

(No Model.)

3 Sheets—Sheet 1.

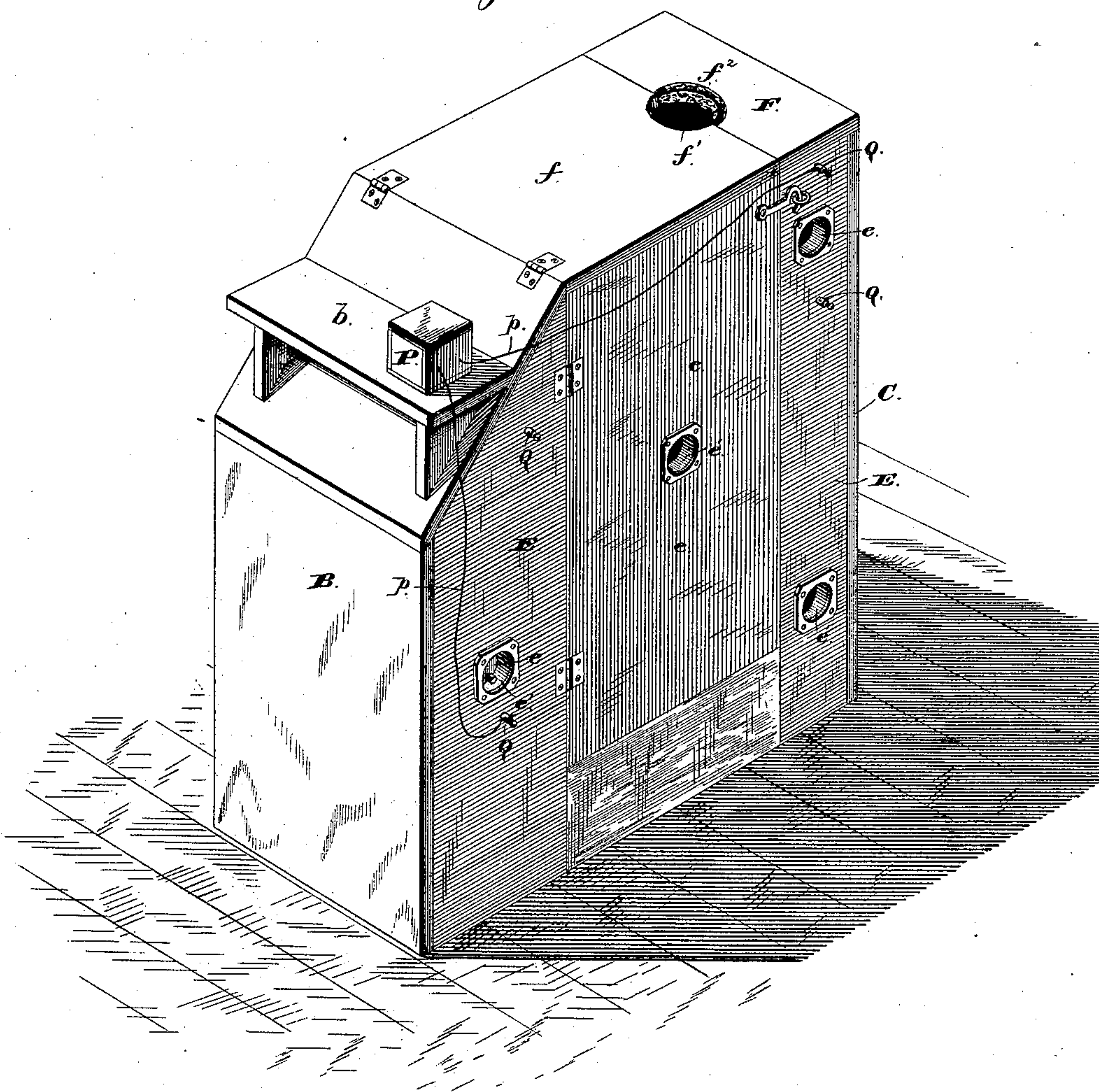
E. HOSFORD.

VAPOR BATH.

No. 360,773.

Patented Apr. 5, 1887.

Fig. 1.



Witnesses:
 Jas. C. Hutchinson.
 Henry C. Hazard

Inventor.
 Elihu Hosford
 by Prindle and Russell
 Attorneys

(No Model.)

