

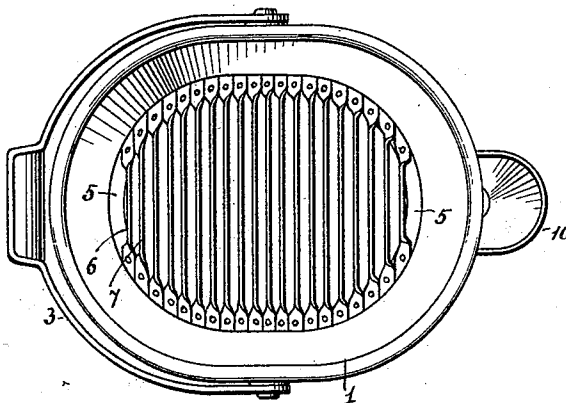
(No Model.)

I. A. ISAACS.  
ELECTRICAL FOOT BATH.

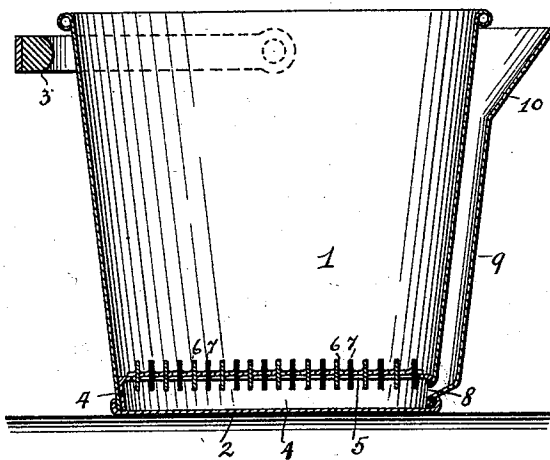
No. 517,862.

Patented Apr. 10, 1894.

*Fig. 1,*



*Fig. 2,*



WITNESSES:

*C. H. Rayport*  
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# UNITED STATES PATENT OFFICE.

ISAAC A. ISAACS, OF NEW YORK, N. Y.

## ELECTRICAL FOOT-BATH.

SPECIFICATION forming part of Letters Patent No. 517,862, dated April 10, 1894.

Application filed January 10, 1894. Serial No. 496,344. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC A. ISAACS, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Electrical Foot-Baths, of which the following is a specification.

My invention has for its main object to provide a simple and economical electrical foot-bath.

In carrying out my invention, I employ a pail or analogous vessel of suitable dimensions capable of holding a sufficient quantity of water and accommodating the lower portions of the legs of a user. Near the bottom of the vessel is placed a series of alternately-arranged copper and zinc or equivalent bars or plates, upon which the feet of the bather or patient may rest. Beneath the plane of this series of bars or plates, the vessel is formed with a lateral opening to which is connected an exteriorly-arranged pipe or conduit which is secured to the body of the vessel, and preferably provided at its upper end with a flaring mouth for the convenient introduction of hot water to the bath. The main purposes of this construction are first to avoid removal of the feet from the bath and any liability of scalding or burning the legs of the user during the pouring in of hot water from time to time as it may be needed to maintain a required or desired temperature of the water; and secondly to introduce the hot water at such a locality relatively to the zinc and copper plates or equivalent voltaic couples as that the best electrical action may be obtained in the bath, and the water at the same time rendered of practically equal temperature throughout without the necessity of stirring it with the hands, or moving the feet from contact with the battery elements.

In the accompanying drawings, Figure 1 is a top plan view of an apparatus embodying my improvements; and Fig. 2 is a central vertical section of the same.

The same part will be found designated by the same numeral of reference in both views.

1 is the body of the pail or vessel, which

may be of any desired shape, size or material; 2 the bottom thereof, and 3 a bail or handle for convenience of carrying.

Resting upon the bottom is a detachable ring or support 4, having a horizontal flange 5, to which is secured or upon which is mounted a short distance above the bottom of the vessel, a suitable number of copper and zinc bars or plates, marked 6 and 7 respectively, and alternately arranged. These bars may be of any desired width and arranged vertically or with edges up, as shown, to obtain the greatest amount of surface within the area afforded by the dimensions of the vessel. When the bars are arranged edgewise their ends may be twisted to a horizontal plane as illustrated, for convenient and economical attachment to the flange; but of course the bars may be otherwise constructed and arranged. The series or sets of bars besides forming a plurality of couples or elements of a voltaic battery also serve the office of a rest or support for the feet of the bather.

At 8, on one side of the vessel, and below the plane of the electrodes is formed an opening to which is connected the lowermost end of a pipe 9, which is soldered or otherwise secured to the outside of the vessel and provided with a flaring mouth 10 at its uppermost end.

The vessel may be partially filled with water at the desired temperature and the feet of the bather or patient then inserted and rested upon the grid formed by the electrodes. As the water decreases in temperature, boiling water may be poured into the pipe and the temperature of the water in the vessel thus gradually restored or increased and from beneath, the tendency of the hotter or boiling water being to rise or cause a circulation upon entering the vessel at the inlet-opening 8. The difference in temperature between the water in the bath and that subsequently introduced through the tube causes an increased electrical action in the bars in the establishment of an equilibrium of temperature in the water.

The apparatus is designed more particularly for persons requiring electrical baths of comparatively weak power, such as those suf-

fering from rheumatism, gout, and nervous affections, and by the construction herein shown and described baths of this nature may be obtained at small expense and in a most convenient and safe form. If desired the water may be acidulated to increase the strength of the electric currents.

Changes in detail construction and arrangement may be made without departing from the spirit of my improvements.

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

1. An electrical foot-bath consisting of a vessel and a number of voltaic couples arranged at or near the bottom of the vessel and serving also as a support for the feet of the user.

2. An electrical foot-bath consisting of a vessel, a number of voltaic couples arranged near the bottom of the vessel, and a hot wa-

ter inlet to the vessel arranged beneath said couples.

3. An electrical foot-bath consisting of a vessel, a number of voltaic couples arranged near the bottom of the vessel, a hot-water inlet arranged between said couples and said bottom, and an exteriorly-arranged hot-water pipe on the side of the vessel.

4. An electrical foot-bath consisting of the vessel, the ring, the voltaic couples thereon, the hot-water inlet beneath the couples, and the outside hot-water pipe.

Signed at New York city, in the county of New York and State of New York, this 8th day of January, A. D. 1894.

I. A. ISAACS.

Witnesses:

JACOB FELBEL,  
I. C. MACDONALD.