

No. 844,572.

PATENTED FEB. 19, 1907.

R. WINGREN.
ELECTRIC BELT.

APPLICATION FILED OCT. 5, 1905.

Fig. 1.

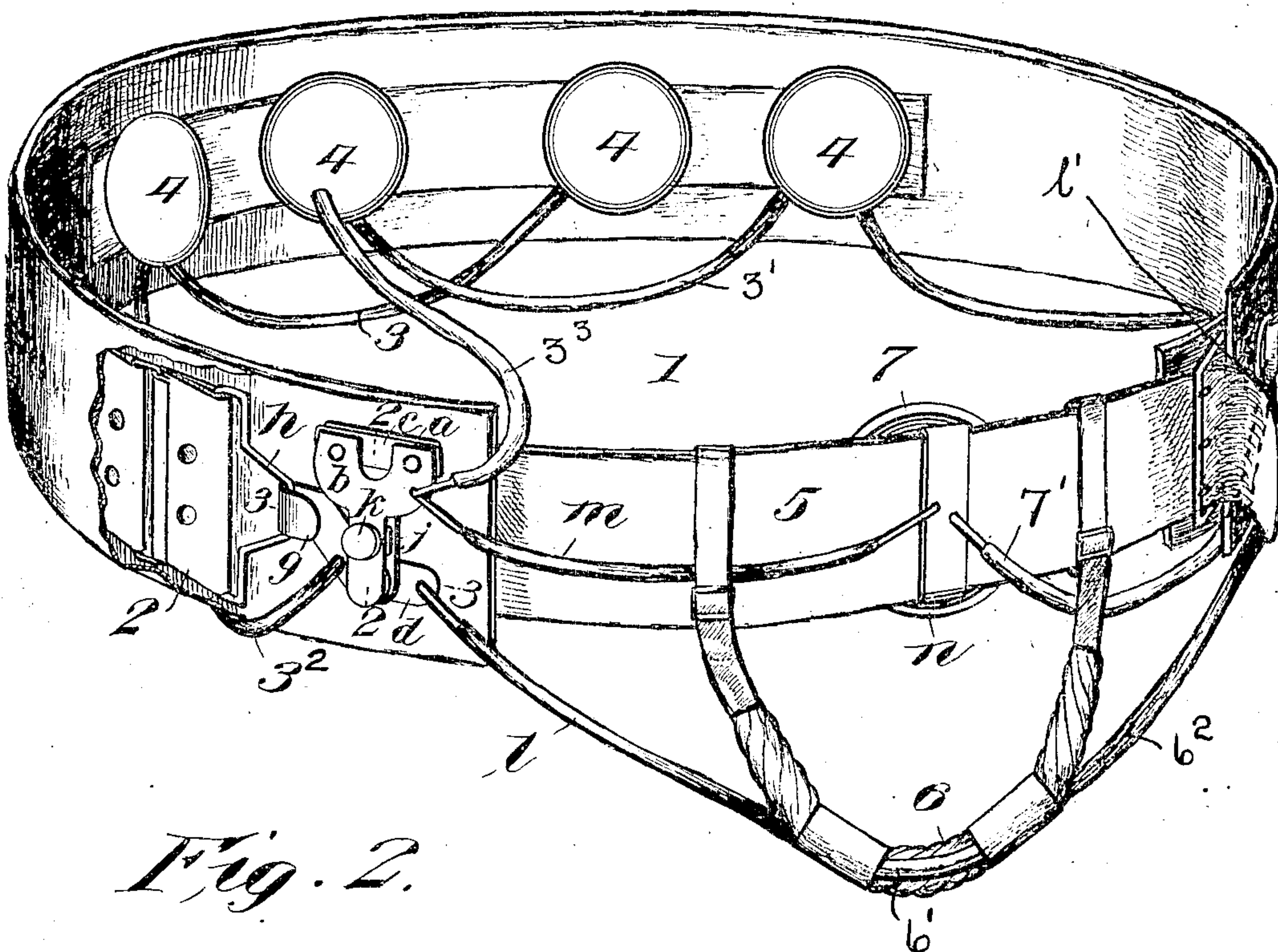


Fig. 2.

