

(No Model.)

G. E. PALMER.
ELECTRO GALVANIC BELT.

No. 279,881.

Patented June 19, 1883.

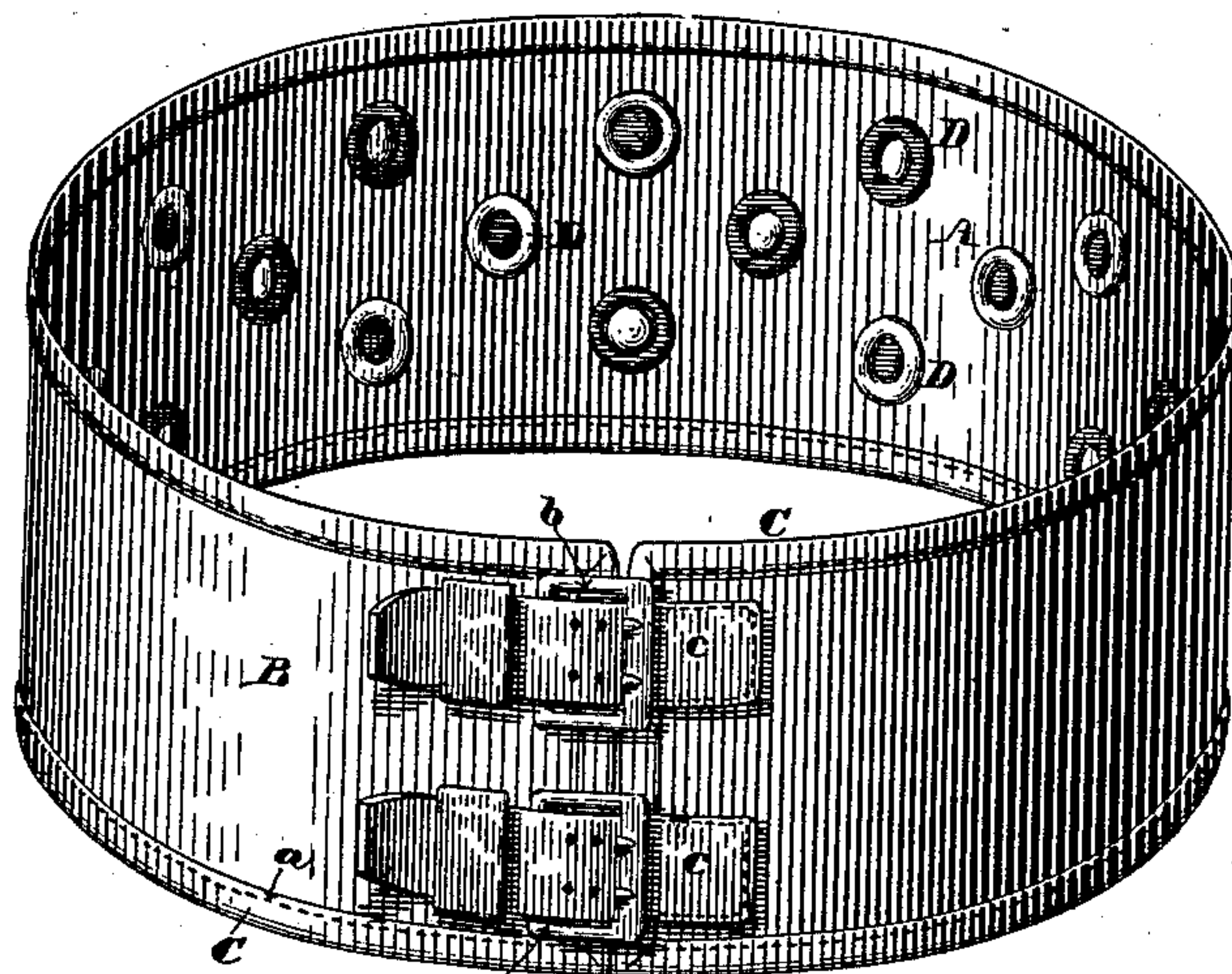


Fig. 1.

