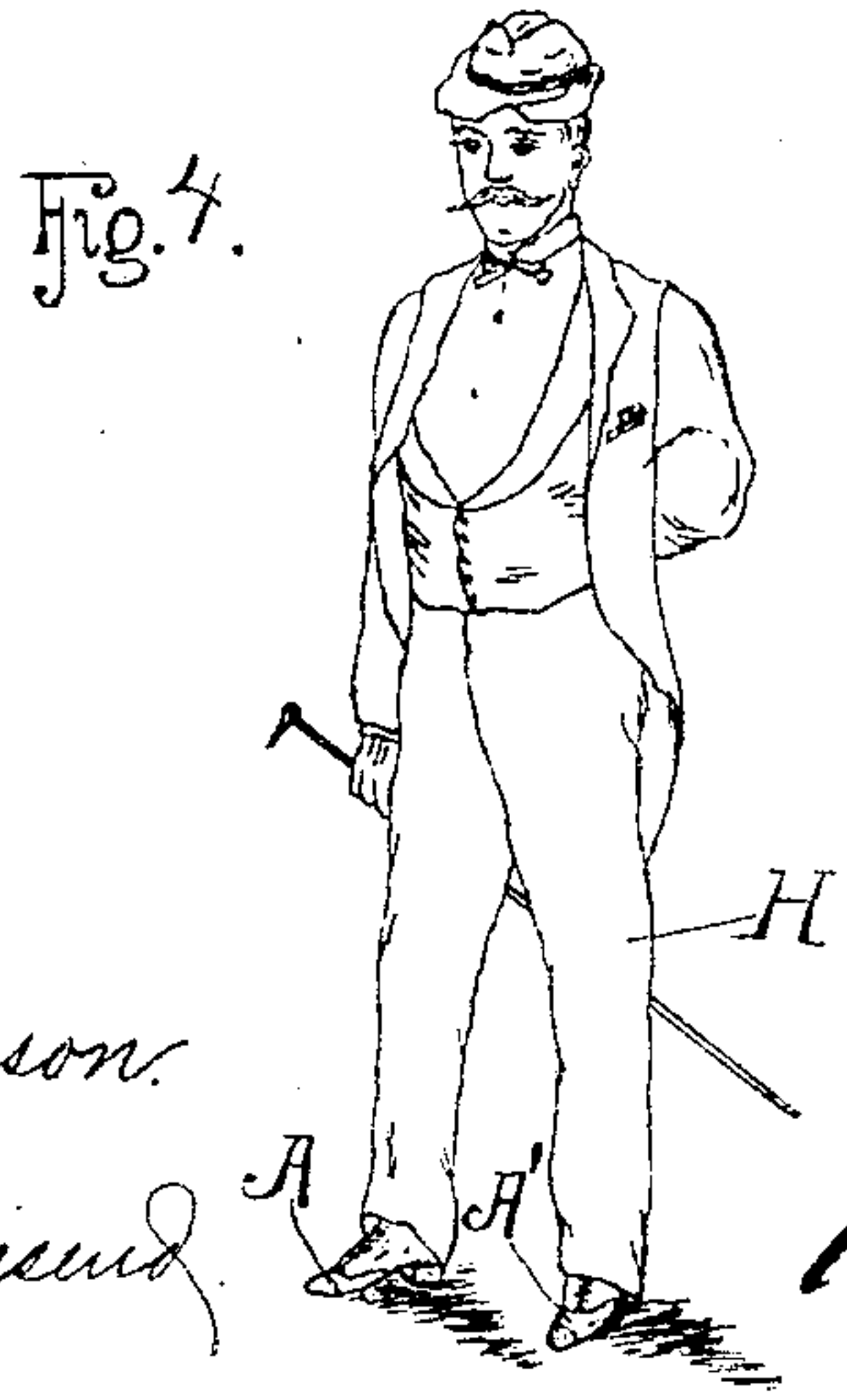
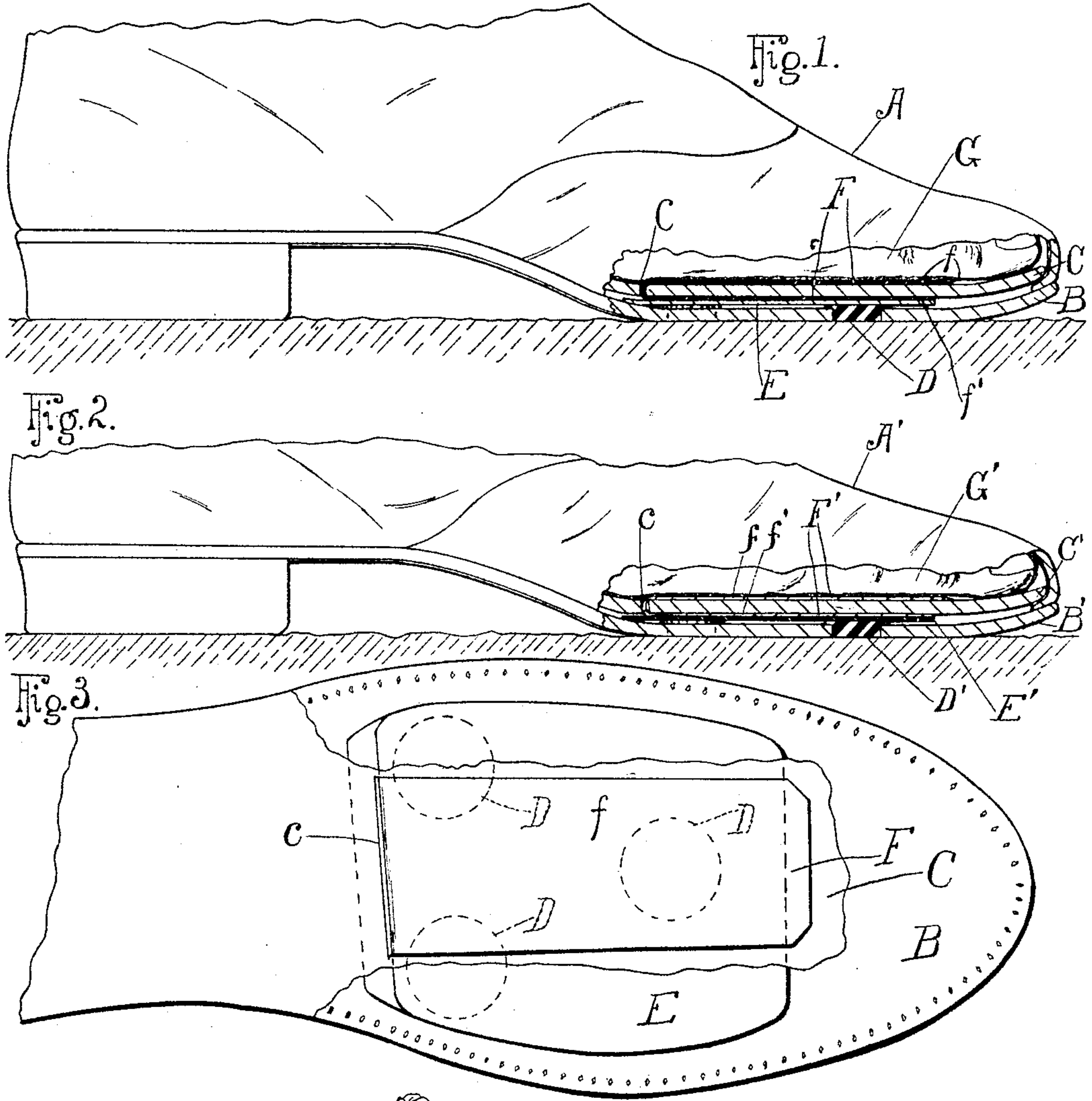


