

(No Model.)

W. C. EKHOLM.
ELECTRIC BELT.

No. 504,336.

Patented Sept. 5, 1893.

Fig. 1.

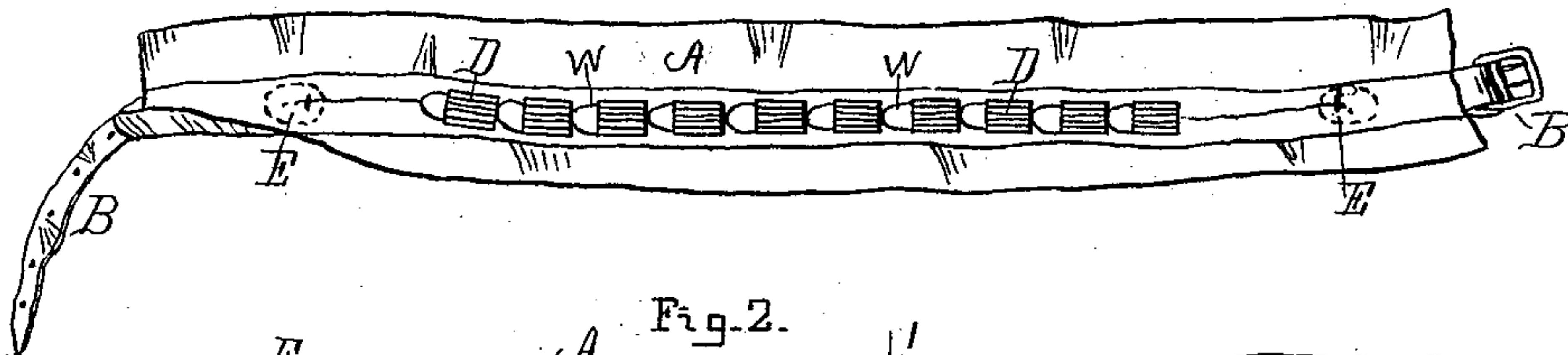


Fig. 2.

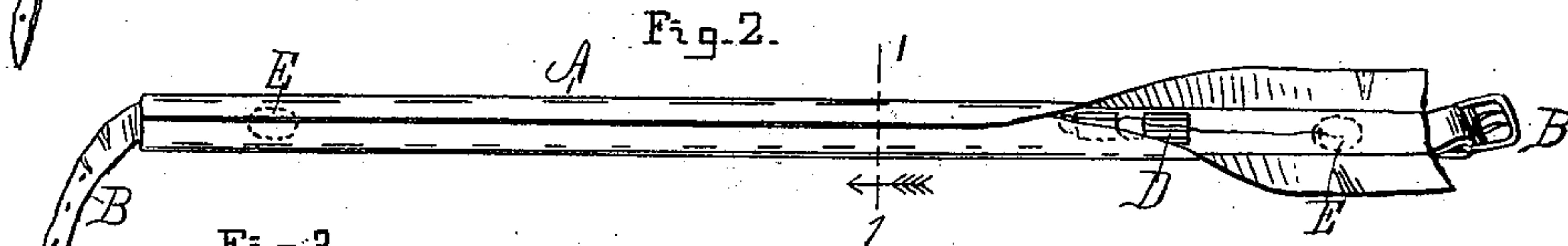


Fig. 3.

