(No Model.)

C. H. GRIMLEY.

ELECTRIC BELT.

No. 401,882. Patented Apr. 23, 1889.

Fig. 1.

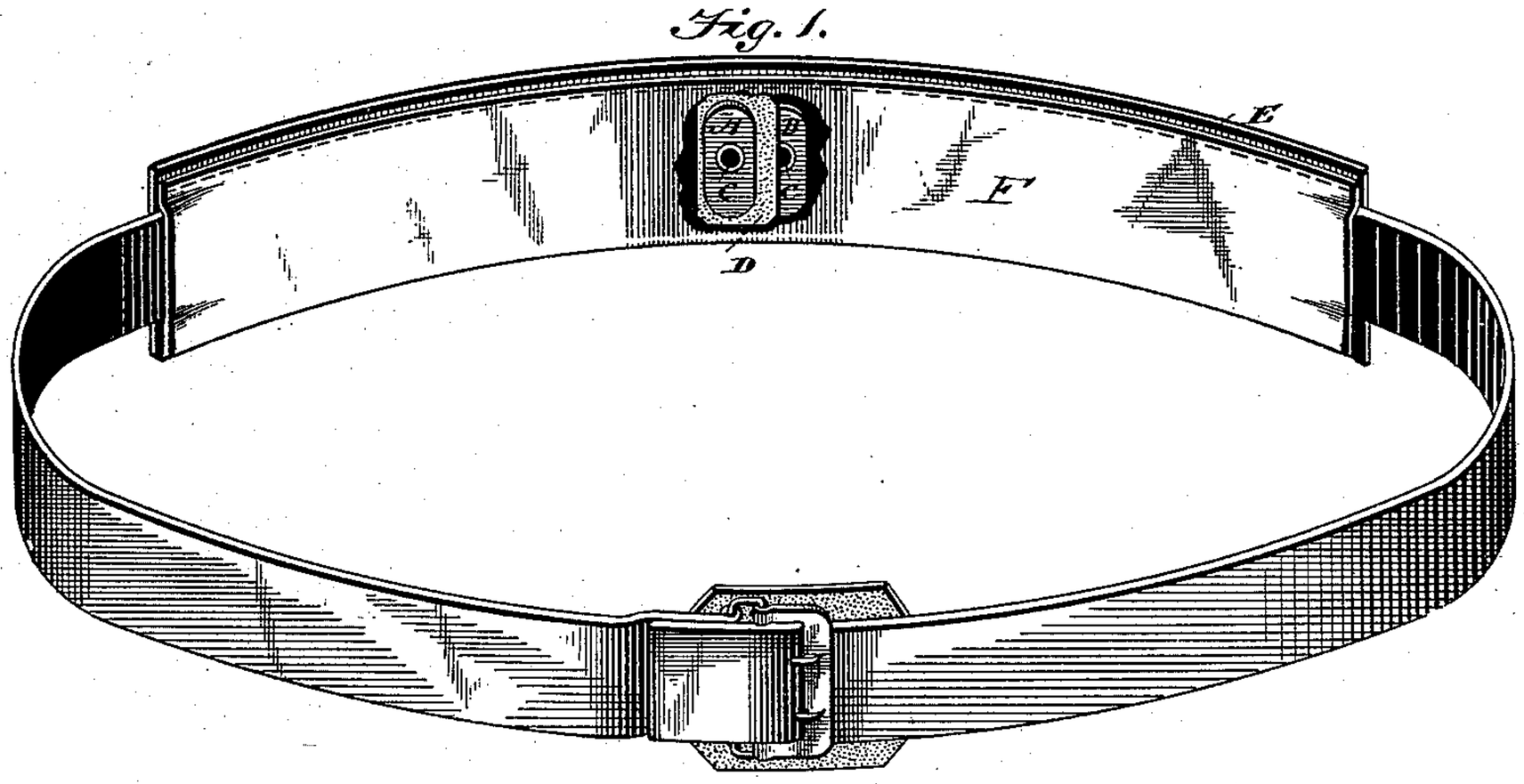


Fig. 2.

