

(No Model.)

P. F. VALIANT.

ELECTRIC BELT.

No. 336,450.

Patented Feb. 16, 1886.

Fig. 1.

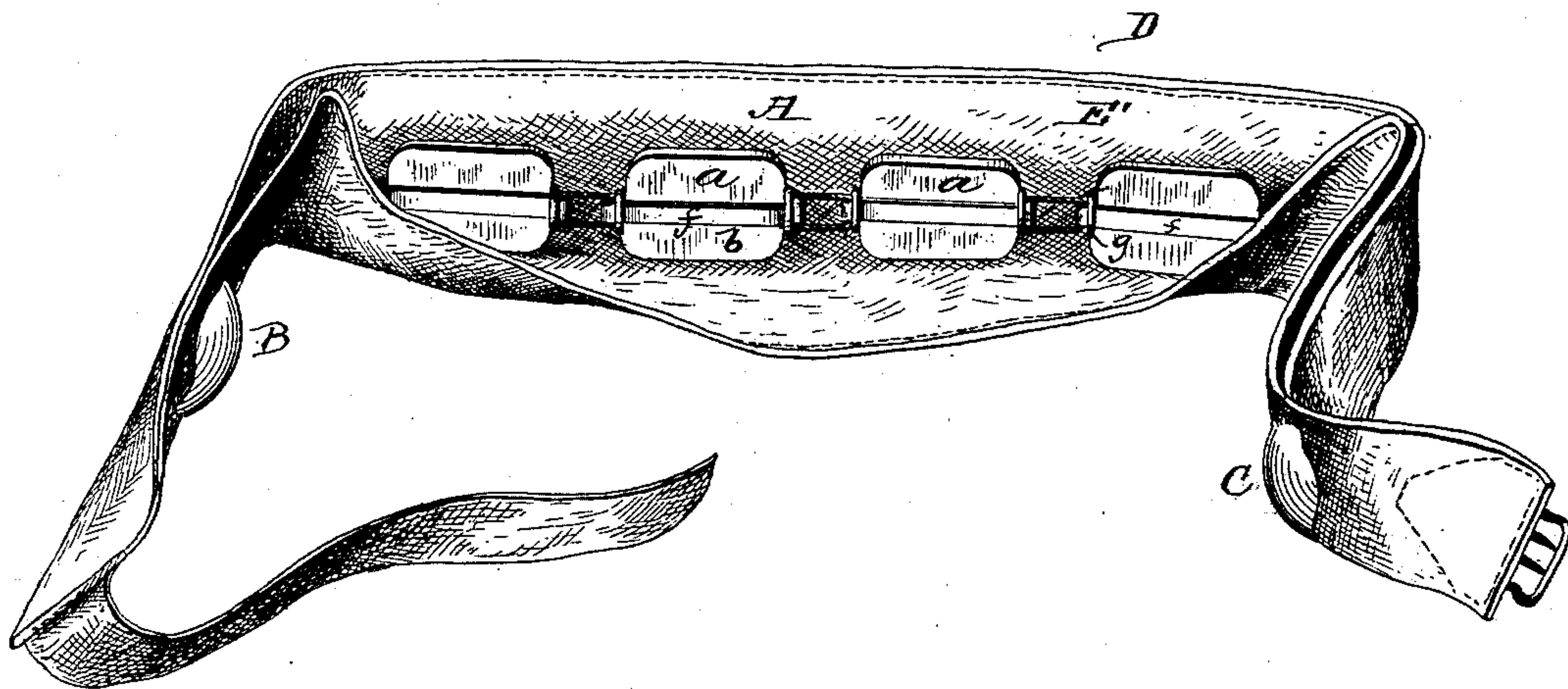


Fig. 2.

