

A. C. GARRATT.
PHYSIOLOGICAL BATTERY.

No. 92,301.

Patented July 6, 1869.

Fig. 1

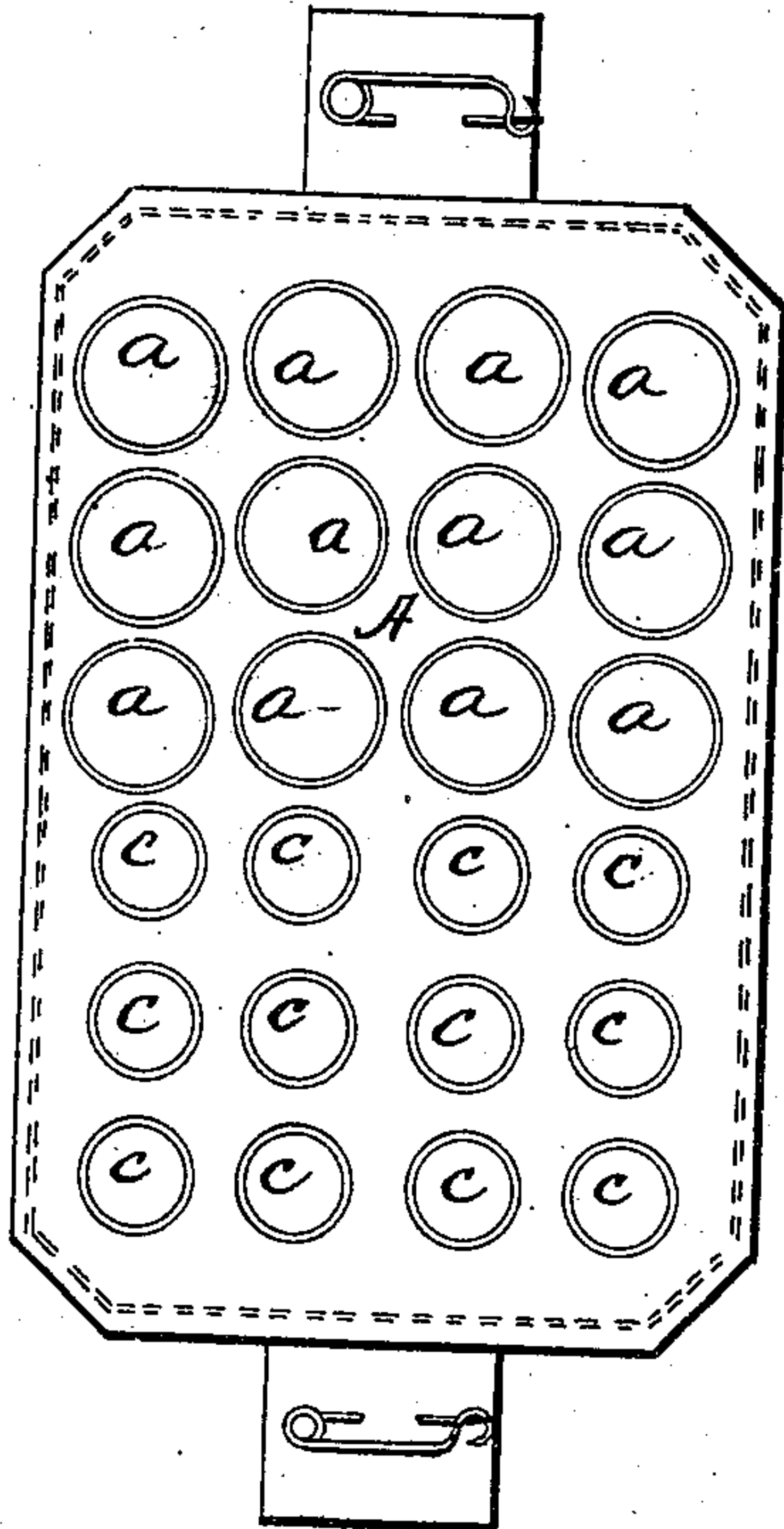


Fig. 3.