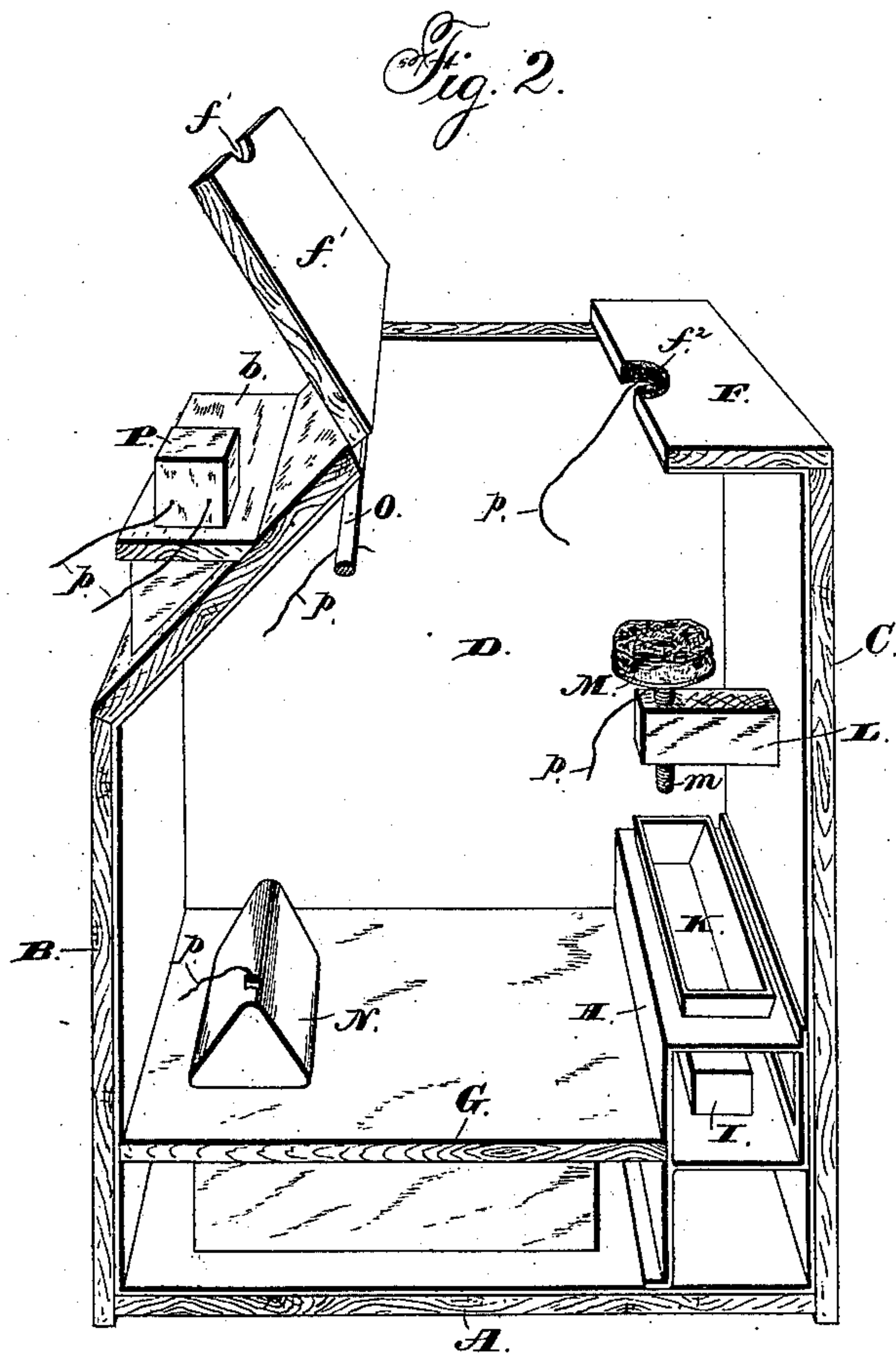
3 Sheets—Sheet 2.

E. HOSFORD.

VAPOR BATH.

No. 360,773.

Patented Apr. 5, 1887.



Witnesses:

Jas. C. Hutchinson.
Henry C. Hazard.

Inventor.
Elihu Hosford
by Prindle and Russell
Attorneys

(No Model.)