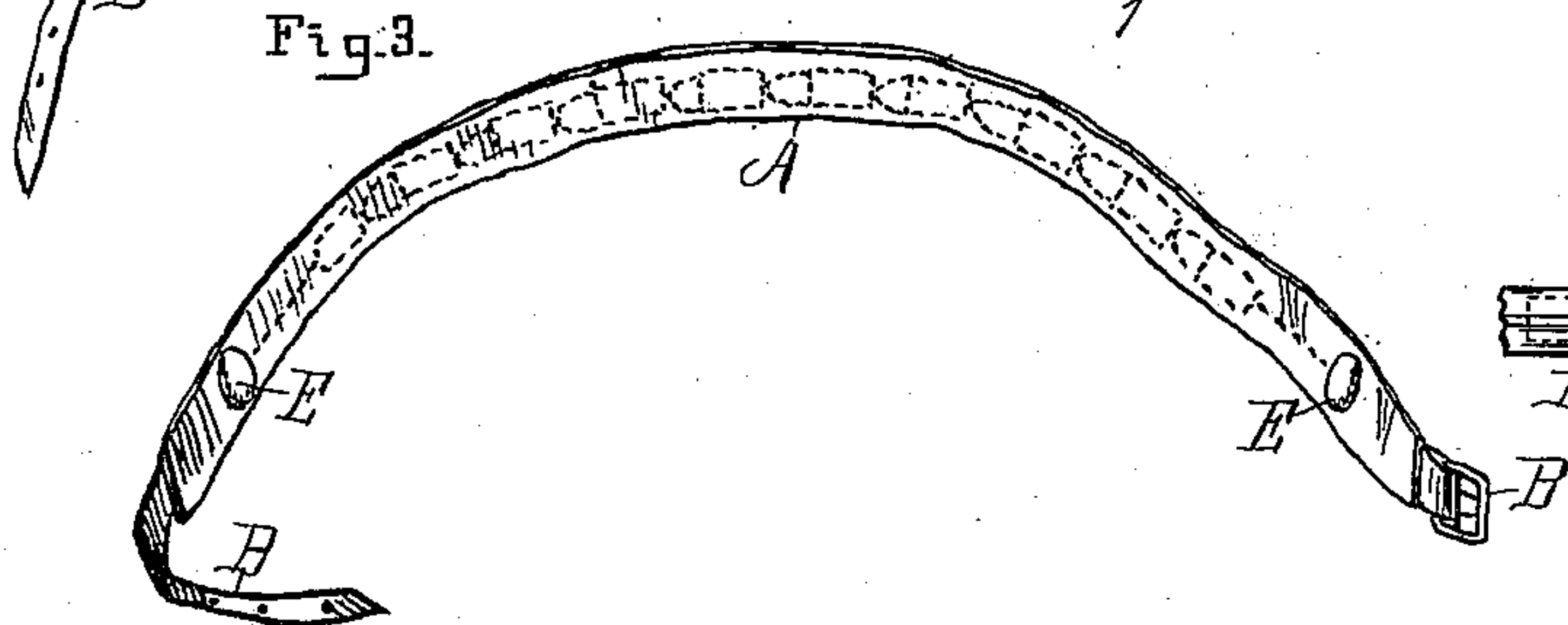


Fig. 4.

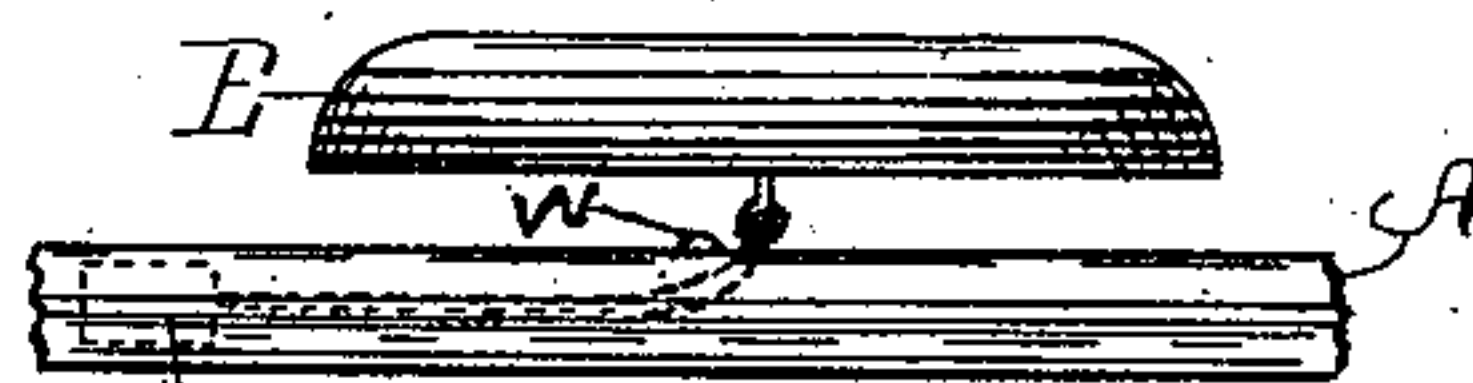


Fig. 5.