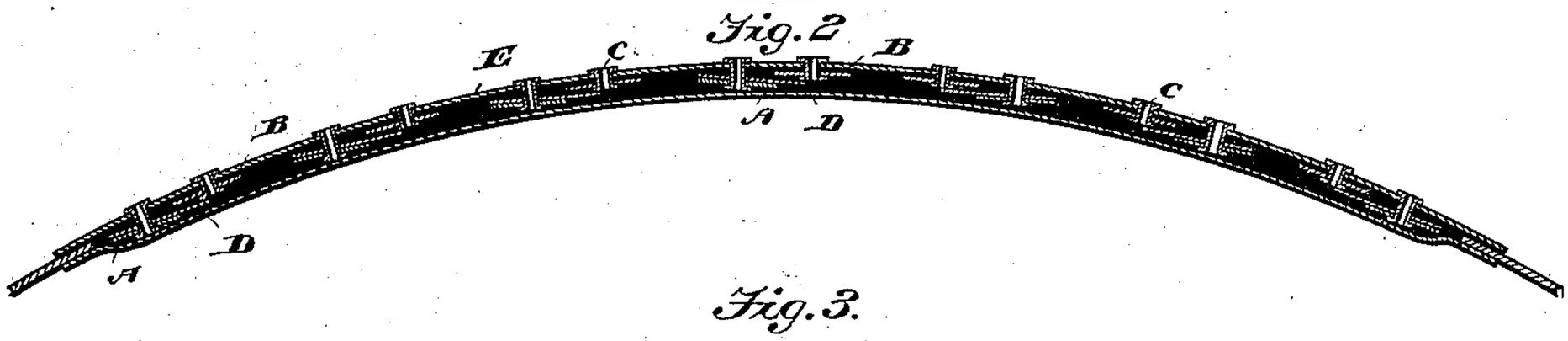


Fig. 3.

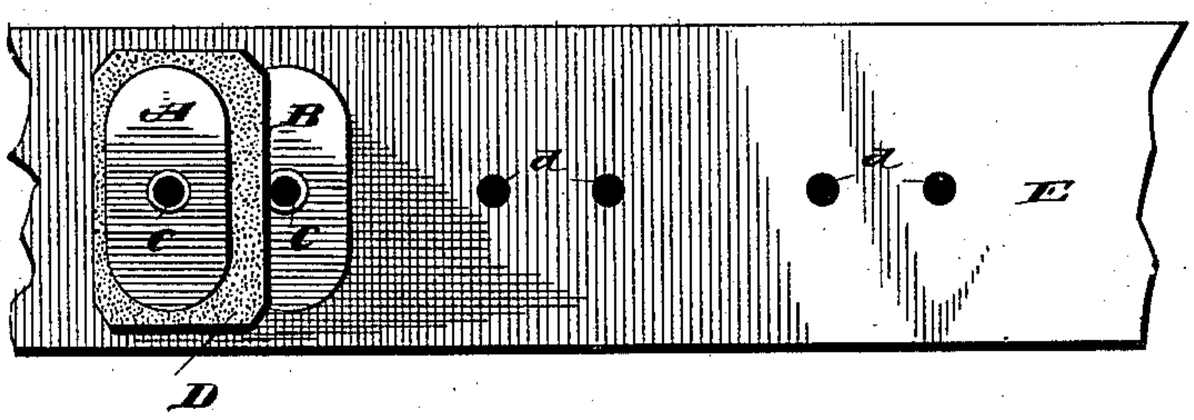


Fig. 5.

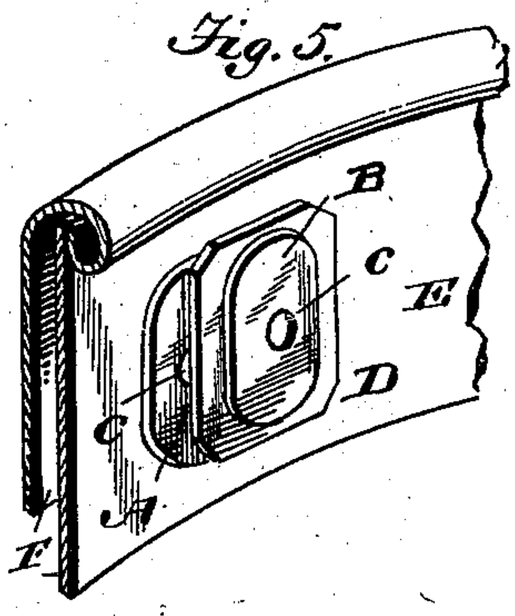
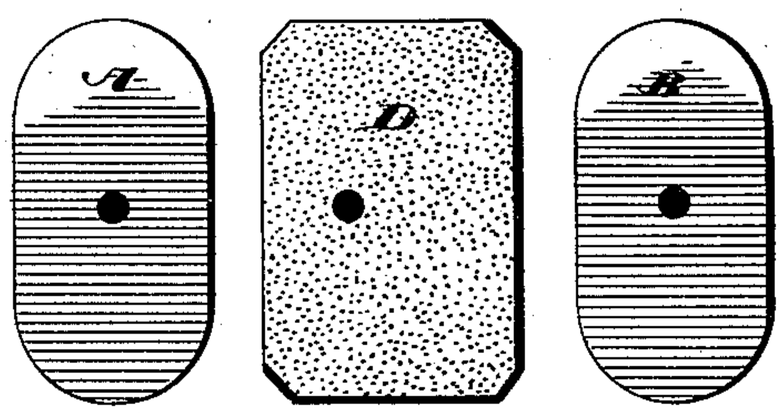


Fig. 4.