3 Sheets—Sheet 3.

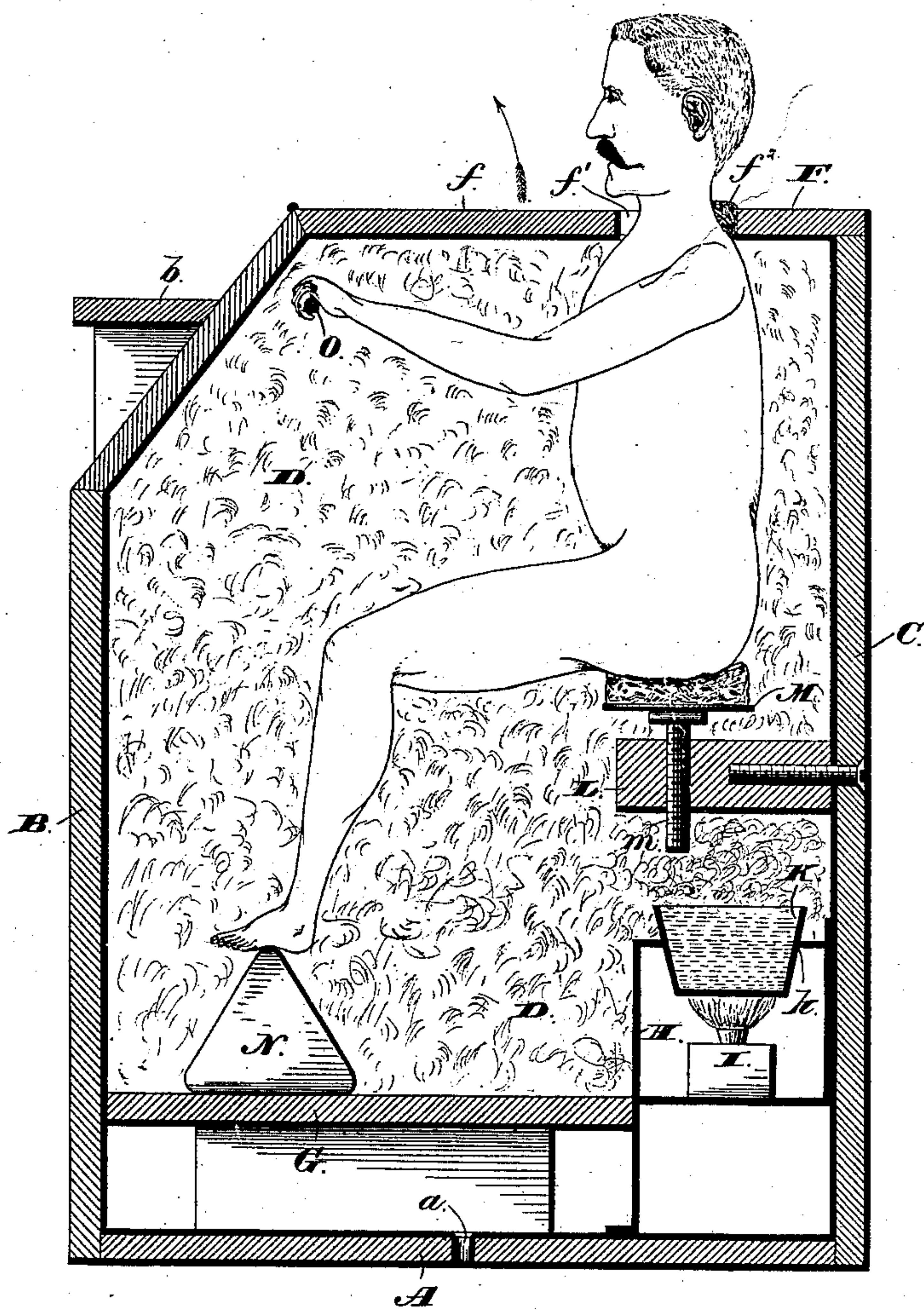
E. HOSFORD.

VAPOR BATH.

No. 360,773.

Patented Apr. 5, 1887.

Fig. 5.



Witnesses:

Jas. C. Hutchinson.
Henry C. Hazard

Inventor.

Elihu Hosford
by Prindle and Russell
Attorneys

UNITED STATES PATENT OFFICE.

ELIHU HOSFORD, OF OAKLAND, CALIFORNIA.

VAPOR-BATH.

SPECIFICATION forming part of Letters Patent No. 360,773, dated April 5, 1887.

Application filed March 1, 1884. Serial No. 123,675. (No model.)

To all whom it may concern:

Be it known that I, ELIHU HOSFORD, of Oakland, in the county of Alameda, and in the State of California, have invented certain new and useful Improvements in Vapor-Baths; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—
Figure 1 is a perspective view of my apparatus as arranged for use. Fig. 2 is a like view of the interior of the same, the adjacent wall being removed; and Fig. 3 is a side elevation, partly in section, showing said apparatus in use.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable vapor, medicated, and electric baths to be easily and successfully administered; and to this end it consists, principally, in the construction of the housing or casing of my device, substantially as and for the purpose hereinafter specified.