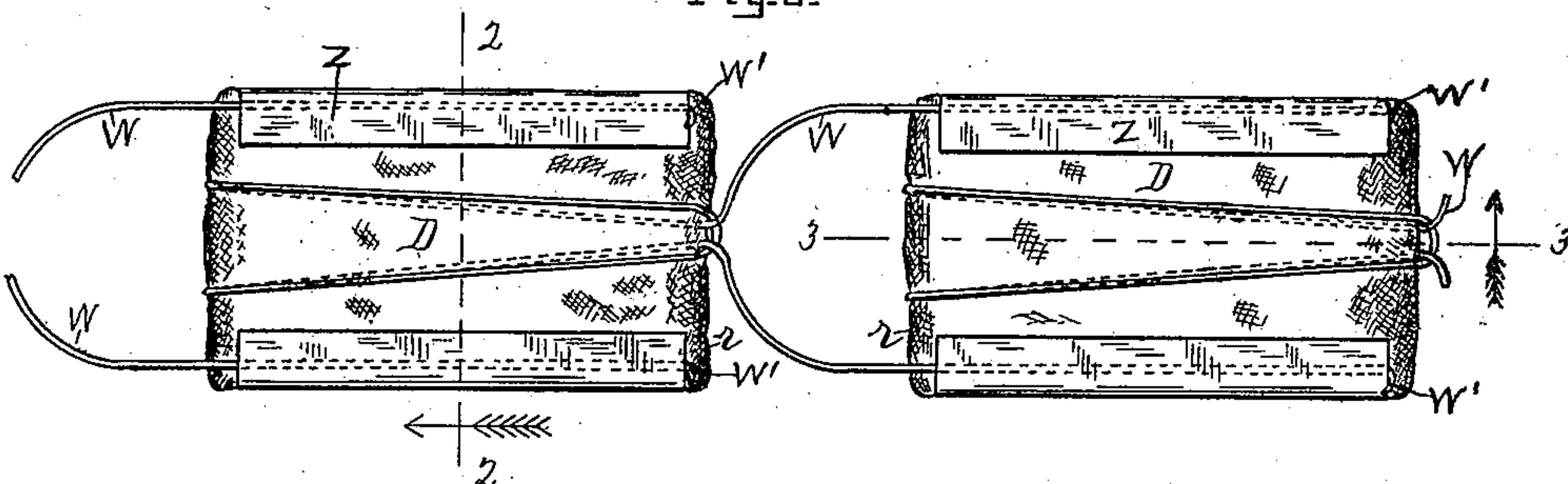


Fig. 6.

