(No Model.)

G. N. MOORE & R. C. MacCULLOCH.

ELECTRIC BELT.

No. 559,535. Patented May 5, 1896.

Fig. 1.

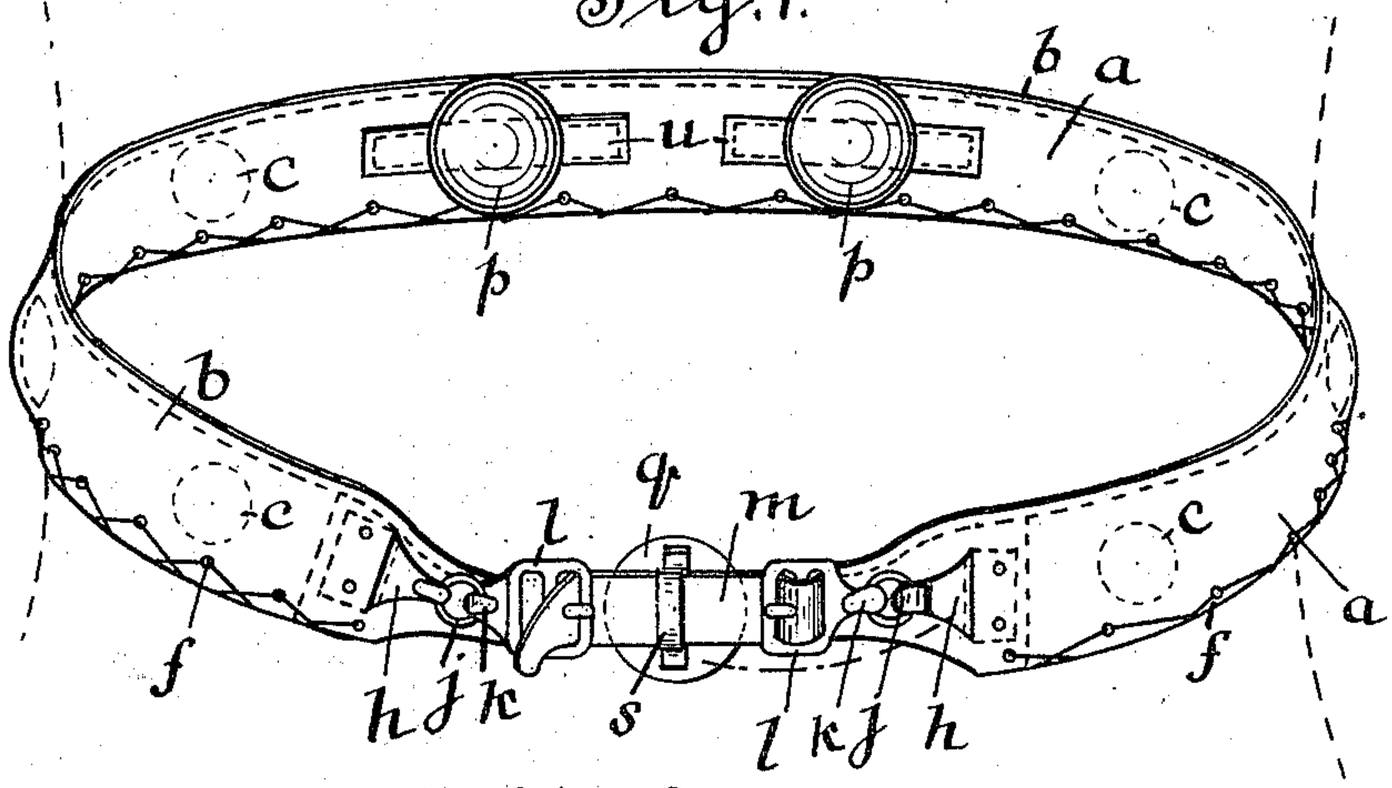


Fig. 2.