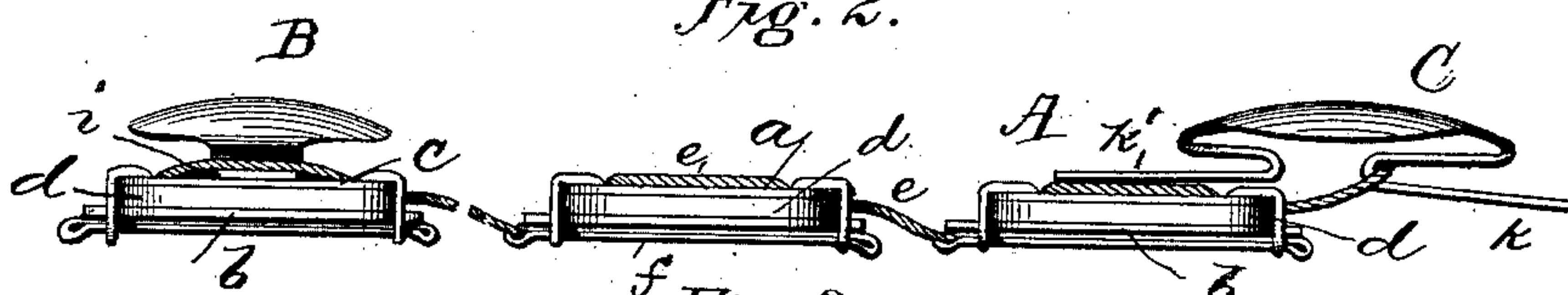


Fig. 3.

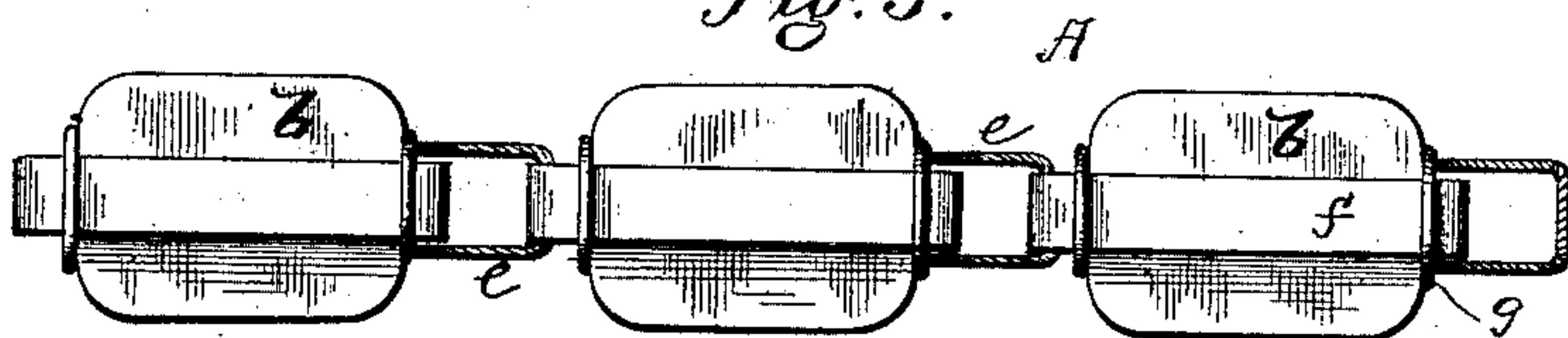


Fig. 4.

