

(No Model.)

L. N. FANCHER.
ELECTRIC BELT.

No. 456,021.

Patented July 14, 1891.

Fig. I.

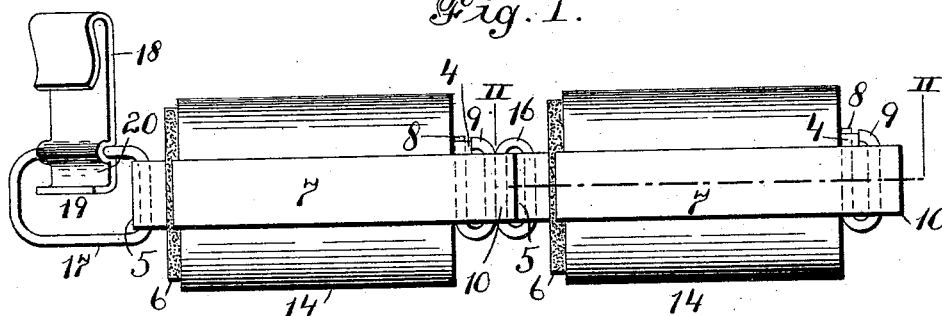


Fig. II.

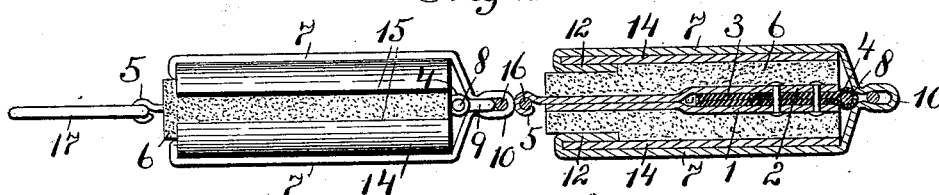
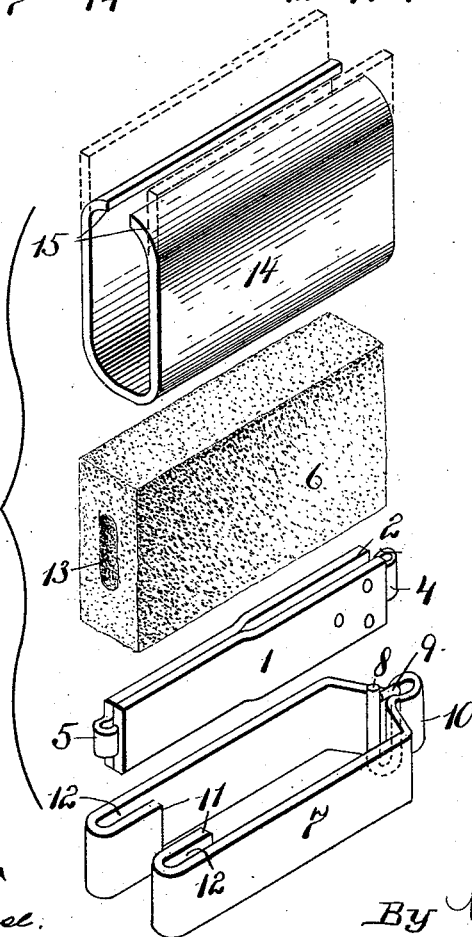


Fig. III.



Witnesses:
S. G. Fischer
George E. Cruise.

Inventor:
L. N. Fancher
By *Amiel & Sons* Attys.

UNITED STATES PATENT OFFICE.

LEWIS N. FANCHER, OF KANSAS CITY, MISSOURI.

ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 456,021, dated July 14, 1891.

Application filed April 6, 1891. Serial No. 387,779. (No model.)

To all whom it may concern:

Be it known that I, LEWIS N. FANCHER, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Electric Belts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in the construction of electric belts; and my invention consists in certain features of novelty hereinafter described, and pointed out in the claims.

Figure I represents a side elevation of a section of my improved belt. Fig. II is in part an edge view and part a sectional view taken on line II II, Fig. I. Fig. III are detail views of the various parts of the cells before being connected to each other.

