

J. BRYAN.  
 Electro-Galvanic Bands.

No. 156,053.

Patented Oct. 20, 1874.

Fig. 1.

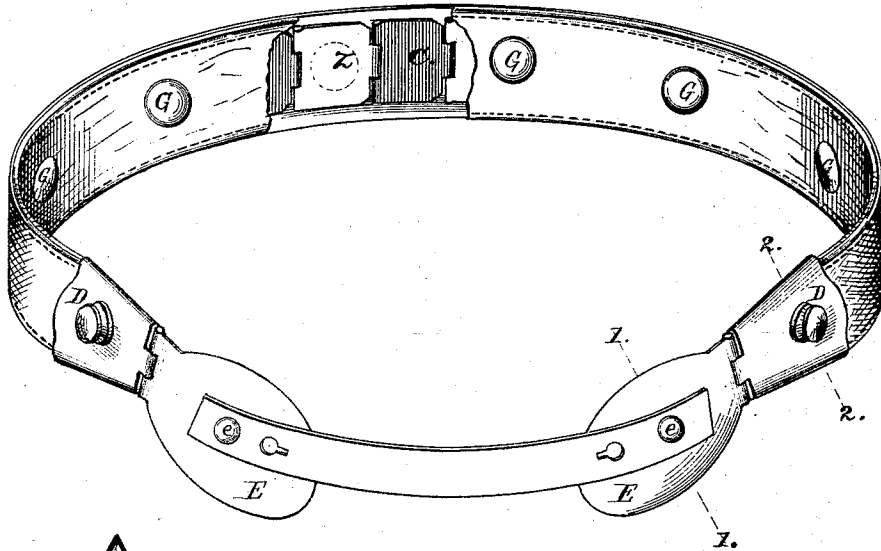


Fig. 2.

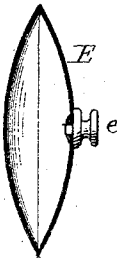


Fig. 5.

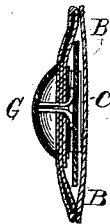


Fig. 3.

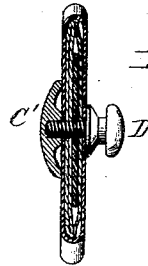
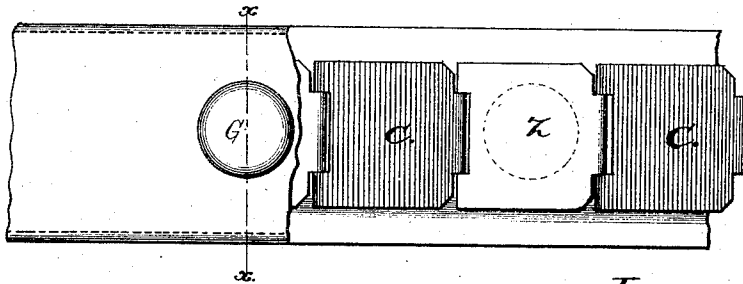


Fig. 4.

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# UNITED STATES PATENT OFFICE.

JAMES BRYAN, OF NEW YORK, N. Y.

## IMPROVEMENT IN ELECTRO-GALVANIC BANDS.

Specification forming part of Letters Patent No. **156,053**, dated October 20, 1874; application filed August 10, 1874.

*To all whom it may concern:*

Be it known that I, JAMES BRYAN, of New York, in the county of New York and State of New York, have invented certain Improvements in Electro-Voltaic Chain-Belts, of which the following is a specification:

This invention relates to certain new and useful improvements in electric belts or bands for imparting a continuous current of electricity to different parts of the body for the treatment of various diseases; and it consists of a series of alternate plates of copper and zinc, hinged together so as to form a flexible band or chain, the whole being inclosed by a covering of leather, or other suitable material. One end of said band terminates with a copper plate forming the negative pole of the belt, the other with a zinc plate forming the positive pole. To each end or pole of the belt, is secured a peculiar metallic pad and conductor, and at various points along the inside of the belt conductors are provided, in order to distribute the electricity at various points along the circuit of the belt to the person of the wearer. The leather insulates the plates between the conductors, and, in combination with said plates and conductors, forms a series of small batteries throughout the entire length of the belt, the poles of which communicate with the person at various points, instead of a continuous battery in which the two poles at the end of the belt alone conduct the electricity through the body.

The advantage of my form of belt over all others will be apparent, since, by its use the electro-current can be divided up and applied to various parts of the body at the same time, while in such belts as heretofore constructed the current could only be applied at two points—the ends of the belt.

In the drawings, Figure 1 represents a perspective view of my improved belt; Fig. 2, a sectional view of one of the metallic pads forming the poles at the end of the belt. Fig. 3 represents a detached view of the belt with a portion of the covering removed, showing the copper and zinc plate. Fig. 4 represents a sectional view of the sockets or ferrules attached to the ends of the belt, to which the

metallic pads are hinged. Fig. 5 represents a sectional view of the belt, showing the conducting-buttons and method of attaching the same.

A represents the metallic chain which forms the battery, consisting of a series of alternate plates of copper and zinc, marked C Z. These plates are hinged together in any convenient manner, and are secured within a leather or other suitable covering, B.

One end of the belt terminates with a zinc plate, forming the positive pole of the battery, and the other with a copper plate, forming the negative pole. Over each end of the belt is secured a socket, C', by means of a screw-bolt, D, which passes through the metal plate of the chain, and forms a metallic connection therewith. To the ends of said sockets are attached the metallic pads E E, which serve to conduct the electricity from the positive and negative poles to the person. Said pads are formed of two concavo-convex disks of metal, united with their concave sides together, forming an easy bearing-surface against the body. The outer sides of said pads are provided with buttons *e e* for the band F, by which the belt is secured around the wearer. At various intervals along the inside of the belt conducting-buttons G are provided. These may be at any convenient distances apart, and should connect alternately with the copper and zinc plates. They may be attached to the plates in any convenient manner, provided a metallic communication between said buttons and plates is formed. Fig. 5 shows a convenient manner of attaching them by means of a metallic shank passing through the leather and the metallic plate, where it is fastened.

The belt may be provided with supporting straps or bands, in order to support it in various positions upon the body.

It needs no preparation previous to being placed upon the body, as the perspiration of the person, permeating the leather or covering and acting upon the plates, will generate the electricity.

What I claim is—

1. The combination of the hinged metallic

plates of copper and zinc with the covering B and conducting-buttons G, for distributing the electricity to the body at various points along the circuit of the belt, as herein described.

2. The metallic pads, constructed as described, in combination with the sockets to which they are attached, the same being se-

cured over the ends of the belts, and having a metallic connection with the plates forming the chain, as herein described.

JAMES BRYAN.

Witnesses:

T. B. MOSHER,

ALEX. F. ROBERTS.