

(No Model.)

C. H. GRIMLEY.
ELECTRIC BELT.

No. 419,013.

Patented Jan. 7, 1890.

Fig. 1.

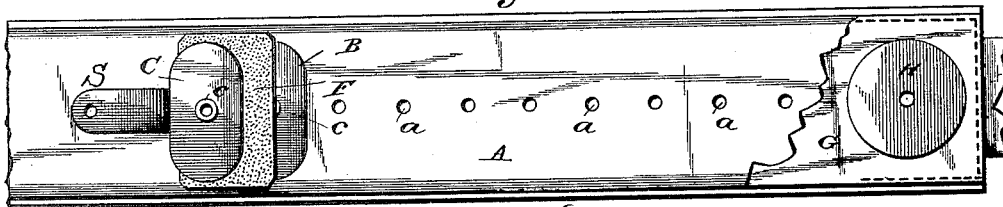
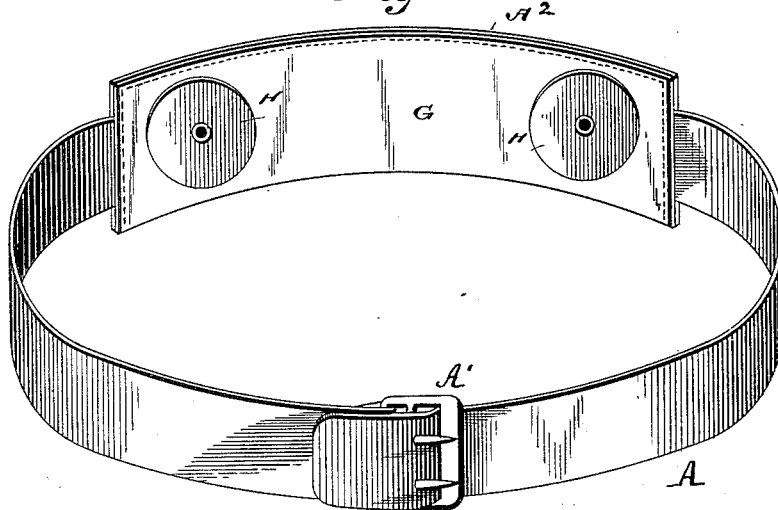
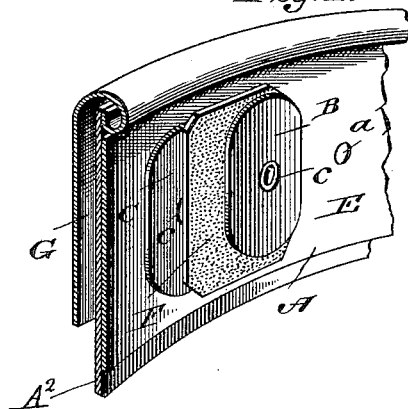


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 419,013, dated January 7, 1890.

Application filed March 23, 1889. Serial No. 304,394. (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 an improvement in electric belts; and it consists in the peculiar arrangement and construction of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

The object of my invention is to provide a light, cheap, and simple belt, which shall be flexible, and adapted to be worn with ease and without discomfort on the body, and which shall be capable of use for the therapeutic treatment of diseases.

In the drawings which fully illustrate my invention, Figure 1 is a perspective view of an electric belt embodying my improvements. Fig. 2 is a sectional view of the same on a larger scale. Fig. 3 is an elevation of a portion of the belt, showing the arrangement of the electric-generating elements. Fig. 4 is a sectional perspective, showing the same, the lining being folded over the back of the belt.

The back piece A^2 , which is of suitable length and width, is made of felt or other suitable flexible material. The face of lining G, which is of the same size, is made of thin fabric of suitable quality, and has its ends and upper edge stitched to the ends and upper edge of the back piece, as shown in Fig. 1, thereby leaving the lower edges of said lining and back piece disconnected, to the end that they may be distended to secure access to the galvanic elements, presently to be described. The back piece and lining form the central portion of the belt, and the strap A is secured between the back piece and lining, as shown, and said strap has a buckle A' at one end, to which the other end of the strap may be fastened in the usual way, thereby adapting the belt to be buckled firmly about the waist of the patient.

The galvanic elements are copper plates C and zinc plates B, arranged in series with their approximate edges overlapping, and between each pair of elements is interposed a piece of absorbent cloth or material E. The said elements are secured to the strap, respectively, by means of metal eyelets C, which pass through central openings in the elements and absorbent cloths and through openings a in the strap and back piece. By thus causing the pairs of galvanic elements to overlap and interposing the absorbent cloths between them the belt is rendered sufficiently flexible to adapt it to the form of the wearer and without the risk of breaking the electric circuit. The face or lining which covers the front sides of the galvanic elements prevent the latter from coming directly in contact with the skin of the wearer, and renders the belt comfortable to the touch. The terminal elements of the series are provided with metallic conducting straps or links S, the inner ends of which are secured in contact with the elements by eyelets, before described and as shown, and the outer ends of the said conductors or links are connected to electrodes H by means of similar eyelets, which pass through the centers of the electrodes and through the face piece or lining, the electrodes being thus secured on the front side thereof, near its ends, and adapted to form electrical contact with the body of the wearer at points on opposite sides of the vertebral column, thus adapting the belt peculiarly to the treatment of lumbago and other spinal muscular diseases.

Having thus described my invention, I claim—

As an improved article of manufacture, the electric belt comprising the strap A, the back piece A^2 on the rear side thereof, the face piece or lining G on the front side thereof and stitched at its ends and upper edge to the back piece, the lower edge remaining unstitched, for the purpose set forth, the galvanic elements of metal arranged in series overlapping each other in pairs and separately riveted to the belt, absorbent cloths inserted between the pairs, and said cloths and elements being attached to the strap and the back piece by eyelets, the con-

ducting-links attached to the terminal elements by the eyelets, and the electrodes arranged on the face of the lining and attached to the ends of the conducting-links by eyelets, the said lining forming a covering for the galvanic elements, substantially as described.

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

CHARLES HENRY GRIMLEY.

Witnesses:

GEO. MAUGHAN,
HENRY G. CASSIDY.