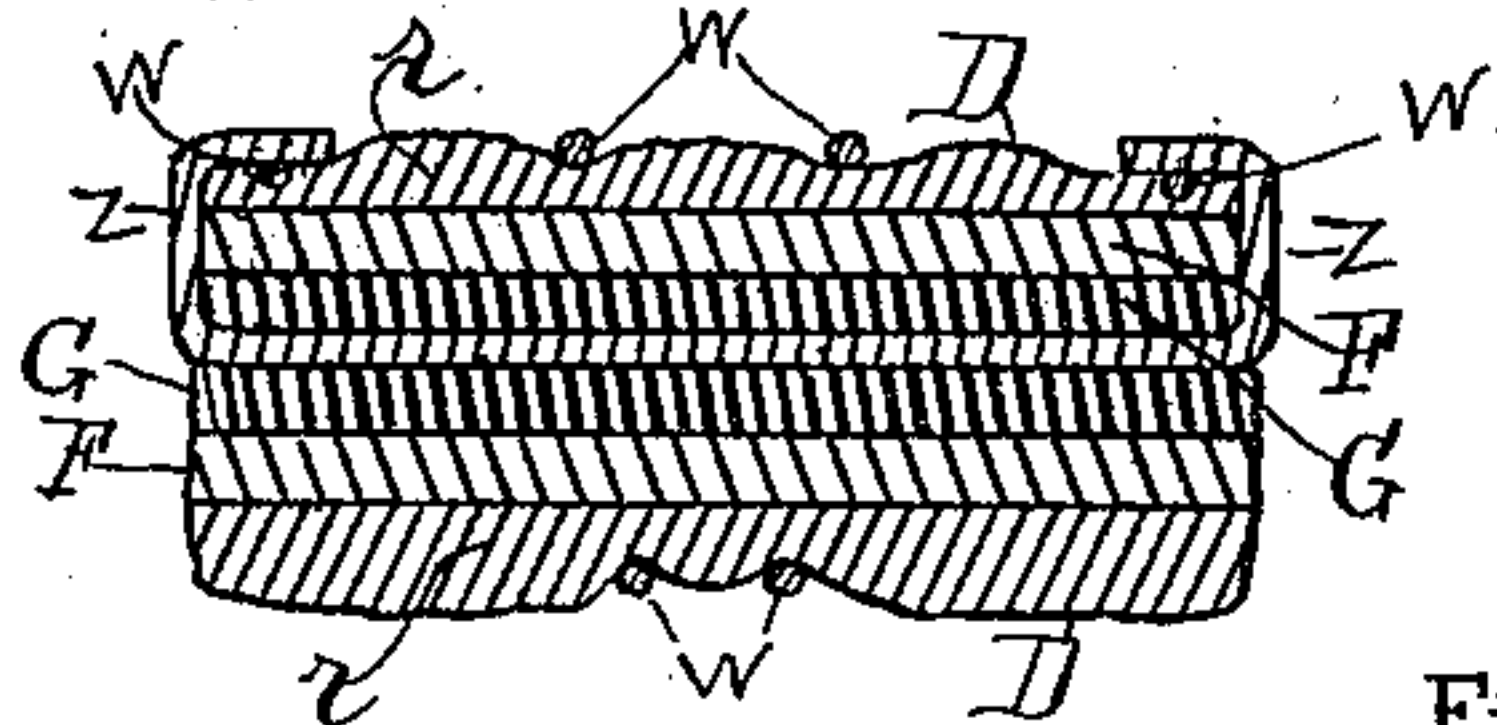


Fig. 7.

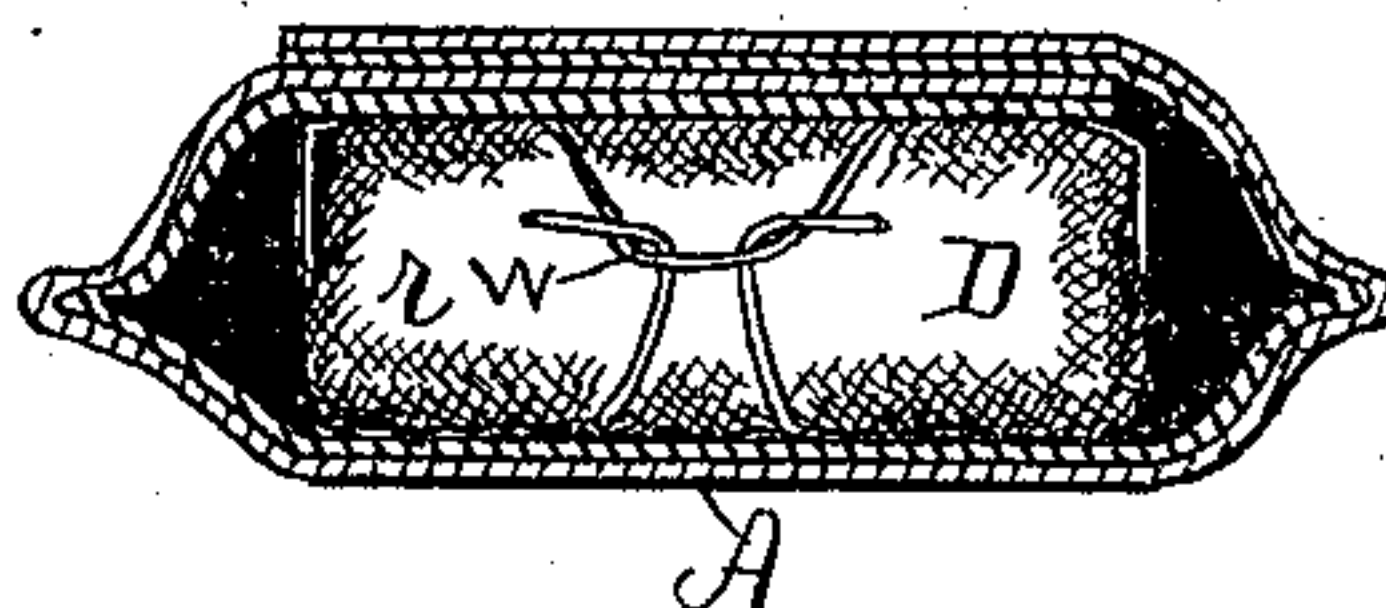


Fig. 8.

