J. W. MOLIERE.

Electro Therapeutic Bath.

No. 162,091. Patented April 13, 1875.

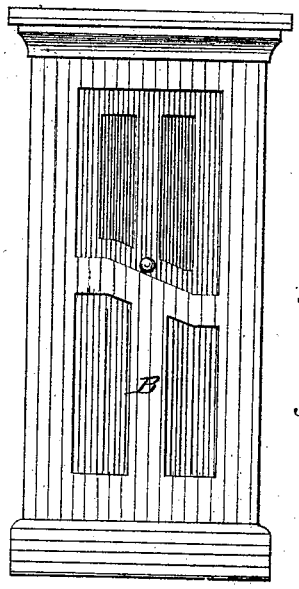


FIG 1.

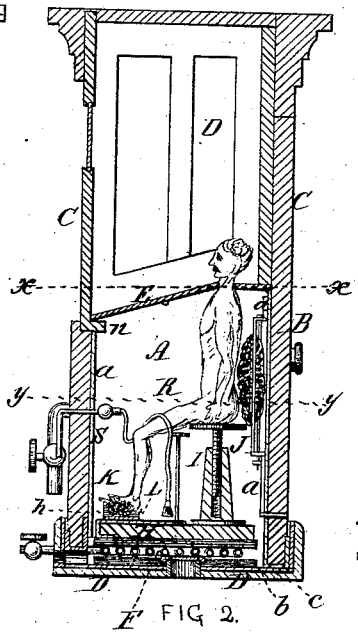


FIG 2.

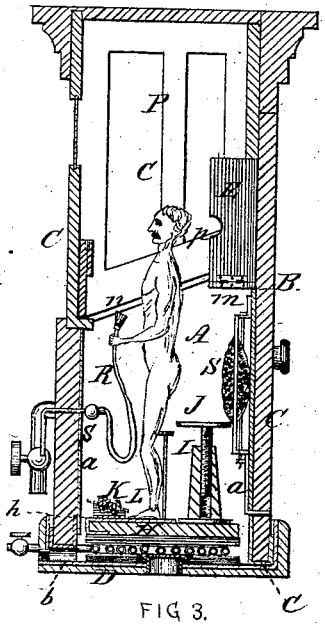


FIG 3.

FIG 4.

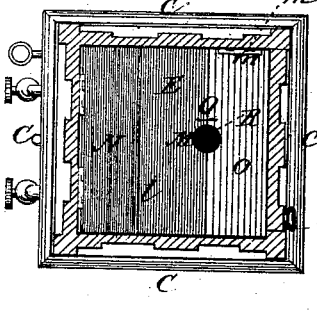


FIG 5.

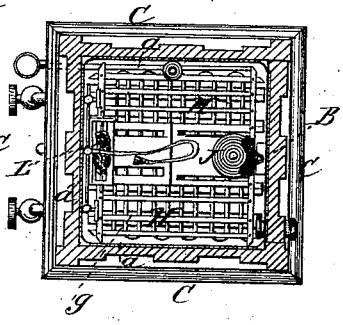


FIG 6.

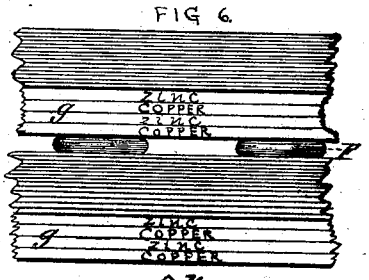
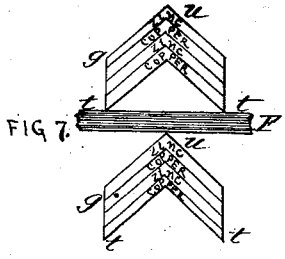


FIG 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES W. MOLIÈRE, OF DETROIT, MICHIGAN.

IMPROVEMENT IN ELECTRO-THERAPEUTIC BATHS.

Specification forming part of Letters Patent No. **162,091**, dated April 13, 1875; application filed July 29, 1874.

To all whom it may concern:

Be it known that I, JAMES WELLS MOLIÈRE, of Detroit, Wayne county, State of Michigan, have invented an Improvement in Thermo-Electric Baths, of which the following is a specification:

My invention consists in the devices and combination more particularly hereinafter described and claimed.

The accompanying plate of drawings illustrates the present invention.

Figure 1 is a side elevation. Figs. 2 and 3 are similar vertical sections, from front to rear, of a bath-chamber constructed according thereto, showing, in the one, the bather seated, and inclosed, and, in the other, the bather released. Figs. 4 and 5 are horizontal sections, respectively, in planes of lines *x x* and *y y*, Fig. 2; Fig. 6, a plan view, and Fig. 7 a cross-section of the coil of pipe and the applied metallic plates.