Referring to the drawings, 1 represents the central core or plate, which is preferably of copper and formed in two sections, said sections being so bent as to leave a space 2, in which is secured a piece of rubber 3 or other non-conducting material, having a loop 4 at its outer end. The opposite end of said core is provided with a loop 5. The core 1 is surrounded with suitable absorbent material 6, which may be formed of felt or other desirable material, to absorb the acid into which the belt may be placed in order to charge the same. The copper core 1 is connected at one of its ends by the rubber loop 4 to the U-shaped copper plate 7, the rubber loop 4 passing over a wire pin 8, said pin 8 being attached to the U-shaped copper plate by means of an extension 9 of the pin 8 extending up through a loop 10 on the plate 7 at one end of said plate, said wire being so bent as to remain attached to said plate. The plate 7 extends on either side of the absorbent material 6, and is provided with return-bends 11, (see Fig. III,) there being a space 12 between said return portions and the body of the plate. The core 1 is first inserted in the felt portion, (there being an opening 13 for this purpose,) after which the rubber loop 4 is placed on the pin 8, the U-shaped plate 7 passing on either side of the felt portion 6. After the plate 7 has been placed in position and the attachment made with the core a U-shaped

zinc plate 14 is then passed over one side of the felt portion 6 and pressed in between the copper plate 7 and the felt 6, said zinc plate passing into the openings 12, formed by the return-bend 11 in said copper plate. After said zinc plate has been placed in position, surrounding the felt portion and connected with the U-shaped plate 7, the ends of said zinc plate are bent, as shown at 15, pressing against the felt portion 6, the said zinc plate being thereby held in its proper position in the belt. When said zinc element or plate becomes eaten up by the acid used in charging the belt, the bent portions 15 can readily be straightened out, as shown in dotted lines, Fig. III, and said zinc plate removed without the use of any tools or mechanical device and an additional plate inserted. Thus the wearer may readily renew the only part of the belt which wears out or is eaten up by the acid. The core 1 is connected at one of its ends with the copper plate 7 by means of a wire loop 16, which passes through the loop 5 on the end of said core and through the loop 10 on the end of the U-shaped plate 7, thus forming a connection between the inside copper element, the outside copper element, and the zinc element of the belt. Any number of cells may be used, the same being coupled to each other in the manner described. At the end of the series of cells I form a wire loop 17, on which is secured a hook 18, said hook being readily attached to a belt for holding the cells. On the opposite end of the plate of which the hook 18 is a part is a right-angle extension 19, leaving a space 20 between said extension and a point where the plate is attached to the loop 17, whereby a strip of cloth may be inserted on either side of said connection with the loop, in order to sew the hook fast to the belt which supports the same, if so desired.

It will be seen that by the use of my device the various parts can be readily attached and detached without the use of instruments for so doing.

I claim as my invention—

1. The combination of a cell formed with a copper core, an absorbent material surrounding the core, a copper plate passing on either side of said absorbent material, return bends in said copper plate, and a U-

shaped zinc plate engaging said outer copper plate and return-bends in the same, substantially as described.

2. The combination of a cell formed with
5 a copper core, absorbent material surrounding said core, a copper plate situated on the outside of said absorbent material, a U-shaped zinc plate connected with said outer
10 copper plate and said absorbent material, said U-shaped plate being bent, as shown at 15, for holding the same in position with said absorbent material and said outer copper element, substantially as and for the purpose described.

15 3. The combination of an inner copper element, absorbent material surrounding the same, an outer copper element partially surrounding the absorbent material, a zinc plate connected with said outer copper element
20 and said absorbent material, and a non-conducting connection between one end of the inner copper element and the outer copper element, substantially as and for the purpose described.

25 4. In an electric belt, a cell formed with the core 1, formed in sections, having a space 2, in which rubber or other non-conducting material 3 is secured, a loop on the end of said non-conducting material, a loop at the opposite
30 end of said core, said core being thereby connected with the plate 7 at one of its ends by a conducting-wire 16 and connected at

its opposite end with said plate 7 by the non-conducting loop 4, substantially as and for the purpose described.

35 5. The combination of the core 1, being supported at one of its ends with a non-conducting material, an absorbent material surrounding said core, a copper plate 7, nearly surrounding said absorbent material, and a
40 zinc plate 14, connected with said absorbent material and said plate 7, substantially as described, and for the purpose set forth.

6. The combination of the core 1, surrounded by an absorbent material 6, plate 7,
45 surrounding the absorbent material, pin 8, connected with said plate 7, by which the core 1 is connected with said plate, a loop 10 on said plate 7 for connecting the same with the
50 core of an adjoining cell, and a loop 5 on the core for connecting the same with an adjoining plate 7, substantially as described, and for the purpose set forth.

7. The combination of the core 1, absorbent material 6, surrounding the same, a copper
55 plate 7, partially surrounding said absorbent material, loop 17, connected with said core, hook 18 on said loop, and a right-angle extension 19 on said hook, substantially as and for the purpose described.

LEWIS N. FANCHER.

Witnesses:

JAS. E. KNIGHT,

F. E. MULLETT.