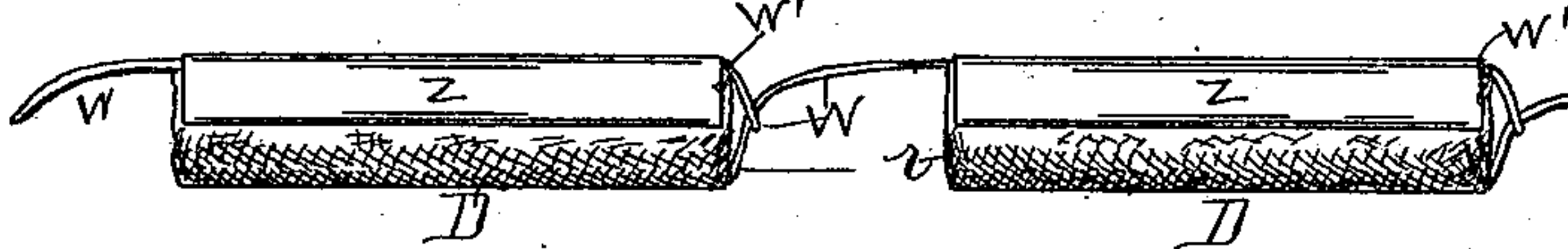
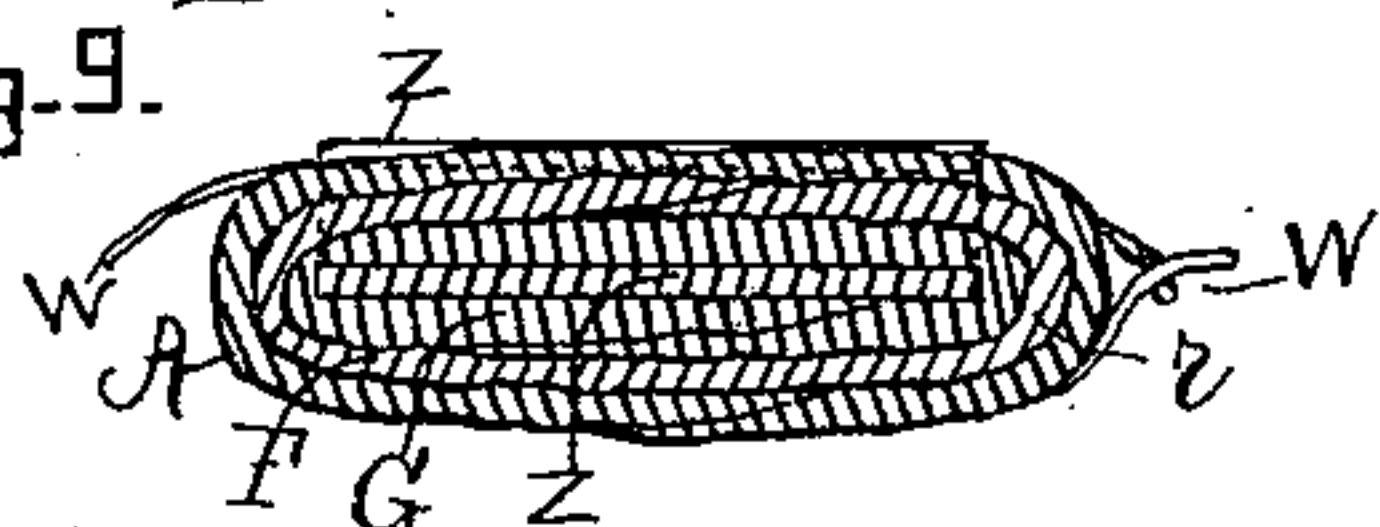


Fig. 9.



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UNITED STATES PATENT OFFICE.

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ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 504,336, dated September 5, 1893.