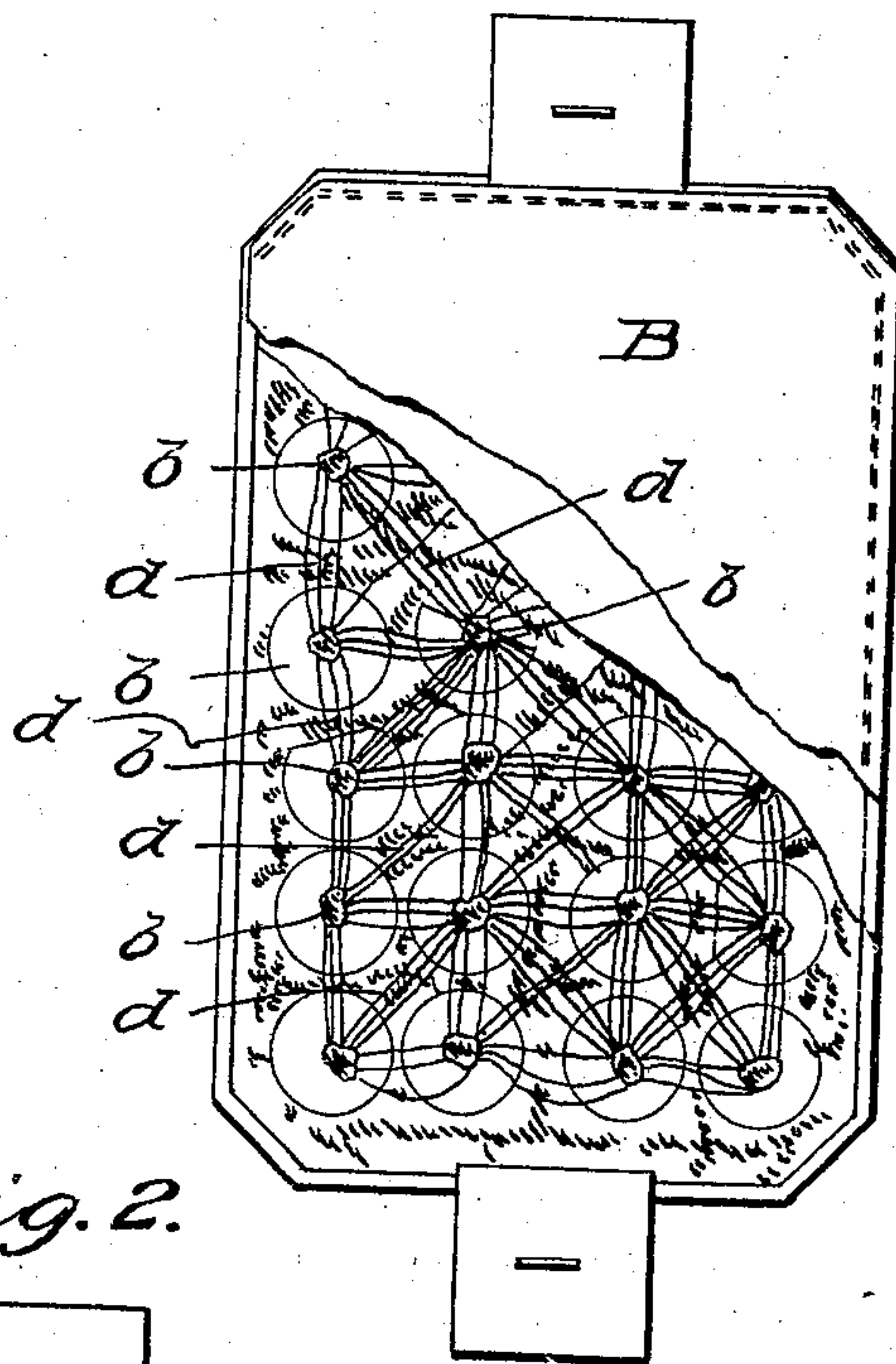
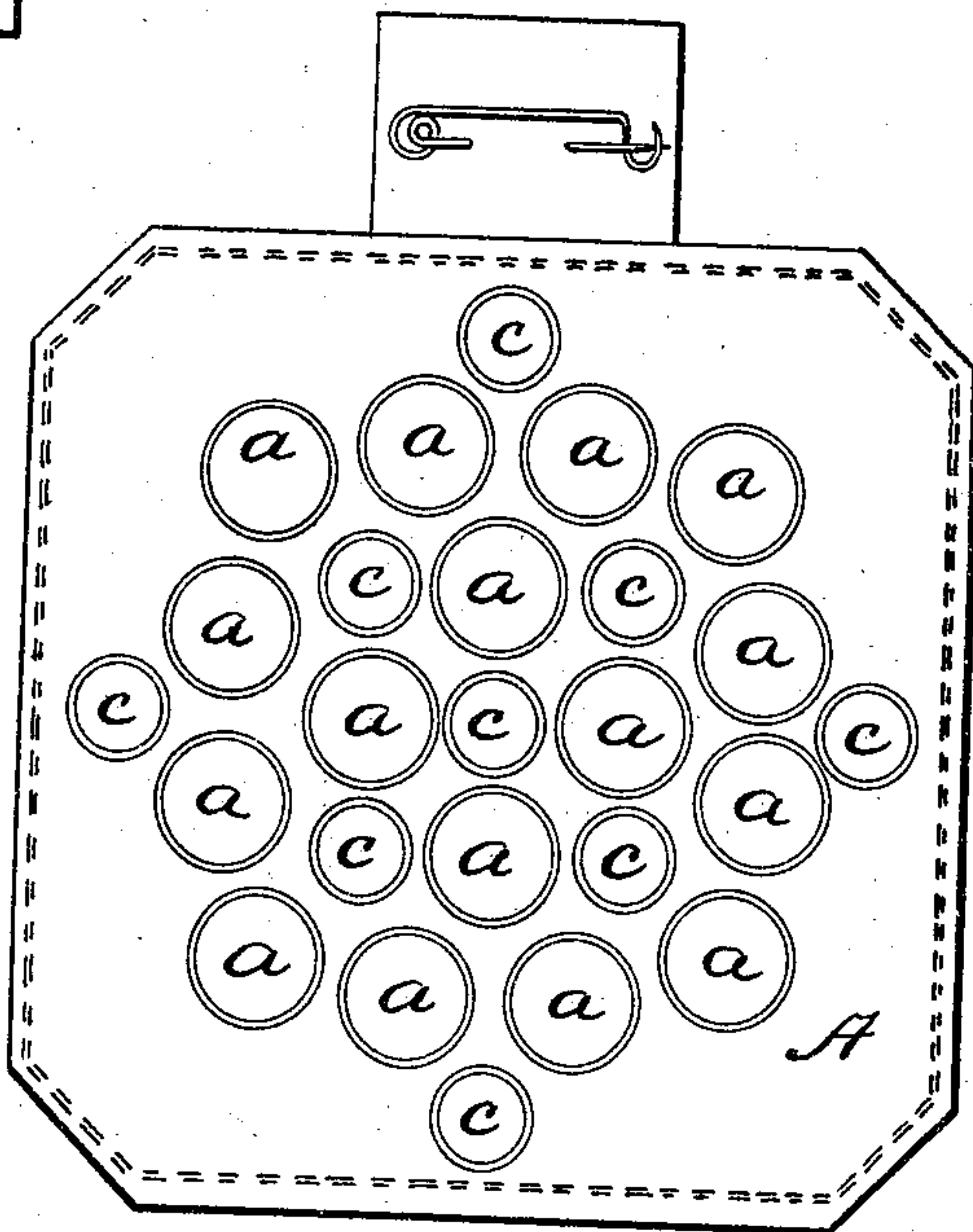