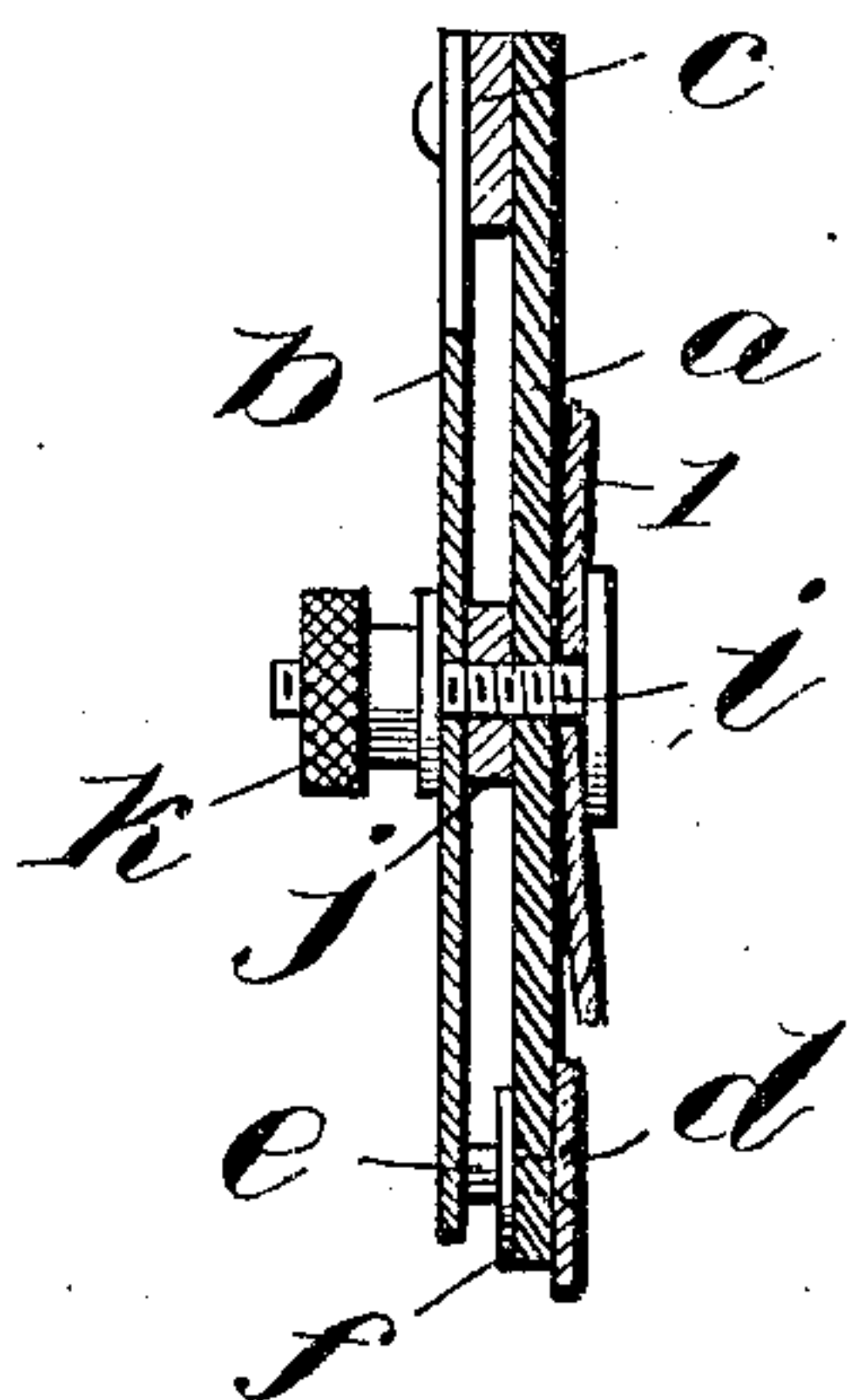