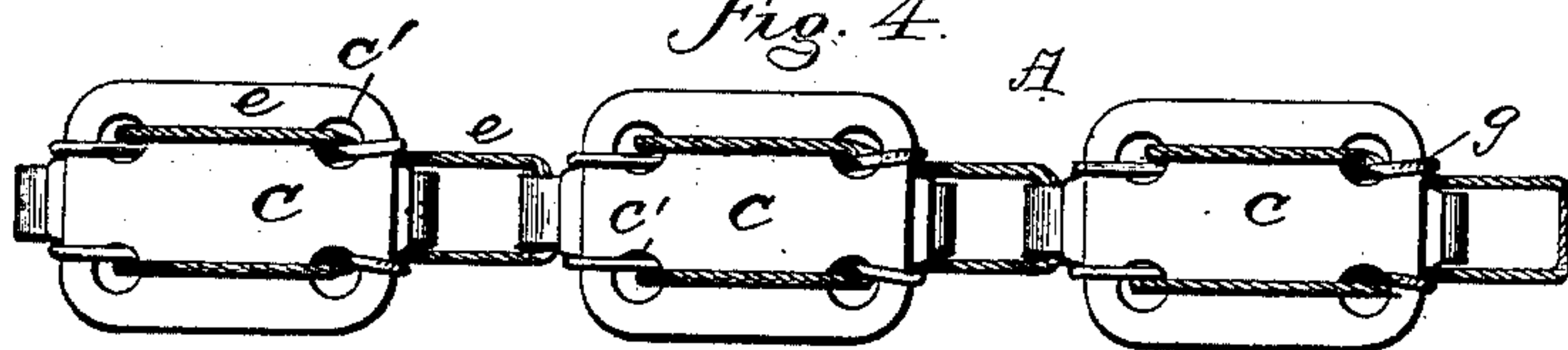
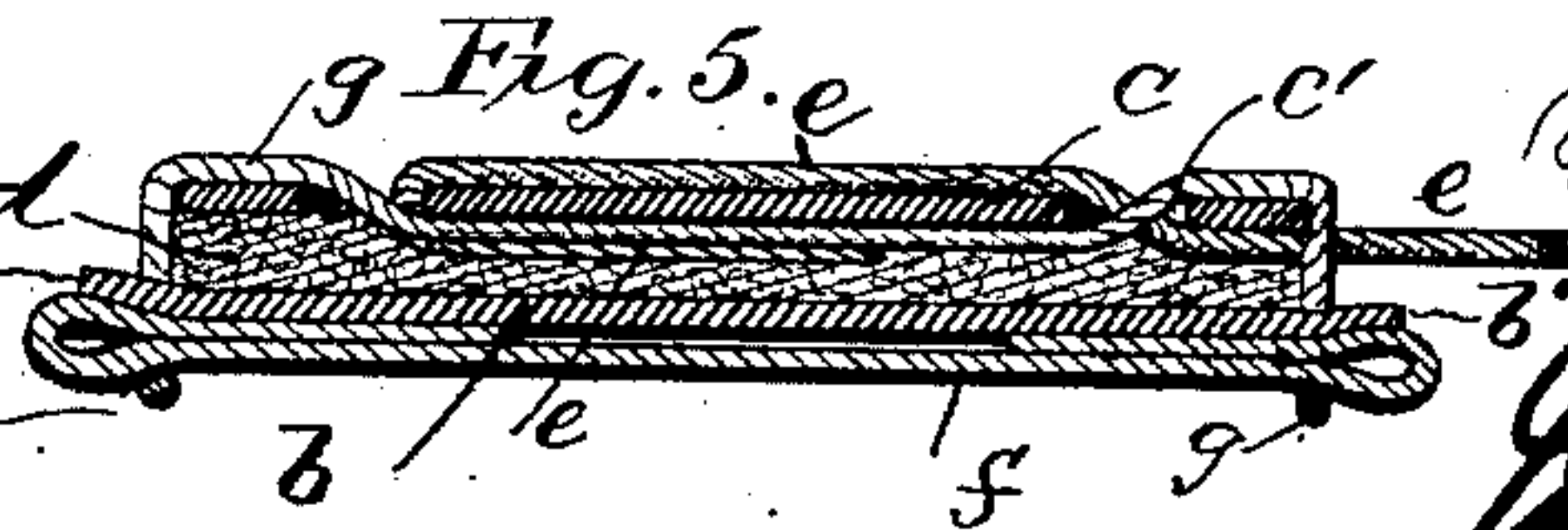


Fig. 5.



WITNESSES

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ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 336,450, dated February 16, 1886.

Application filed October 1, 1885. Serial No. 178,738. (No model.)

To all whom it may concern:

Be it known that I, PLACITO F. VALIANT, a citizen of the United States of America, residing at Jefferson, in the county of Greene and State of Iowa, have invented certain new and useful Improvements in Electric Belts; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in electro-therapeutical belts of that class which are intended to be worn upon the person of individuals to vitalize or restore a normal action in debilitated or diseased organs.

My invention consists in the construction of a voltaic pile the elements of which form the links of the belt, which are combined, arranged, and constructed as will be hereinafter set forth, and specifically pointed out in the claim.

In the accompanying drawings, which form a part of this specification, Figure 1 is a perspective view of my improved belt, showing the covering partly open, so as to expose the links which constitute the voltaic power. Fig. 2 is a longitudinal plan view. Figs. 3 and 4 are side views. Fig. 5 is a longitudinal section of a single link.

