A. BLUME.

THERMOTHERAPEUTIC APPLIANCE.

APPLICATION FILED JAN. 16, 1919.

1,355,382. Patented Oct. 12, 1920.

Fig. 1.

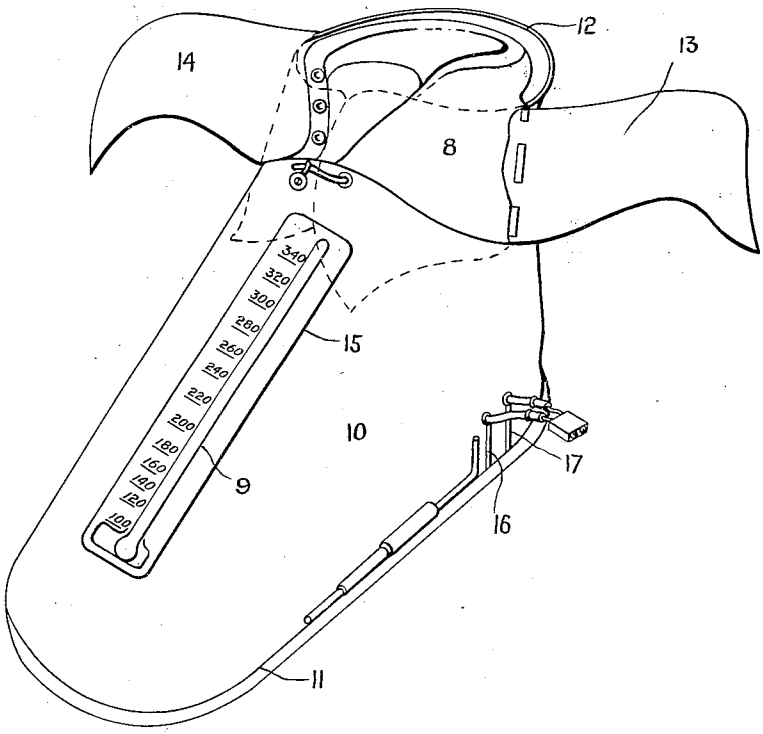


Fig. 3.

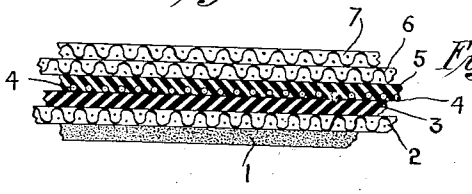


Fig. 2.

WITNESS

C. Mitchell

Aaron Blume

INVENTOR,

BY Robert B. Killgore,

ATTORNEY.

UNITED STATES PATENT OFFICE.

AARON BLUME, OF NEW YORK, N. Y.

THERMOTHERAPEUTIC APPLIANCE.

1,355,382. Specification of Letters Patent. Patented Oct. 12, 1920.

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To all whom it may concern:

Be it known that I, AARON BLUME, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Thermo-therapeutic Appliances, of which the following is a specification.

My invention relates to thermo-therapeutic appliances primarily designed to apply heat to the human foot in the treatment of rheumatism, rheumatic affections, gout, arthritis, in the production of hyperemia, and the like, and it is my object to produce an appliance which will apply a uniform heat striking throughout all parts of the foot equally, in which the heat is at all times under the control of the operator and which is provided with an outer, rigid protecting case.

In the drawing Figure 1 is a view of the complete appliance; Fig. 2 a view, partly in section, of the heating element; and Fig. 3 an exaggerated sectional view of the laminations making up the heating element.

The appliance comprises a base or shoe 1 preferably made of felt. On this a layer of asbestos fabric 2 and a layer of asbestos sheet 3 are secured. The electric resistance heating wire 4 for heating the appliance is then laid on the asbestos layer as shown in Fig. 3 and covers all parts of the foot, including the sole and back of the heel. A layer of asbestos cement 5 is next laid over the heating wire so it is completely embedded therein. Another layer of asbestos fabric 6 is secured over the asbestos embedded wire and a final outer covering of canvas 7 is secured to the whole.

As asbestos is a non-conductor of electricity and the heating wire is completely embedded therein there is no danger of short circuiting or shocking the patient under treatment.

The terminals of the wire are led out at 4' and may be connected with any suitable supply of electricity.

The upper 8 of the heating shoe is of the usual lace type.

A thermometer 9 is embedded in the asbestos layers over the instep and in practice registers to 340° F.

To protect the operative portion of the appliance from accidental damage an outer, rigid case 10 is provided. This has a detachable sole 11 and a top 12 provided with hinged wings 13 and 14 at the instep and ankle.

The canvas top of the shoe proper is preferably higher than the outer case to prevent burning the patient through contact with the hot metal of the case. The case has an openiug 15 to expose the thermometer and openings 16 and 17 through which the lead wires pass.

The sole of the case may be removed and the heating element or shoe proper placed inside with the thermometer exposed and the lead wires passing out the side opening after which the sole may be replaced.

The foot of the patient is incased in cotton, which may be suitably medicated if desired, and the current is turned on heating the appliance to any desired degree, the asbestos holding the heat for a considerable period of time and transmitting it to the foot, expanding the blood vessels and stimulating the circulation.

I claim:—

1. A thermo-therapeutic appliance comprising a shoe of electrically non-conductive material, an electrical heating resistance conductor embedded therein and a rigid, outer protecting case inclosing the shoe.

2. A thermo-therapeutic appliance comprising a shoe of electrically non-conductive material, an electrical resistance heating conductor embedded therein, a thermometer embeded in the shoe adjacent to the conductor and out of physical contact therewith, and a rigid outer protecting case inclosing the shoe provided with an aperture to expose the thermometer.

3. A thermo-therapeutic appliance comprising a shoe of electrically non-conductive material, an electrical resistance heating conductor embedded therein, and a rigid, outer protecting case inclosing said shoe the sole of said case being detachable to permit inserting and removing the shoe.

4. A thermo-therapeutic appliance comprising a shoe of electrically non-conductive material, an electrical heating resistance conductor embedded therein, an outer case

rigidly inclosing the shoe and open at the ankle front, and wings hinged to said case to cover said ankle opening.

5. A thermo-therapeutic appliance comprising a shoe of suitable material, an electrical resistance heating conductor between laminations and embedded in electrical insulating material.

6. A thermo-therapeutic appliance comprising a rigid outer case, and electric heating resistance therein, and a support for the foot within said casing whereby the heat is applied to the entire foot of the patient.

In testimony whereof I have affixed my signature.

AARON BLUME.