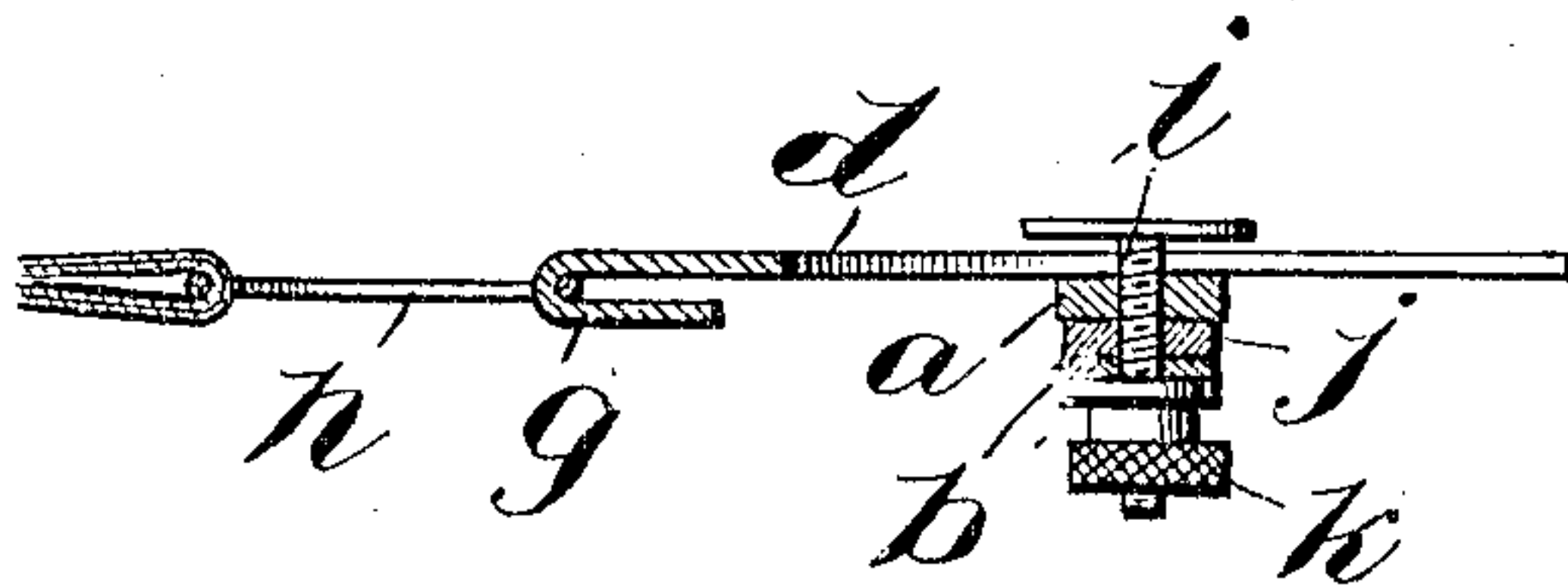


