled or separately, of a bag M, and of a connecting pipe K, each of said parts constructed, and arranged substantially as described, and for the purposes specified. 60

L. H. LEFEBVRE.

Witnesses:

S. W. WOOD,  
JOHN S. SNOTZ.