Application filed June 19, 1893. Serial No. 478,061. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. EKHOLM, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Electric Belts, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1. is a perspective view of the belt showing a series of cells attached thereto, and showing the flap for covering said cells open, exposing the cells to view. Fig. 2. is a perspective view of the belt similar to Fig. 1, showing the flap closed over the cells. Fig. 3. is a perspective view of the belt as it would appear ready for use. Fig. 4 is a side view of a portion of the belt, at one end, showing a contact button attached to one of its wires. Fig. 5 is a plan of two of the cells showing the manner of their connection by means of wires. Fig. 6. is a cross sectional view of one of the cells taken on line 2 of Fig. 5. Fig. 7 is a cross sectional view of the belt taken on line 1 of Fig. 2. Fig. 8 is a side view of two cells showing the manner of their connection by means of wires and Fig. 9. is a longitudinal section of one of the cells taken on line 3 of Fig. 5.

This invention relates to certain improvements in electric belts, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings B represents an ordinary belt having attached to it on its inner side a series of cells D connected with each other by means of the wires W which, at each end of the belt connect with a contact button E, for contact with the wearer. The battery of the belt is composed of a series of cells each of which consists of a plate Z of oxidizable metal, preferably zinc. The zinc plate Z is wrapped endwise with cloth G. Said cloth wrapping is wrapped or covered with asbestos cloth F, and said asbestos cloth is wrapped or covered with chamois skin r. The asbestos cloth is intended to be used for storage of an acid, such as vinegar or the like, which may be applied thereto by immersing the cells in such acid, and the cloth wrapping G prevents contact of the asbestos cloth with

the zinc, and feeds the acid to the zinc, by absorbing it from the asbestos cloth. If the asbestos cloth were in direct contact with the zinc it would adhere to it as the zinc is oxidized by the acid. The chamois skin wrapper r prevents evaporation of the acid from the asbestos cloth, and prevents it from wearing out, and forms a foundation for the wires connecting the cells. The ends of the zinc plate Z are each folded back over the sides of the cells as shown in Fig. 6. for securing all the parts in their proper place, and for furnishing means for attachment to the connecting wires W.

The manner of connecting the cells by means of the wires is shown in Figs. 5. 7. and 8. These wires are intended to be of copper, and one single wire is used to connect a pair of cells. Looking at Fig. 5 the looped end of the wire is passed around the cell lengthwise between the two ends of the zinc plate Z. The free ends of the wire are passed through the looped end of the wire and are inclosed by the folded edges or ends of the zinc plate of the next cell and their extreme ends hooked around the edge of the fold of the plate as shown at W', so that the wire is in contact with the zinc plate Z of one cell, and out of contact with it in the other cell, and so on the cells are all connected with each other by means of separate copper wires having contact with the zinc plate of one cell, and having no contact with the zinc plate of the next adjoining cell, so that the current of electricity generated in each cell by the zinc plate and acid, must pass through the wrappings of each plate to the connecting copper wires W. The wires at each end of the belt are twisted together and connected to a contact button E respectively, which are intended to be in contact with the wearer, one on either side. After the battery is charged with the acid, the cells are covered by the flap A, so as to prevent their contact with the person or his clothing, and the said flap is intended to be made of rubber cloth to prevent the acid from soaking through the belt, or coming in contact with the wearer. The electric current generated will cause one contact button to be the positive pole, and the other to be the negative pole, and the body of the wearer will complete the electric circuit.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. An electric belt having a battery composed of a series of cells each of which consists of a plate of oxidizable metal such as zinc having each end folded back over the sides of the cell, a wrapping of cloth for covering said plate between its folded ends, a wrapping of asbestos cloth for covering said cloth covering and a wrapping of chamois skin for covering said asbestos cloth, a copper wire having its looped end passed around one cell out of contact with its zinc or oxidizable plate, and having its free ends passed through said looped end and connected with

the folded edges of the plate of the adjacent cell, all combined and arranged substantially as and for the purpose set forth.

2. In an electric belt, a cell composed of an oxidizable plate such as zinc, having each end folded back over the sides of the cell, a cloth wrapping for covering said plate between its folded edges, a wrapping of asbestos cloth for covering said cloth covering, and a covering of chamois skin for covering said asbestos cloth, all combined and arranged substantially as and for the purpose set forth.

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Witnesses:

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