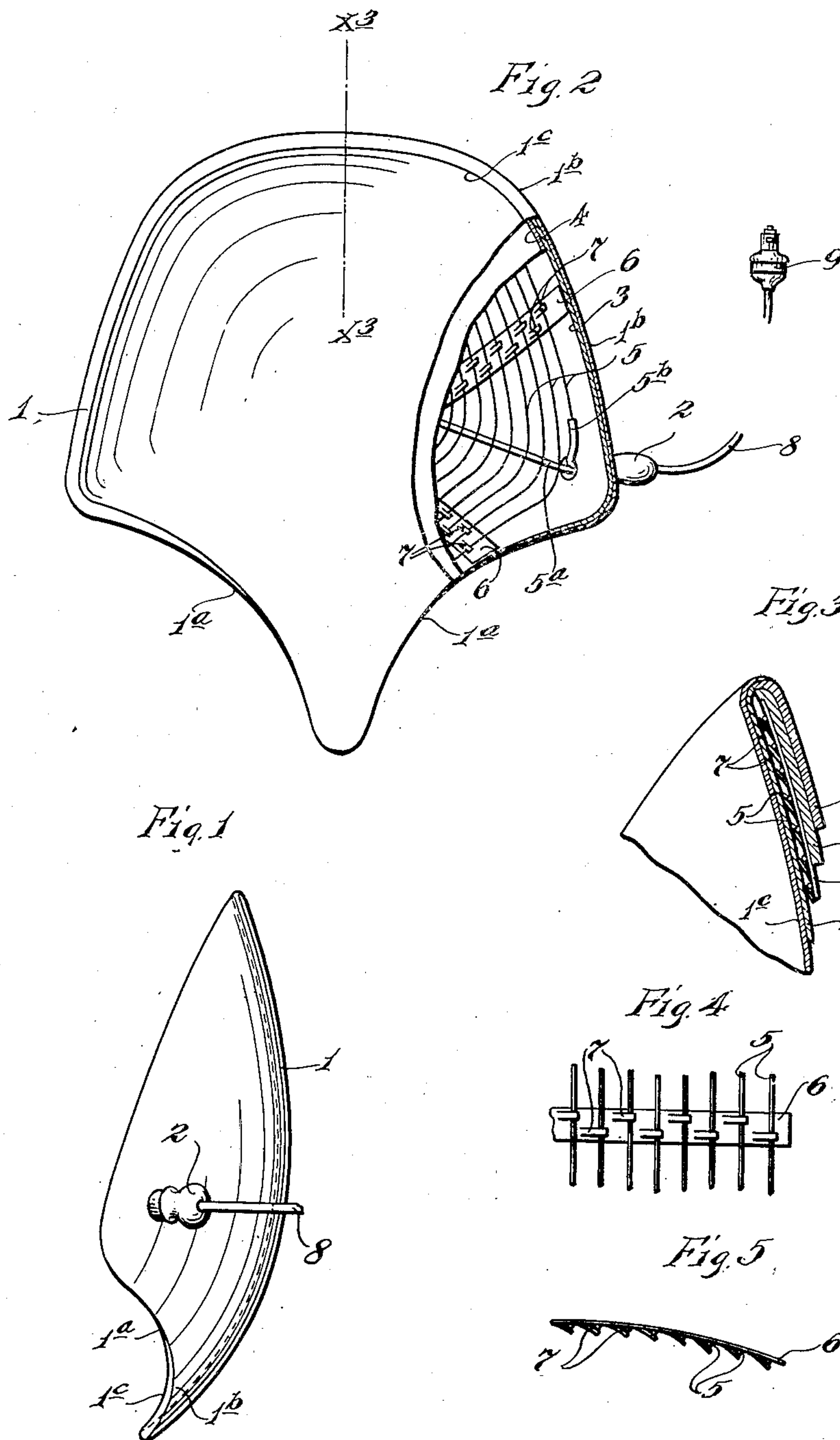


No. 877,154.

PATENTED JAN. 21, 1908.

H. D. WOOD, JR.
ELECTRICAL ABDOMINAL HEATER.

APPLICATION FILED JULY 3, 1907.



Witnesses:
L. L. Simpson.
A. H. Opsahl.

Inventor:
Hiram D. Wood Jr.
By his Attorneys
William M. Meland

UNITED STATES PATENT OFFICE.