My improved electric belt A consists, essentially, of a series of links, *a*, which are composed of plates *b*, of copper, and the opposite plates, *c*, of zinc, between which is placed a packing, *d*, of absorbent material, which is saturated with an acid which induces chemical action between the plates. Each link of the chain forms an element of the battery, the strength of which increases with the number of elements or length of the chain. The links or elements of the chain are connected to each other by a looped wire, *e*, which is attached to the copper plate *c* by being passed through perforations *c'* therein, the looped end extending beyond the plate, as shown, while the opposite ends are bent upon themselves and lie

parallel with each other, said ends being located on the inner side of the copper plate *c*.

The wire loop or connection may be composed of several strands of wire which are twisted together, or a single wire may be employed.

The zinc plates *b* are provided at their ends with central projecting portions, *b'*, and above said plates *b* are secured flat bars *f*, of copper, which have looped or bent ends, said bars being of sufficient length to extend over the ends of the plates. An endless cord or loop, *g*, passes through the perforation *c'* in the plates *c*, and over the ends thereof, after which said loop is brought over the ends of the flat bars *f* and is secured thereto by a fine cord or thread.

The plates *b c*, between which the packing of absorbent material is placed, are held upon said packing and to each other by the loop *g*, which passes over the bent ends of the flat bar *f*, one end of said bent ends receiving the looped end of the wire of the adjacent link, so as to form a hinged connection, while through the opposite end passes the thread for holding the loop *g* in place. By this construction the parts are held securely together, and the packing *d* or absorbent material can be compressed between the plates.

By providing the zinc plate *b* with projecting ends it is held securely between the ends of the looped cord *g*, so that it cannot slide laterally or longitudinally out of place.

The belt or chain hereinbefore described is provided at its ends with buttons or disks B C, which contact with the person of the individual wearing the belt. The button or disk B is provided on its upper and lower side with projecting portions or tongues *i i*, the tongue *i* being adapted to contact with the last cell or element of the chain by being passed between the copper plate and the wire *e*. The projecting portions or tongues of the button or disk C are bent, as shown in Fig. 2, and said projecting tongues will, when attached to the chain, be in a horizontal position, so that the end *k* may pass through the wire loop of the last cell or link, and when the belt is curved or placed around the body the opposite tongue, *k'*, will be pressed upon the cen-

ter portion of the copper plate between the wires. By this construction the buttons can be readily detached and secured to other links of the belt when it is desired to provide a
5 belt of less length, also for the purpose of immersing the belt in diluted acid.

The buttons through which the electricity passes to the body of the wearer may be covered with flannel or other material, so that the
10 body will not be in direct contact therewith, thus avoiding the unpleasant sensation caused by the metal coming in contact with the skin, and also avoiding burning or cauterizing of the flesh.

15 In order to render the chain or belt comfortable to the wearer, I place the same in a belt, D, which is constructed so as to have a longitudinal pocket, E, within which the cells will lie. This belt D is lined on its inner side,
20 which forms the pocket, with a water-proof material, while its outer side may be of any suitable textile fabric. The ends of this covering-belt are provided with means—as a buckle and strap—for attaching the same to each other
25 around the body. The buttons or disks B C are attached to the belt by passing the projecting portions or tongues from the inner side of the covering to the interior of the pocket through slits or holes which are made there-

in, and said tongues are held in place by wire loops or keys. 30

To prepare the chain for use, it is first necessary to remove it from the belt and pass the same through vinegar or other acid, so that each absorbent between the plates is moist-
35 ened, then replace the battery in the belt.

I claim—

An electric belt consisting of a series of elements which are connected to each other, each of said elements consisting of a positive
40 and negative plate, between which is interposed an absorbent material, the negative element being provided with perforations, through which a wire forming a connecting-loop passes, and a textile loop for holding the
45 bent bar *f* in place and against the positive plate, in combination with the terminal buttons B C, having members engaging with the end links of the chain, and a belt having a pocket provided with a waterproofing lining,
50 for the reception of said chain, substantially as shown and described.

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

PLACITO F. VALIANT.

Witnesses:

G. G. LAURENCE,
CHAS. A. HUGHES.