In the drawings, A represents a chamber, suitable to admit a person. This chamber A, in the present instance, is made of a square box form, and at one side has a door, B, for convenience of entrance, and on all its four sides the chamber is inclosed, as shown. The chamber is constructed of wood, or other good non-conducting material, and each of its several sides C are covered or sheathed interiorly with sheet-zinc, as shown at *a*, extending, in each case, from the floor D of the chamber up to the lid E, which is arranged above for closing about the neck of the bather, as will be hereinafter described. The floor D is covered or sheathed interiorly with sheet-copper, as shown at *b*, and this copper is in direct contact and connection with the lower edge *c* of the sheet-zinc of the several sides C. F is a coil of metallic pipe. This pipe-coil is located upon the floor D of the chamber, and it is adapted, as ordinarily, for the passage of steam, hot air, or other vapor or heated medium through it, a cock being located within the chamber for regulating the same. The coil F is overlaid and underlaid with similar angular metallic plates or strips, *g*, of opposite electric qualities—as, for instance, zinc and copper, applied alternately one to the other and with zinc as the lower plate of the underlay of plates, this lower plate being in contact with the copper-covered floor. The coil of pipe and its overlay of plates, *g*, is covered with a wooden-slatted flooring, H, which is, in fact, the floor of the bath-chamber, on which the bather stands. This slatted floor H is provided with a stool, I, having its seat J, as in piano-stools, adjustable as to height, and on the stool I the bather is to sit. The floor H is also provided with a rest, K, for the feet of the bather, which foot-rest is in electric connection with the overlay-plates *g* of the pipe-coil by and through the metallic plate *h*, in the present instance copper, which is in contact with the upper zinc plate of the overlay-plates *g*. The foot-rest K has a sponge, L, for the direct contact of the feet; and this sponge, for special therapeutic purposes, is to be saturated with solutions of alkalies, acids, or salts, or other chemicals. The overlay and underlay of metallic plates *g* are for the purpose of increasing the magnetic and electric action or effect of the bath-chamber, and, as before stated, the plates are of zinc and copper, alternating with each other, commencing with copper, in each instance, at their contact with the coil of pipe, and ending with zinc. More or less of these "piles" may be used, according as more or less density or force of electric action may be required, and, in lieu of zinc and copper, other well-known equivalents for each may be substituted. The closing-lid E is made in three sections, M, N, and O. Two, M and N, of these sections are hinged together at *l*, and the section N is hinged to the rear side of the chamber, so as to swing upwardly. The section O is hinged, at *m*, to one side of the chamber. When these several sections are down they are supported in position by the shoulder or rib *n* of the chamber, and they close the top of the chamber, all as shown in Fig. 1, but allow the head of the bather to project above the lid, and, for such purpose, the contact edges *o* of the two sections M and O are cut out semicircularly, as at *p*, sufficiently to surround the bather's neck. Above the lid E the three fixed sides of the chamber are provided with panels P, arranged as shown in Fig. 3, to be raised or lowered from the inside or outside of the chamber, for ventilation during the bathing operation. The bather, upon entering the bath-chamber, closes the door,

raises the side panels P, and takes a seat upon the stool I, with his back toward the door, as shown in Fig. 1. He then lowers the lid-section O to its horizontal position, and this section fits, by its semicircular cut *p*, about the back of the bather's neck, and after this he lowers the other lid-sections, M and N, one, M, of which similarly fits the front of the bather's neck, and thus, while the head is exposed, the body of the bather is inclosed within the bath-chamber A. The seat of stool I is now adjusted as to height to suit the position of the bather above stated; and, with the feet of the bather upon the foot-rest K, the bather then opens the coil of pipe to the admission of the heated medium, and the operation of the bath commences. The heat from the pipe-coil causes the metallic lining of the bath to become surcharged with thermo-electricity, and, when the bather has become sufficiently charged thereby, the coil of pipe is closed to the further admission of the heated medium. The bather having remained a sufficient time under the influence of the thermo-electricity, he opens the lid sections M N O and lowers the side panels P, and then uses the hose-sprinkler R, adapted at *s*, as ordinarily, for both hot and cold water, to secure the desired temperature. The plates *g* may be flat; but it is preferable to make them angular, as then the heat is received simultaneously at the edges *t* and angles *u* of each plate, and thus is the more perfectly and evenly conducted through the metal, and a better electric action obtained. Besides, the water, from the use of the sprinkler, is the better shed and conducted off from them to the bottom of the chamber A. The lid E, herein described, obviously is susceptible of ready manipulation by the bather himself, a most important advantage. For a concentrated application of the electric action, I have located upon the inside of the door B a sponge cushion or pad, S, which is in electric connection with the zinc sheathing of the door and the copper covering of the bottom, and is adapted, as shown, to be slid up and down, so that it may be brought, as to height, to the place desired, against the back of the person. This sponge, for special therapeutic purposes, may be charged with alkalies, acids, or salts, as was stated for the sponge of the foot-rest. The pad may be made of other materials, but sponge is preferable. In lieu of a coil of pipe for conducting heat to the electric piles *g*, and to the inside of the chamber A, the heat may be given to the piles and to the chamber by the interposition of any suitable plate metal—as, for instance, plate-copper, plate-zinc, or plate-iron—to receive the heat from the heating device, which may be, for instance, a gas or other flame, located to impinge against said interposed sheet, and thus, heating the same, conduct it (the heat) to the electric plates on the inside of the chamber.

What I claim as my invention is—

The combination of the metallic-lined chamber A, having a lid composed of the sections M N O, slide P, coiled pipe F, and electric pile-plates *g*, substantially as herein shown and described.

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Witnesses:

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