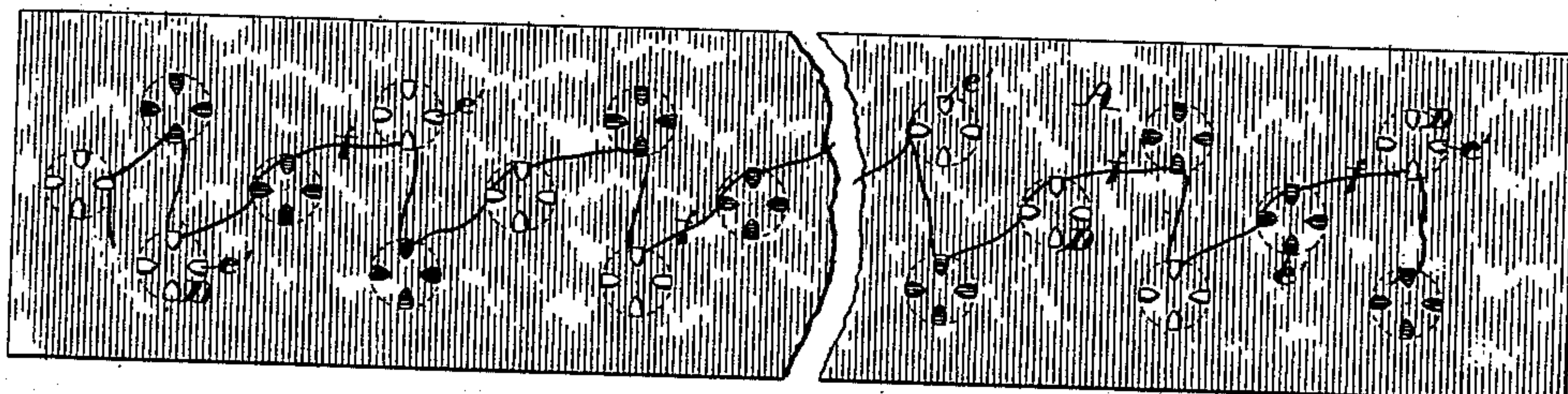


Fig. 2.

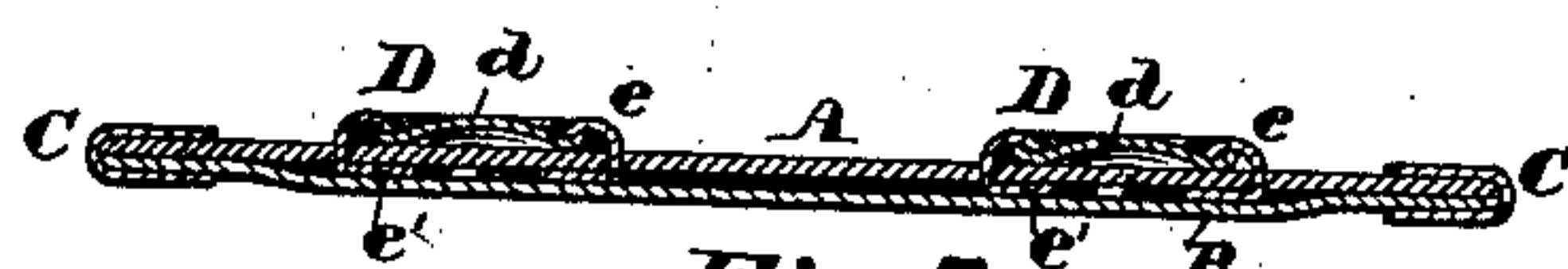


Fig. 3.

Witnesses:
Walter E. Lombard.
E. A. Hemmenway.

Inventor:
George E. Palmer,
by N. G. Lombard
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE E. PALMER, OF BOSTON, ASSIGNOR OF ONE-HALF TO JOHN LOMBARD, OF CAMBRIDGEPORT, MASSACHUSETTS.

ELECTRO-GALVANIC BELT.

SPECIFICATION forming part of Letters Patent No. 279,881, dated June 19, 1883.

Application filed May 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. PALMER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Electro-Galvanic Belts, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to electro-galvanic belts to be worn upon the person; and it consists in a novel construction, arrangement, and mode of applying a series of batteries, which will be readily understood by reference to the description of the drawings and to the claim to be hereinafter given.

Figure 1 of the drawings is a perspective view of my improved belt. Fig. 2 is an elevation of the leather belt detached from the cloth covering and showing the manner of attaching the series of batteries and connecting them together; and Fig. 3 is a transverse section through the complete belt, the cutting-plane being through two of the batteries, drawn to an enlarged scale.

A is a leather band; B, a covering of flannel or other textile fabric; or, if desired, it may be of chamois-skin, the band A and covering B being connected or attached together by lines of stitching, *a*, which also secures thereto the binding C.

To one end of the belt is secured the buckles *b b*, and to the opposite end are secured the straps *c c*, by means of which the belt is secured around the body of the wearer in a well-known manner.

To the leather band A is secured a series of small batteries, D, each composed of a concavo-convex disk, *d*, and an annular concavo-convex plate or ring, *e*, arranged to overlap

said disk *d* around its entire circumference, and provided with two or more prongs, *e'*, which passthrough said leather band, and are clinched upon the other side thereof, as shown in Fig. 2. The disks *d* are made alternately of copper and zinc, as are also the rings *e*; but a zinc disk is coupled with a copper ring and a copper disk with a zinc ring. A fine copper wire, *f*, is run from one battery to another through the whole series between the leather band A and the covering B, connecting alternately with a copper ring and then a zinc ring throughout the whole series. The outer surfaces of the disks *d* and rings *e* are so rounded as to present no sharp corners to cut or chafe the person, and they are so separated as to permit the belt to freely and readily conform to the person of the wearer, and adapt itself to changes of position; and they project so little from the surface of the belt that they will not materially inconvenience the wearer.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In an electro-galvanic belt, the combination of a series of disks, *d*, a series of rings, *e*, having their edges turned over the disks and presenting smooth surfaces arranged relative to each other, as set forth, and the wire *f*, connecting all of said rings in a circuit, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of May, A. D. 1883.

GEORGE E. PALMER.

Witnesses:

E. A. HEMMENWAY,
WALTER E. LOMBARD.