It consists, further, in the construction and arrangement of parts in the interior of said casing, substantially as and for the purpose hereinafter shown.

It consists, further, in the means employed for applying electric currents to different parts of the body, substantially as and for the purpose hereinafter set forth.

It consists, finally, in the apparatus as a whole, its several parts being constructed and combined to operate in the manner and for the purpose substantially as and for the purpose hereinafter shown and described.

In the annexed drawings, A represents the bottom, B the front, C the back, D and E the sides, and F the top, of the casing of my apparatus, which casing has substantially a square form in horizontal section, and may be rectangular in side and front elevations; or, preferably, its front side may have an upward and rearward inclination from a point above its vertical center to its upper end, as shown.

The central portion, *f*, of the top F is hinged at its front edge, and within its rear edge and within the contiguous edge of the adjacent stationary portion of said top is provided an opening, *f'*, which has sufficient dimensions to en-

able it to contain the neck of an ordinary person, who takes position within the casing while said part *f* is raised, and then closes the latter downward to place. A portion, *e*, of the side E is also hinged at its front edge, and may be opened outward, so as to enable a person to readily pass into or from said casing.

The interior of the casing is lined with sheet metal, in order to prevent the radiation of heat, and to protect the exterior, which is constructed from wood, from the effects of dampness; and within its bottom A is provided a waste-pipe, *a*, through which condensed moisture may escape.

Extending from the front B to a point upon a line with the rear edge of the door *e* is a raised platform, G, which rests upon the bottom A, and enables a person to enter or leave the casing without rendering necessary the placing of his feet upon the metallic bottom lining or within such water as may have collected at such point. In rear of said platform is a metal housing, H, which is adapted to receive within its interior a lamp, I, and within its top is provided with an opening, *h*, that receives and contains a water-vat, K, the arrangement being such that the liquid contents of said vat will be heated and vaporized by the flame of said lamp.

At a convenient point above the vat K an arm, L, projects horizontally forward from the back C and receives the screw-spindle *m* of the vertically-adjustable seat M, upon which seat is supported the weight of the person being treated, while at or near the front of the casing, upon the platform G, is a foot-rest, N, that has in end elevation substantially the form of a triangle with rounded corners, and is made from metal and adapted to be filled with and to contain a liquid. The platform G, which is preferably of wood, serves to insulate the foot-rest from the metallic lining on the bottom of the casing. A metallic cross-bar, O, of copper, and extending between the sides D and E, near the upper forward corner of said casing, furnishes a convenient rest for the hands and enables the occupant to control his position within said casing.

A number of openings, *e'*, controlled by slides *e''*, within the side E, enable the operator to readily ascertain the condition of affairs

within the interior of the casing and to place within the same from time to time any medicament which may be deemed advantageous.

In order that electricity may be applied to a person within the casing, a battery, P, is provided and preferably placed upon a ledge or shelf, *b*, near the upper end of the front B; and within the side D are provided suitable electric connections, Q, by means of which a current of electricity may be passed from said battery into the hand-bar O, the foot-rest N, a sponge-cushion, *m'*, of the seat M, or into a sponge, *f*², that is secured within the rear portion of the neck-opening *f'*, such current being entirely within control of the operator, who makes or breaks the connection between either of said parts and said battery by means of an insulated wire, *p*, or any of the usual and well-known appliances for such purpose.

As arranged, it will be seen that an operator can administer to a person a plain or medicated bath, and easily and perfectly regulate the same to suit the necessities of the case, and in addition thereto, and without exposing the person to a change of temperature, can apply to the same an electric current through the feet, hands, neck, or base of the spine, as may be deemed best, and that while the body of the person being operated upon is thus thoroughly protected his or her head is outside of the casing and none of the heat or vapors need pass into the lungs.

The arm or bracket L, projecting, as described hereinbefore, forward from the back C of the casing, is, as indicated in the drawings, made of wood. The seat supported thereon and the sponge-electrode on the seat will then be insulated from the zinc lining of the casing. The copper hand-bar is at its ends insulated, also, from such lining, so that the current brought to it by a conductor will not pass off through the lining.