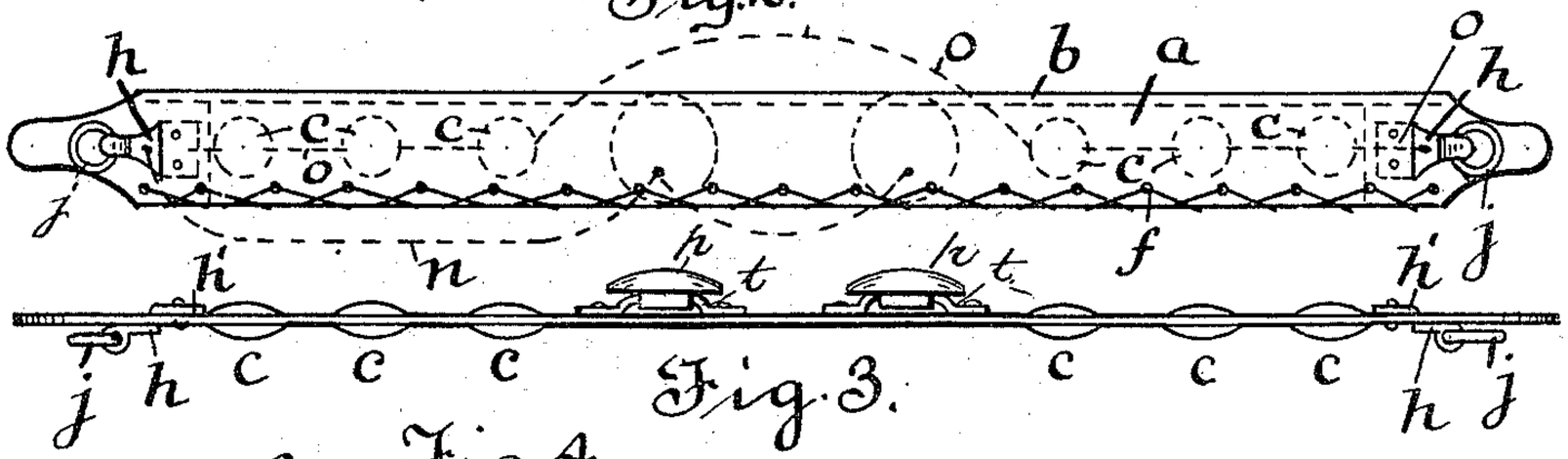


Fig. 3.

Fig. 4.

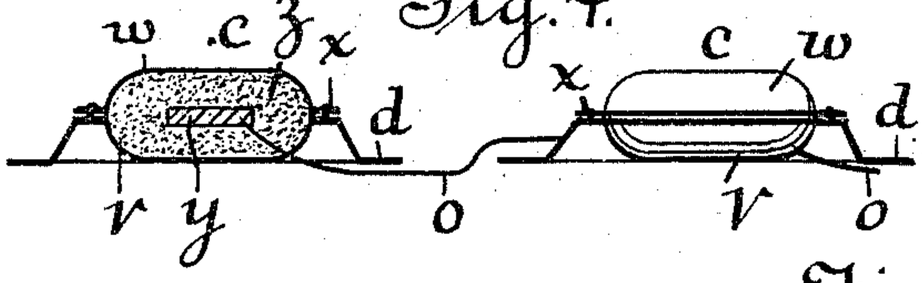


Fig. 5.

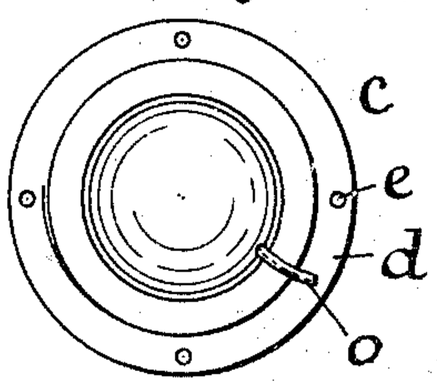


Fig. 6.

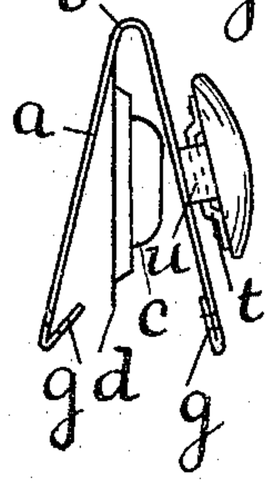


Fig. 7.

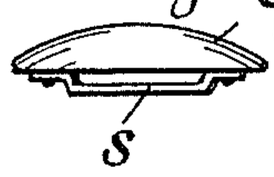
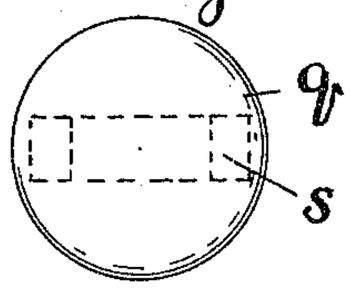


Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE N. MOORE AND ROBERT C. MACCULLOCH, OF NEW YORK, N. Y.,
ASSIGNORS TO ALBERT T. SANDEN, OF SAME PLACE.

ELECTRIC BELT.

SPECIFICATION forming part of Letters Patent No. 559,535, dated May 5, 1896.

Application filed April 17, 1895. Serial No. 546,012. (No model.)

To all whom it may concern:

Be it known that we, GEORGE N. MOORE and ROBERT C. MACCULLOCH, citizens of the United States, and residents of New York city, in the county and State of New York, have invented certain new and useful Improvements in Electric Belts, of which the following is a specification.

