G. M. SCHWEIG.

ELECTRODES FOR ELECTRICAL BATH-TUBS.

No. 192,601. Patented July 3, 1877.

Fig. 1.

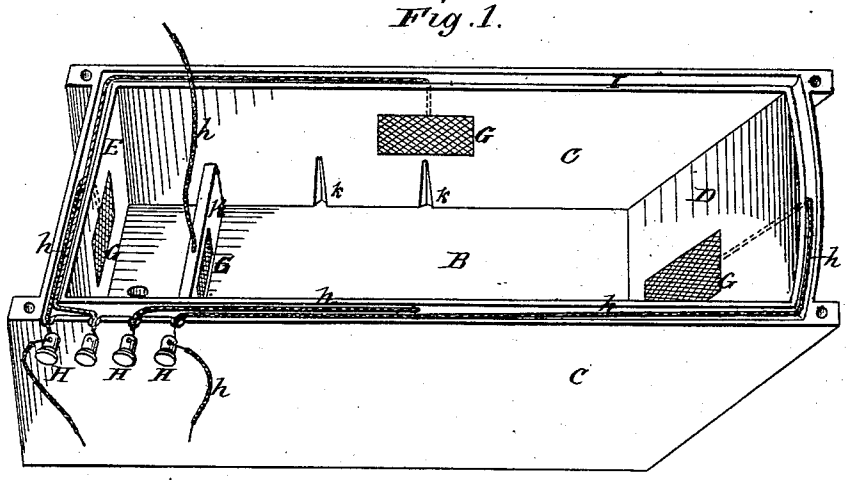


Fig. 2.

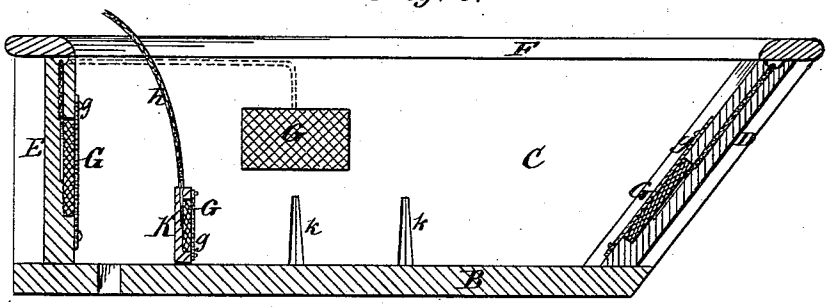
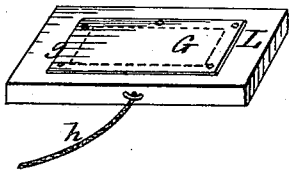


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE M. SCHWEIG, OF NEW YORK, N. Y., ASSIGNOR TO LESSER STEINHARDT, OF SAME PLACE.

IMPROVEMENT IN ELECTRODES FOR ELECTRICAL BATH-TUBS.

Specification forming part of Letters Patent No. 192,601, dated July 3, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, GEORGE M. SCHWEIG, of the city of New York, in the State of New York, have invented certain new and useful Improvements in Electric Bath-Tubs for Hygienic and Medical Purposes; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the improved electric bath-tub with the coping removed. Fig. 2 represents a longitudinal vertical section through said bath-tub. Fig. 3 represents a detached view of a floating electrode.

In all electric bath-tubs for medical purposes heretofore used, the galvanic current is introduced in the water and the bodies of patients through metal electrodes, chiefly copper electrodes. It has been found by actual experiments that the copper (or other metal) thus employed as an electrode becomes oxidized through the oxygen set free at the positive pole of the battery. The inevitable result is, that the patient is made to take a bath in a solution of oxide of copper—in other words, a poisonous bath.

To obviate this is the object of my invention, which consists in a new method of introducing the galvanic (or Faradaic) current—that is, unaccompanied by any such injurious collateral effects—viz., by means of carbon electrodes affixed to tubs, movable foot-board, floats, &c., made of non-conducting materials, such as wood, soap-stone, porcelain, vulcanized rubber, glass, &c.

Carbon is not decomposed by either positive or negative electric currents, and is therefore not open to the objections that attach to metal electrodes.

The tub, as shown in the drawings, is preferably made of wood, and is formed with a bottom, B, two sides, *c*, the head-piece D, slightly circular, and foot-piece E, and also a removable coping, F, to cover the electric wires, as will be hereinafter described.

The carbon electrodes G are preferably placed in recesses formed in the material of the tub, and protected by muslin, *g*, or other equivalent substance fastened over them. They are placed at the head, foot, and sides, so that the current may be made to traverse the body of the patient longitudinally or transversely, as may be desired. They are connected, by means of insulated wires *h*, with the binding-posts H at the side of the tub, through which communication is made with a battery. I prefer to have the wires conducted from the electrodes within the material of the tub to the top, where a groove, I, is formed for their reception, and through which they are led to the binding-posts.

The groove I and wires are covered by the coping F, so constructed as to be easily removed for the inspection and arrangement of the wires.

Within the tub the sides *c* have series of vertical grooves *k*, for the reception of the two extremities of a detachable foot-board, K, made of non-conducting material, and also furnished with a carbon electrode, from which an insulated wire can reach the binding-posts H. This foot-board renders the tub adaptable to persons of all sizes, including children.

In connection with this tub there is a floating electrode, L, made of non-conducting material, and also furnished with a carbon plate and insulated wire, which, when connected with one pole of a battery, the other pole of which is connected with any one or more of the electrodes of the tub, and applied to any desired portion of the body, establish a direct circuit through the body between said floating electrode and the electrode or electrodes communicating with the other pole of the battery.

Having now fully described my invention, I claim—

In connection with electric bath-tubs made of non-conducting material, and for medical purposes, carbon electrodes affixed to said tub, to a movable foot-board, or to a float, and connected by wires to a battery for the introduction of electric currents, substantially as and for the purpose described.

GEORGE M. SCHWEIG.

Witnesses:

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