Witnesses:

H. Washburn.

F. E. Gunckel.

Inventor:
Chas. H. Grimley.
By, James J. Shelby.
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES HENRY GRIMLEY, OF NEW YORK, N. Y.

ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 401,882, dated April 23, 1889.

Application filed February 5, 1889. Serial No. 298,734. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY GRIMLEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Belts; and I do 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 invention relates to means for conveying to the human body a mild and constant current of electricity for remedial purposes; and it consists in the novel construction of an electric belt of great simplicity, as hereinafter specified and claimed.

The invention will be fully understood from the following specification and claims, when taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of my improved belt; Fig. 2, a longitudinal sectional view taken through the batteries. Fig. 3 is a plan view of a portion of the belt with a battery arranged thereon, and having the fabric or flap F turned back to allow the battery-plates and portions of the interposed cloth strip to impinge against the skin of the wearer. Fig. 4 is a plan view of the electrodes and textile strip therefor. Fig. 5 is a perspective sectional view of Fig. 3, showing the flap F turned back, as in Fig. 3.

Referring by letter to said drawings, A indicates a plate of copper, and B a similar plate of zinc. Each of these plates is punctured at or near its center to receive a fastening-eyelet, which punctures are indicated by *c*.

D indicates a strip of cloth or other absorbent material, preferably flannel, having a puncture on one side of its center, as shown, and for the purpose hereinafter mentioned.

E indicates a strip of webbing provided with a series of apertures, (marked *d*.)

I take a plate, A, a plate, B, and arrange them on the webbing in the manner shown in Fig. 3. An eyelet is passed through the perforation of plate A, the perforation of the cloth D, and also through a like perforation in the webbing. The eyelet is then pressed down firmly by a suitable implement—such as pinchers—and the plate, cloth, and webbing are thereby thoroughly united. I next take a plate, B, and attach it to the webbing by an eyelet in like manner at such distance from plate A that the edges of the plates slightly overlap each other and would be in contact were it not that the free edge of the cloth strip D is interposed between them, as shown. Plates A and B, with the interposed cloth strip D, when thus arranged, constitute what I call a "battery." A belt prepared for use should have several such batteries secured upon it; but the number should always correspond to the amount of electrical energy required. If only a light current be desired, only a few batteries must be employed.

In the annexed drawings I show independent batteries which are disconnected, and I prefer to so apply them, so that a gentle electrical energy will be produced and applied at numerous points around or about the body of the wearer.

It will be observed by reference to the drawings that I stitch to the upper edge of the webbing E a flap, F, of flannel or other suitable absorbent material, leaving the opposite edge of this flap free or disconnected from the lower edge of the webbing E.

Whenever I desire to use the belt as a bracing-band for giving support to the body without necessarily or materially affording a strong galvanic action to the body, I arrange the said flap over the batteries so that it lies between the skin of the wearer and these batteries, as shown in Fig. 1. When I desire to afford the full galvanic action of all the batteries employed on the webbing E, I simply turn the flap F over the upper edge of the webbing, as indicated in Fig. 3 and clearly shown in Fig. 5.

It is obvious that an electric belt constructed as herein described can be so cheaply manufactured that it may be brought within the means of the very poorest classes of citizens. It is also so light as not to be cumbersome to the wearer, inasmuch as the metal plates employed are very small and thin.

In operation, the plates A B and portions of the interposed cloth pieces D will contact with the skin of the wearer and galvanic action will be excited, the currents acting to stimulate the cuticle and superficial nerves and produce a therapeutic tonic effect.

I attach considerable importance to the

cheapness of manufacture, and to the fact that the belt can be produced by unskilled labor, as it is only necessary after punching holes in the belt and plates to secure them by common eyelets. These eyelet-fastenings, which are very desirable and made of sheet metal, also permit of free respiration of the body.

Having described my invention, what I claim is—

1. As an improved article of manufacture, a therapeutic electric belt consisting, essentially, of a webbing belt having punctures arranged in pairs, a positive and a negative electrode respectively provided with a puncture to match those of the web and arranged to overlap one another, an interposed cloth strip for the electrodes, eyelets securing the interposed strip and electrodes to the web, and a flap, F, of suitable material, as specified.

2. A therapeutic electric belt having a series of disconnected batteries composed of a positive and a negative electrode overlapping one another, and an interposed cloth strip, all secured to the web, substantially as specified.

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

CHARLES HENRY GRIMLEY.

Witnesses:
GEO. MANGHAN,
HENRY G. CASSIDY.