Our invention consists of improvements in the construction of electric belts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of our improved electric belt complete. Fig. 2 is a side view of the principal portion of the belt. Fig. 3 is an edge view of said principal portion of the belt. Fig. 4 is a sectional elevation of one of the battery-cells and a side elevation of another and their connecting-wire. Fig. 5 is a plan view of the bottom of one of the cells. Fig. 6 is a transverse section of the web of the belt and a side view of one of the battery-cells and one of the electrodes, the side portions of the web and the battery-cell being partly separated from each other to show more clearly. Fig. 7 is a side view of one of the electrodes detached from the belt, and Fig. 8 is a plan view of an electrode. Fig. 1 is drawn to a larger scale than Figs. 2 and 3. Figs. 6, 7, and 8 are drawn to a larger scale than Fig. 1, and Figs. 4 and 5 are made on a still larger scale.

We take a web of canvas or other woven material or leather, as *a*, of about twice the desired width of the belt or a little more and somewhat shorter than the girth of the body of the wearer for whom it is intended, and fold it along the middle lengthwise, as at *b*, for inclosing the battery-cells *c*, which we provide with a base-flange *d*, having perforations *e*, then sew them to one of the folded sides of the web *a*, for fixing them in position, and then lace the edges of the two sides together, as at *f*, preferably first hemming the edges of the sides, as at *g*. Near each end of the said principal portion of the belt is a metallic plate *h* on the outside of the belt, having an eye in which a ring *j* is secured for engaging a hook *k* of a buckle *l*, by which a short intermediate web *m*, preferably of elastic material and having such a buckle at each end, is connected for joining the extremities of the belt and adjusting the belt to the wearer, this being a better device than a buckle at one extremity of the belt and a tongue at the other extremity to engage the buckle, because it enables the slack to be taken up at either extremity for correcting the adjustment without shifting the whole of the belt on the body after having become fixed in the desired position. The plates *h* have an offset portion *h'* inserted through the belt-web and facing the inside, so as have bearing contact with the body of the wearer, and said plates are connected in the circuit as indicated by the wires *n o* intermediate of the battery-cells and the electrodes *p q*, respectively. The electrode *q* is strung on the connecting-web *m* by a cleat *s*, and the electrodes *p* are strung by similar cleats *t* to webs *u*, attached to the inside of the belt.

An especial feature of our invention is a construction in which dry battery-cells are effectively utilized in a belt in lieu of the common cells, which require the application of an exciting fluid when applied to use and which lose their efficiency with the evaporation of the fluid. In the construction of our cells illustrated in Figs. 4 and 5 we provide a shell of zinc or other suitable metal for one of the elements, consisting of two cup-shaped plates *v* and *w*, adapted for containing the other elements and each having a flange *x*, by which to be joined after being filled, and cup *v* having the attaching-flange *d* before referred to. The carbon element *y* is located in the center of the cell and is surrounded with the intermediate exciting-paste *z*. The zinc and carbon elements are respectively connected in series by the wires *n o* with the electrodes *p*, forming one terminal for application to the back of the wearer, and the plate *h* and the electrode *q*, forming opposite terminals.

We claim—

1. The combination in an electric belt, of the belt-web folded along the middle lengthwise, and the battery-cells having the perforated attaching-flange secured to one of the folded parts, and said parts being laced along the open edge substantially as described.

2. The combination in an electric belt, of the belt-web folded along the middle lengthwise, the battery-cells having the perforated

attaching-flange secured to one of the folded parts of said belt-web, the ring-holding plates attached to the extremities of the belt-web, the intermediate connecting-web, and the buckle-hooks of said intermediate web connecting with the rings, said belt-web being laced along the open edge substantially as described.

3. The combination in an electric belt, of the belt-web folded along the middle lengthwise, the battery-cells having the perforated attaching-flange secured to one of the folded parts of said belt-web between the two parts, the ring-holding plates attached to the extremities of the belt-web, buckle-hooks of said intermediate web connecting with the rings, the electrode on the intermediate web and the electrodes on the belt-web, said cells and electrodes connected in series substantially as described.

4. The combination in an electric belt, of the belt-web folded along the middle lengthwise, the battery-cells having the perforated attaching-flange secured to one of the folded parts of said belt-web between the two parts, the ring-holding plates attached to the extremities of the belt-web; the intermediate connecting-web, buckle-hooks of said intermediate web connecting with the rings, the electrode on the intermediate web, and the electrodes on the belt-web, said cells, electrodes and the ring-plates connected in series substantially as described.

Signed in New York city, in the county and State of New York, this 23d day of March, A. D. 1895.

GEORGE N. MOORE.
ROBERT C. MACCULLOCH.

Witnesses:
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