

(No Model.)

M. E. THOMAS.
ELECTRO MAGNETIC ABDOMINAL SUPPORT.

No. 420,840.

Patented Feb. 4, 1890.

Fig. 1.

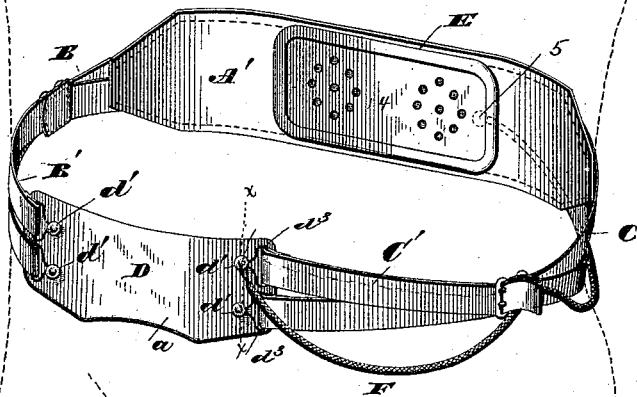


Fig. 2.

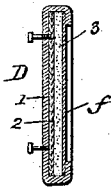
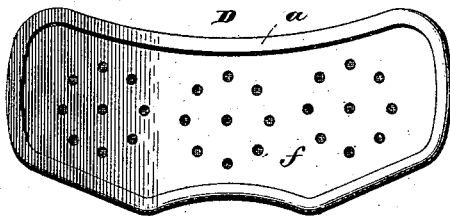


Fig. 3.



WITNESSES

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MARY E. THOMAS, OF CARDINGTON, OHIO.

ELECTRO-MAGNETIC ABDOMINAL SUPPORT.

SPECIFICATION forming part of Letters Patent No. 420,840, dated February 4, 1890.

Application filed October 7, 1885. Serial No. 179,228. (No model.)

To all whom it may concern:

Be it known that I, MARY E. THOMAS, a citizen of the United States, residing at Cardington, in the county of Morrow and State of Ohio, have invented certain new and useful Improvements in Electro-Magnetic Abdominal Supports, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in electric belts; and it consists in the combination of parts, as will be hereinafter fully set forth.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of my improved belt, illustrating its application. Fig. 2 is an enlarged detail sectional view taken on the dotted line *x x*, Fig. 1; and Fig. 3 is an enlarged view of the battery-section, looking at the inner side of the same.

The main portion of the belt is constituted by an extended horizontal section *A'*, of leather or other suitable material, to the ends of which are connected straps *B C*, carrying buckles for adjustable connection with horizontal loops *B' C'*, which are preferably elastic to allow the device to yield under the movements of the wearer. The forward ends of the elastic loops *B' C'* are connected to wire loops *d³*, which are pivotally attached to studs or projections *d'*, seated in a pad-section *D*, as will be hereinafter fully described. The pad-section *D* has the properties of a galvanic pile, and consists of a brass plate 1, adjacent to the inner side of which are arranged a plate of copper 2 and a plate of zinc *f*, having a section 3, of felt or like absorbent material interposed. The several plates of brass, copper, and zinc and layer of absorbent material are held rigidly together and protected by an outer casing of leather, forming a non-conducting covering, the marginal portions of which are turned over to embrace the edge portions of the several plates, as shown in Fig. 3. The section *f* is perforated, so that the felt may be readily saturated with vinegar or other suitable agent to excite the galvanic properties of the pile, and

also enable the salts of the body to contribute thereto.

A rear pad *E* is secured to the inner face of the horizontal section *A'* of the belt, and consists of one or more plates of zinc, which may or may not have an interposed sheet of absorbent material, in any event all being incased in a leather covering similar to that provided for the section *D*. It will be most desirable, however, and contribute more to the efficiency of the device to have the rear pad also constitute a galvanic pile, in which event the inner perforated plate 4 will be of copper succeeded by a sheet of absorbent material, then of zinc, and finally of brass, a conducting stud or projection 5 (see dotted line, Fig. 1) serving for the external electric connection of the zinc element of the rear pile with the copper element of the front through the medium of an insulated conductor *F*, attached to the stud *h*.

In operation the supporter will be adjusted to conform to the person through the medium of the straps, buckles, and loops, as will be readily apparent, care having been previously exercised to have the absorbent sections of both piles properly moistened with an exciting agent. The effect of the device will be to cause currents to travel through the body of the wearer from the alternating elements of both piles, the current being externally established through the studs and conductor *F*.

I claim—

1. In an electro-therapeutical appliance, the combination of a galvanic pile consisting of plates of zinc and copper and an intermediate sheet of absorbent material, an outer covering of non-conducting material protecting one side and having the marginal portions bent over to receive the plates and sheet, and a stud extending from the outer element through the non-conducting material, together with a conducting-wire connected to said stud and adapted to be placed in electrical contact with the person of the wearer, substantially as set forth.

2. In an electro-therapeutical device, the combination of a galvanic pile consisting of

zinc and copper elements and interposed
sheet of absorbent material, an outer cover-
ing of non-conducting material protecting
one side and having its marginal portions
5 bent over to secure the plates and sheet, and
a stud connecting with one element and pro-
jecting through the covering, a pad E and
wire F, electrically connecting it with the

stud, together with adjusting devices, sub-
stantially as set forth. 10

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

MARY E. THOMAS.

Witnesses:

Y. P. BARRY,
H. J. SHAW.