The sponge-electrode on the neck-opening is the only one of the electrodes which I allow to be in contact with the casing-lining. This, as shown, touches the lining of the casing-top at the edge of the neck-opening and connects the neck of the occupant of the bath directly with the metallic lining of the whole casing. All the connections Q Q, for connecting the conductors *q q* from battery P with the hand bar, foot-rest, sponge-seat, and neck-sponge, are of course insulated from the casing-lining, or the current flowing from the battery through a conductor would be conducted directly through the metallic lining to the other conductor, instead of passing from one electrode to the other through the body of the bath occupant.

It is my intention always to connect the neck-electrode with the positive pole of the battery, when such electrode is in the battery-circuit at all, in order that the current flowing from the positive pole may always start at the neck of the patient and flow downward therefrom through the body of the patient to the nega-

tive electrode. The direction of the natural nerve-currents is thus followed.

The hand-bar of copper and the lining of zinc act as the elements of an electric battery, especially when there is vapor in the bath, sending a current of electricity through the body of the occupant of the bath, whose neck and hands are in contact or connected with the lining and hand-bar, respectively. The current of electricity thus produced is a gentle but constant one. The zinc lining is the positive element and the copper the negative element of the battery, and with the body of the bath occupant forming a connection between the two elements in the battery the direction of the current through the body is just as desired—that is, from the positive element to the neck of the occupant and through his body to the negative element.

I do not intend to limit myself to the use of zinc for the lining and copper for the hand-bar, as other combinations of metals having the same electric relation can of course be used. The positive one should, however, always be the lining metal, connected with the sponge or other electrode for the neck. With this construction and arrangement, even without the battery P and its connections, the patient when taking a vapor bath will be subjected to the action of a constant and gentle current of electricity passing through him in the most beneficial direction—from the origin to the termination of the nerve structure.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In a bath, the inclosing-casing having a suitable cover provided with a neck-opening, the sponge-electrode arranged on the rear side of the opening, an electrode adapted to be applied to the person within the bath-casing, a source of supply of electricity, and suitable connections for connecting the sponge and the electrode within the casing with such source, substantially as and for the purpose shown.

2. In a bath, in combination with the casing having in its top an opening for receiving the neck of the occupant of the bath, the conducting-sponge attached to the rear side of the opening, the adjustable seat within the casing below the neck-opening, the conducting-sponge on the seat, a source of supply of electricity, and conductors adapted to connect the seat-sponges with such source, substantially as and for the purpose described.

3. In a bath, the rigid stationary hand-bar within the casing acting as a steady support for occupant of the bath and forming a conducting-electrode, in combination with a source of supply of electricity and a suitable conductor to connect the bar with such source, substantially as and for the purpose shown and described.

4. In a bath, the rigid metal hand-bar extending across within the casing in front of the occupant of the bath, an electrode adapted to

be applied to the person of the occupant of the bath, a source of supply of electricity, and suitable conductors for connecting the hand-bar and the electrode with such source of supply, substantially as and for the purpose specified.

5 5. In combination with a vapor-bath casing, the metallic lining, a body of metal electro-negative with reference to the metal lining, situated so as to be grasped by the hands of
10 the bath occupant, and a contact device adapted to put the body of the occupant of the bath in good electric connection with the lining, substantially as and for the purpose described.

15 6. In combination with the bath-casing, the lining of electro-positive material, the hand-bar of electro-negative material, and a suitable electrode connected with the lining, adapted to be in contact with the neck of the bath occupant, substantially as and for the
20 purpose specified.

7. In combination with the bath-casing, the zinc lining, the copper hand-bar, and an electrode connected with the lining, substantially as and for the purpose shown.

25 8. In combination with the casing provided with the neck-opening, the sponge on the rear side of such opening, the zinc lining electrically connected with the sponge, and the copper hand-bar and foot-rest, substantially as
30 and for the purpose set forth.

9. In combination with the casing provided with the neck-opening and the neck-electrode on the rear side of the opening, the zinc lining electrically connected with such neck-electrode, the copper hand-electrode within the casing, a source of supply of electricity, and means for connecting its poles with the two electrodes, as desired, substantially as and for the purpose described. 35

10. In combination with the casing provided with the neck-opening and the neck-electrode on the rear side of such opening, the copper hand-bar forming the hand-electrode, the zinc lining electrically connected with neck-electrode, the seat-electrode, the foot-electrode, a source of supply of electricity, and suitable conductors and connections whereby the source of electricity can be connected at will with the various electrodes, substantially as and for the purpose specified. 40 45 50

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of January, 1884. 55

ELIHU HOSFORD.

Witnesses:

WM. G. WHITE,
GEO. F. BROWN.