(No Model.)

H. C. ROYER.
ELECTROTHERAPEUTIC APPLIANCE.

No. 497,822.

Patented May 23, 1893.



Witnesses.
P. W. Harrison.
F. M. Townsend.

Inventor.
Henry C. Royer
Attest
Edward Townsend
his Atty.

UNITED STATES PATENT OFFICE.

HENRY C. ROYER, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO JOHN E. REED, OF SAME PLACE.

ELECTRO-THERAPEUTIC APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 497,822, dated May 23, 1893.

Application filed October 3, 1892. Serial No. 447,712. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. ROYER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Electrical Therapeutic Appliance for Shoes, of which the following is a specification.

The object of my invention is to bring the wearer into electrical connection with the earth, also to generate and pass through the body of the wearer an electric current, thereby to preserve health and to cure and to aid in the cure of disease.

My invention relates essentially to the soles of the shoes and consists broadly in a shoe sole provided with an electrical conductor adapted to form an electrical connection between the earth and the wearer of the shoe.

It also comprises the combination of the outer or lower layer of the sole provided with electrical conductors extending there-through and adapted to come into contact with the ground, and the inner layer of the sole provided with an electrical conductor extending there-through and arranged in contact with the ground conductors and adapted to come into electrical contact with the foot of the wearer.

My invention comprises the combination of metal plates so disposed in the boot or shoe that the lower plate is adapted to have electrical connection with the earth at the bottom of the shoe or boot and the upper plate is in electrical contact with the lower plate and is adapted to have contact with the foot of the wearer, the metal plates being respectively of zinc and copper and being reversed in their relative positions in one shoe from what they are in its mate so that two cells of batteries are formed thereby, one in each shoe and whereby when the shoes are upon the feet of the wearer and the wearer is standing upon the earth or upon an electrical conductor connected with the earth, the current of electricity will pass from one foot to the other through the ground and will complete the circuit by passing through the body of the wearer.