Fig. 2.



Witnesses
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ALFRED CHARLES GARRATT, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 92,301, dated July 6, 1869.

IMPROVEMENT IN PHYSIOLOGICAL BATTERIES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, ALFRED CHARLES GARRATT, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improved Physiological or "Button"-Battery; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of my improved battery.

Figure 2 is also a front view, in which is shown a different arrangement of the buttons or disks.

Figure 3 shows the back of my battery, exhibiting the manner of connecting the buttons or disks.

This invention is an improvement on a physiological battery, patented by myself, December 29, 1868, and has for its objects, the attainment of greater elasticity in application; the production of a simple "one-element battery" as a whole; the result of this construction being, that I utilize the equivalent of a copper and zinc pair of plates.

The nature of my invention consists in adjusting buttons or disks of copper or silver, and of zinc or alloy, or their equivalents in dissimilar metals, upon a flexible insulation as a base, with sure metallic connections upon the back, the whole so constructed that the battery is made pliable and durable, so as to be worn upon any uneven surface of the body or limbs.

In the drawings—

a a are zinc, or zinc and magnesium buttons or disks, attached to flexible base *A* by means of a metal eye riveted or soldered into metal plate *b*, as seen in fig. 3.

c c are copper or silver buttons or disks, attached to flexible base *A* in same manner as zinc buttons.

The eyes of these copper and zinc buttons are connected, upon the back of the battery, by copper wires, *d d*, which connect in all directions—crosswise, diagonally, lengthwise, &c.—making the metallic connections of the copper and zinc buttons perfectly sure.

Between the flexible back *B* and the front is rubber or other insulation, for protection against outside influences.

The arrangement shown in fig. 2 is on the same principle, generally. The copper buttons are surrounded by the zinc or alloy buttons, thus making the copper buttons the centres of circles.

The superior flexibility of this improved battery

renders it the most convenient and effective in the treatment of old, indolent ulcers, and for wear upon uneven, bony surfaces or projections of the body and limbs, as upon the spine, ankles, or wrists, which results cannot be attained with my battery of December 29, 1868, nor with any other.

These advantages are secured by the use of the connecting-wires at the back, enabling me to use the buttons or disks upon a base, the whole being flexible.

This improved battery is simply a one-element battery, as a whole; that is, the copper buttons are as but one in action, and the zinc or alloy, though a dozen in number, are as but one, and all the insulation-spaces between all these bits of metal are as but one in action; and the result is, I utilize the equivalent of a zinc and copper pair, which, if one, would be unyielding, and incapable of adjustment to uneven surfaces.

The use of the single element of zinc and copper is valuable, and well known to the medical profession in the whole world, but has only been made of stiff and uncomfortable materials, and impracticable, because it could not be adapted to the parts desired with a surface large enough to effect a cure; consequently, this is a thing old and well known, but improved and utilized; and, by my invention, this single-element battery is made very available, for if thus manufactured, and kept for sale, the profession and the public at large would employ a thousand where one battery of single element is now used.

What I claim, therefore, as my invention, and an improvement on battery patented December 29, 1868, and desire to secure by Letters Patent, is—

The arrangement of buttons *a a*, *c c*, of dissimilar metals, upon a flexible non-conducting base, *A*, insulated from the back *B*, the buttons connected by wires *d d*, the whole forming a single-element physiological battery, substantially as herein set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED C. GARRATT.

Witnesses:

CARROLL D. WRIGHT,
AUSTIN S. HOWARTH.