HIRAM D. WOOD, JR., OF MINNEAPOLIS, MINNESOTA.

ELECTRICAL ABDOMINAL HEATER.

No. 877,154.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed July 3, 1907. Serial No. 381,993.

To all whom it may concern:

Be it known that I, HIRAM D. WOOD, Jr., a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Electrical Abdominal Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has for its object to provide an electrical abdominal steamer and is directed to the particular form of the device disclosed and broadly claimed in a companion application for Letters Patent of the United States filed by me of even date herewith, and entitled "Electrical face steamers."

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation, showing the improved steamer. Fig. 2 is a view in elevation, with some parts broken away and with some parts sectioned, looking at the inner or concave face of the steamer. Fig. 3 is an enlarged detail in section, taken on the line $x^3 x^3$ of Fig. 2; and Figs. 4 and 5 are fragmentary views, respectively, in plan and edge elevation, showing the electric wire and mica strip for spacing the same apart.

The body of the steamer is in the form of a bowl indicated as an entirety by the numeral 1, the upper portion thereof being of proper form to fit closely over the abdomen, while the lower portion thereof is formed on lines that curve reversely inward to form concavities at 1^a adapted to closely fit the thighs. As shown, this bowl is provided at one side with a hand piece 2 which, however, may be omitted. The exterior convex and concave surfaces of the bowl are formed by thin metal shells 1^b—1^c, respectively, the edges of which are preferably overlapped at the rim of the bowl, as best shown in Fig. 3. The metal shells 1^b and 1^c are preferably of aluminium and they are spaced apart sufficiently to make room for outer and inner asbestos lining sheets 3 and 4, respectively, and a wire 5 and spacing strips 6. The wire

5 extends through the handle 2 and is provided with insulated or wound end sections 5^a and 5^b, the former of which is extended inward to or approximately to the center of the bowl. The wire from the end section 5^a is wound with convolutions that increase successively until it reaches the end wire 5^b at the rim of the bowl. These convolutions, furthermore, follow approximately the outline of the irregular margin of the bowl, and they are located between the outer and inner asbestos sheets 3 and 4 and they are spaced apart by radially disposed insulating strips 6, preferably of mica. These spacing strips are formed with laterally pressed wire retaining lips 7, as best shown in Figs. 4 and 5. The outer asbestos sheet 3 is heavy enough to prevent the outward radiation of any considerable amount of heat, while the inner asbestos sheet 4 is so thin that it will not, to any considerable extent, prevent the inward radiation of heat from the hot wire 5 but is, nevertheless, heavy enough to afford an electrical insulation between the wire and the inner metal shell 1^c.

As shown in Fig. 2, the wire terminals 5^a and 5^b are united in the form of a cable 8 outward of the handle 2. This cable is attached to a circuit head 9 adapting it for application to an ordinary incandescent lamp socket.

As is evident, when current is turned onto the wire 5, very considerable amount of heat will be produced, and this will be radiated into the bowl and will serve to rapidly heat wet cloths or towels placed within the concave surface thereof. The aluminium lining or inner shell does not absorb moisture from the wet cloths or towels and, hence, preserves the wiring. Furthermore, aluminium does not corrode and also makes the device thoroughly antiseptic. As the bowl is rigid, the internal wires are held in permanent arrangement and, hence, are not liable to be broken, as is the case where the wiring is applied in a flexible device. A thin coating of silicate of soda or "water glass" is preferably applied to the internal wires and also to the inner surface of the aluminium shells.

What I claim is:

1. In an abdominal heater, the combination with a bowl made up of inner and outer shells of non-absorbent material, said bowl having a body portion adapted to cover the abdomen and having reverse inwardly curved lower edges adapted to fit the thighs, and electric wiring in the space between the

said inner and outer shell insulated therefrom, substantially as described.

2. An abdominal heater comprising a bowl made up of inner and outer metallic shells
5 joined at their marginal portions, said bowl having a body portion adapted to cover the abdomen, and a reverse inwardly curved lower portion, electric wiring within the said bowl approximately following the outline of

the margin thereof, and insulated from said 10 inner and outer shells, substantially as described.

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

HIRAM D. WOOD, JR.

Witnesses:

H. D. KILGORE,
F. D. MERCHANT.