The accompanying drawings illustrate my invention.

Figure 1 is a fragmental view of one of a pair of shoes on the foot of the wearer, a portion of the sole being shown in vertical longitudinal mid-section to show the arrangement of the several plates and conductors. Fig. 2 is a like view of the mate of such shoe. Fig. 3 is a fragmental view of the sole of a shoe provided with my invention. Fig. 4 is a view illustrating the practical use of my invention.

A A' indicate the two shoes of the pair provided with my invention.

B (B') indicate the lower layer of the sole.

D (D') indicate the conductors passing through the outer layer of the sole to form connection between the earth and the lower plate.

E E' indicate respectively the lower single plates in electrical contact with the conductors D D' respectively.

F F' respectively indicate the upper plate arranged to come into contact respectively with the feet G G' of the wearer. The double plates F F' are each formed of an upper member *f* and a lower member *f'* bent upon each other, one member being passed through a slot *c* in the insole so that one member rests upon the top of the insole to come into contact with the foot, while the other member is interposed between the insole and the lower plate E or E' and comes into contact therewith so that the upper plate embraces a portion of the insole between its two members and is in contact both with the foot of the wearer and with the lower plate and through that and the conductor D with the earth. The upper plate F in one shoe is of copper and the upper plate F' in the other shoe is of zinc, while the lower plate E that is in contact with the copper plate F is of zinc and the lower plate E' which is in contact with the upper zinc plate F' is of copper so that when the two sets of plates are connected with each other by a suitable electrical conductor such as is formed by the legs and body of the wearer they form positive and negative poles of the battery and when brought into electrical contact with the earth a complete circuit is produced passing through the legs and body of the wearer from pole to pole and returning through the earth.

Now, having described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A shoe sole provided with an interior plate adapted for contact with the foot of the 5
wearer and an electrical conductor arranged to engage such plate and adapted to form therewith an electrical connection between the earth and the wearer of the shoe.

2. A shoe sole comprising the combination 10
of the outer or lower layer of the sole; electrical conductors extending therethrough and adapted to come into contact with the ground; the inner layer of the sole provided with an electrical conductor extending therethrough 15
and arranged in contact with the ground conductors, and such electrical conductors adapted to come into electrical contact with the foot of the wearer.

3. A pair of shoes, each shoe provided re- 20
spectively with metal plates so disposed one above the other that one plate is adapted to have electrical connection with the earth at the bottom of the shoe and the other plate is in electrical contact with the lower plate and 25
is adapted to have contact with the foot of the wearer, the metal plates being respectively of zinc and copper and being reversed in their relative positions in one shoe from what they are in its mate so that two cells of batteries 30
are formed thereby, one in each shoe and whereby when the shoes are upon the feet of the wearer and the wearer is standing upon the earth or upon an electrical conductor connected with the earth, the current of elec- 35
tricity generated by such battery will pass from one foot to the other through the ground and will complete the circuit by passing through the body of the wearer.

4. A shoe having a sole comprising the com- 40
bination of the outer layer of the sole provided with electrical conductors passing there- through; the lower plate arranged in electri- cal contact with such conductors; the upper

layer of the sole provided with a slot extend- 45
ing therethrough; the upper plate formed of an upper and lower member bent upon each other, one member being passed through the slot in the upper layer so that one member is above the upper layer and the other member is therebelow and in electrical contact with 50
the lower single plate; one of such plates being zinc and the other one being copper, substantially as and for the purpose set forth.

5. A pair of shoes in which the soles re- 55
spectively comprise the combination of an outer layer provided with electrical conductors passing therethrough; the lower single plate arranged in electrical contact with such conductors; the upper layer of the sole pro- 60
vided with a slot extending therethrough; the double plate formed of an upper and lower member bent upon each other, one member being passed through the slot in the upper layer of the sole so that one member is above 65
the upper layer and the other member is therebelow and in electrical contact with the lower plate; the single and double plates being formed one of zinc and the other of copper and being reversed in their relative positions 70
in one shoe from what they are in its mate substantially as and for the purpose set forth.

6. A shoe sole comprising the combination of the outer layer provided with electrical conductors extending therethrough; the up- 75
per layer provided with the slot, and the double plate formed of an upper and lower member bent upon each other, one member being passed through the slot in the upper sole so that one member rests upon the top of the upper sole and the other member rests 80
therebeneath and in electrical contact with the conductors extending through the outer layer.

HENRY C. ROYER.

Witnesses:

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