Fig. 3.



Witnesses

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ELECTRIC BELT.

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To all whom it may concern:

Be it known that I, RICHARD WINGREN, a citizen of the United States, residing at Burlington, in the county of Coffey and State of Kansas, have invented certain new and useful Improvements in Electric Belts; and I do 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.

This invention relates to electric belts, and has for one of its objects to provide a simply-constructed, reliable, and convenient means for regulating the current and increasing or decreasing its force.

Another object is to provide a current regulator or switch for electric belts which can be quickly operated and which can be applied to electric belts of any preferred construction without alteration of any of the working parts.

These and other objects are attained by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of an electric belt having applied thereto my improved current-regulator. Fig. 2 is a sectional view of the regulator or switch on the line 2 2 of Fig. 1, and Fig. 3 is a sectional view on the line 3 3 of Fig. 1.

Referring to the drawings for a more particular description of my invention, the numeral 1 designates an electric belt provided with a voltaic chain 2 of usual construction, inclosed within a pocket in the belt and provided with a plurality of disk-electrodes for bearing at the back of the belt and insulated therefrom by the material of the pocket. For the purpose of illustration two pairs of electrodes are shown, the first and third connected by a conductor 3 and the second and fourth connected by a conductor 3'.

At the front the ends of the belt are connected by a strap 5, and sliding upon said strap is a depending loop 6, having spaced electrodes coupled at 6' and also coupled at 6² to one end of the belt, and a disk-electrode 7 slides upon said strap. The regulator consists of a piece of insulating material *a*, enlarged at its upper end and having a spring-metal plate *b* secured at its upper end to said insulator, a piece of zinc *c* being interposed between the insulator and the spring-metal plate. At the opposite or lower end of the

insulator a metal hook-plate *d* is secured to the insulator by means of a copper pin or rivet *e*, the end of said rivet projecting in advance of the insulator and having a washer *f* applied thereto. The hook-plate has a bent end forming a hook *g*, to which a loop *b* on the belt engages.

Extending through the insulator and through the belt is a threaded pin *i*, said pin also projecting through a zinc washer *j*, placed upon the insulator, and through the spring-metal regulator-plate, said pin being threaded and fitted with a nut *k*, the purpose of which is to depress the free end of the regulator-plate to make contact with the pin or rivet *e*.

The hook member *d* is connected to the first of the series of electrodes 4 by a conductor 3², while the second of the electrodes 4 is coupled to the resilient member *b* by a conductor 3³. The electrode 7 is also coupled to the adjacent end of the chain by a conductor 7'. By this arrangement if the nut *k* be loosened the resilient member *b* will become detached from the contact-point *e*, and thus "cut out" the second and fourth of the electrodes 4, leaving the current to pass only between the first and third of the electrodes 4 and the electrode 7 through the body of the wearer. Then if the clamp-nut *k* be rotated to compress the yieldable member *b* against the contact-point *e* the circuit will be closed through the second and fourth of the electrodes 4 and the electrode 7 through the body of the wearer, together with the first and third of the electrodes 4, and by this means the strength of the current may be readily controlled, as will be obvious, by simply actuating the clamp-nut *k*.

To charge the voltaic chain 2, it is immersed in vinegar for a suitable period to incite galvanic action, after which the chain 2 is placed in the pocket in the belt and is then ready for use.

When the switch is operated to disconnect the conductor *l* from the belt, the current passes through the chain 2 from the disks 4, through the conductors 3 and *m*, around the waist of the wearer, and when the switch is operated to connect the depending loop 6 the current passes from the disks 4, chain 2, the switch, conductor *l*, through the loop 6, to the connection *l'*, and around the waist of the wearer.

From the foregoing it will be obvious that my regulator is of simple construction, can be readily operated, can be applied to electric belts of various constructions, and is reliable and efficient in use.

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

1. A regulator for electric belts comprising an insulator secured to the belt, a regulator-plate secured to said insulator and provided with a spring-tongue, a contact pin or rivet projecting through the insulator, a hook-plate secured to said insulator, a pin or stud projecting through the insulator and the spring regulator-plate, and a nut applied to said pin for throwing the spring-tongue into contact with the rivet or contact-point, substantially as described.

2. In an electric belt, a regulator comprising an insulator, a hook-plate secured to said insulator and provided with a hook for attachment to the chain, a regulator-plate secured to said insulator, a contact-point projecting above said insulator, a threaded pin, a nut thereon for throwing the tongue into

contact with the contact-pin, and conductors leading from the hook-plate and from the regulator-plate to the chain, substantially as described.

3. A regulator for electric belts comprising an insulator secured to the belt, a spring contact-plate secured to said insulator, an intermediate zinc plate, a spring-tongue on said contact-plate, a hook-plate connected to the voltaic chain, a rivet securing said hook-plate to the insulator and having a projecting contact-point, connections between said hook-plate, said contact-plate and the chain and disks of the belt, and means for moving the contact-plate into and out of contact with the point to change the current from the front to the back of the belt, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RICHARD WINGREN.

Witnesses:

E. N. CONNALL,
L. S. DRAKE.