

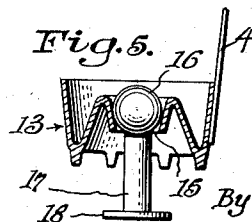
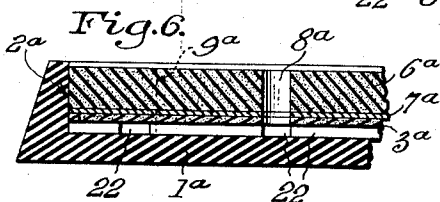
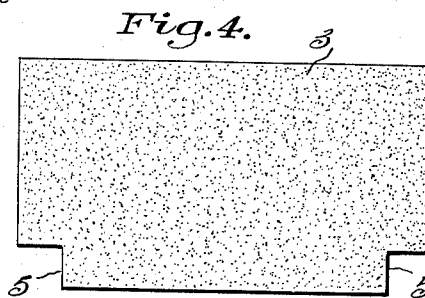
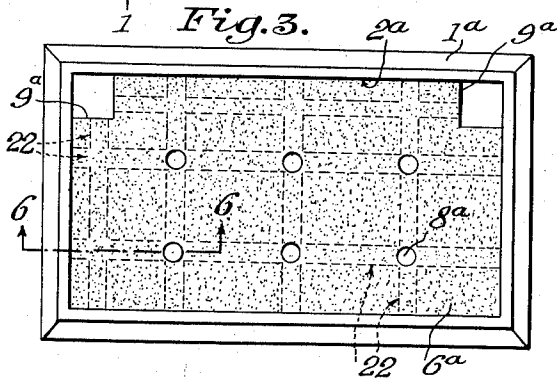
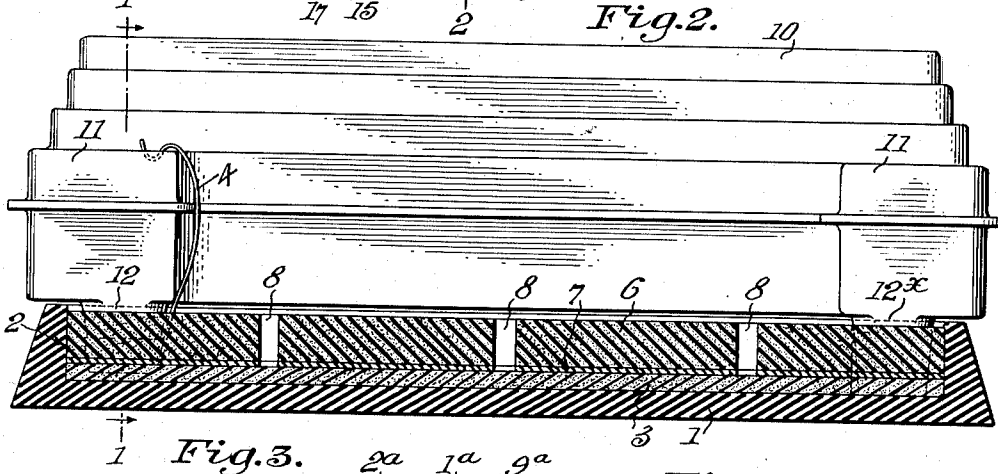
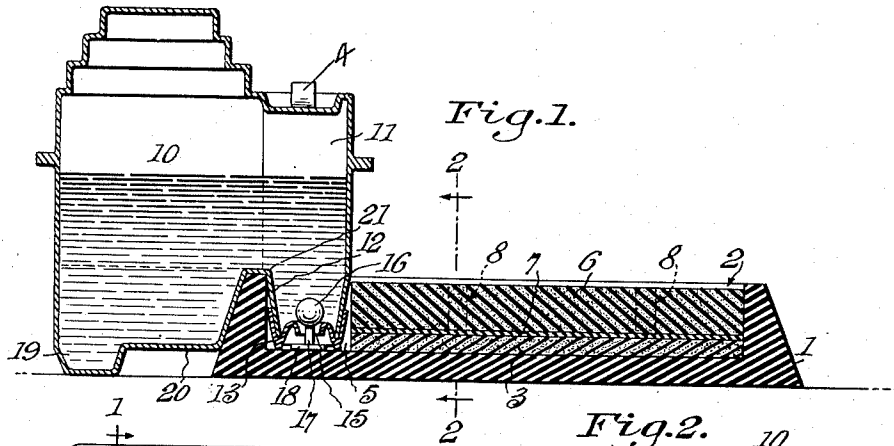
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A. HYDE

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FOOT CONDITIONING APPARATUS

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FOOT CONDITIONING APPARATUS

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9 Claims. (Cl. 128—260)

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My invention relates to means for relieving foot troubles such as athlete's foot and other skin irritations.

In general the invention seeks to provide a tray for holding a spongy mat, provisions being made for maintaining a constant supply of medicating liquid in the tray for applying the liquid to one's foot when one steps on the mat, so that the foot is bathed with the healing liquid.

More specifically, the invention comprises a tray having a marginal wall defining a chamber in the bottom of which is located a layer of a material, such as synthetic sponge, which functions as a wick for conveying a healing liquid from a place where it is fed into the tray, over the entire bottom of the tray, there being a sponge rubber layer having a rubberized fabric strip on the bottom located over the synthetic sponge layer and provided with a plurality of holes which pass through the sponge rubber layer and the rubberized fabric to the upper surface of the sponge rubber, through which holes the healing liquid is squirted upon application of foot pressure on the sponge rubber layer.

A further object of the invention is to provide two separable units one of which is a liquid reservoir constructed to cooperate with the tray as the other unit, the reservoir and the tray being interengaged so that the reservoir is in part supported outside of the tray and in part is supported within the tray, the reservoir being preferably provided with a pair of legs one of which has a valved outlet through which, when the reservoir is assembled with the tray, the liquid contents of the reservoir may escape into the tray chamber.

Other objects will in part be obvious and in part will be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, and then be particularly pointed out in the appended claims, reference being had to the accompanying drawing, in which:

Fig. 1 is a section on the line 1—1 of Fig. 2.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

Fig. 3 is a top plan view, on a reduced scale, of a modified tray assembly.

Fig. 4 is a top plan view of the synthetic sponge layer.

Fig. 5 is an enlarged detail vertical section of the valve set and valve attachment.

Fig. 6 is an enlarged detail section on the line 6—6 of Fig. 3.

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In the drawing, in which like numerals of reference indicate like parts in all the figures, 1 represents a tray having a marginal wall defining a recess or chamber 2 in which, in superposed layers, are located respectively a layer of synthetic sponge 3 having high capillary characteristics and a thicker layer of sponge rubber 6 on the bottom of which layer 6 is integrally secured a sheet of rubberized fabric 7. The sponge rubber and its rubberized fabric sheet have a series of vertical holes or passages 8 for a purpose presently to appear.

The synthetic sponge 3 and the sponge rubber and fabric layers 6, 7 have portions removed therefrom such as portions 5 and 9a, Figures 3 and 4 to provide spaces adjacent one of the marginal walls of the tray 1 for the front legs 12, 12^x of the liquid reservoir 10. The reservoir 10 is preferably of an ornamental form and is provided with a pair of projecting portions 11 having the front legs 12, 12^x with the leg 12 having a valve controlled outlet therein. The reservoir is also provided with a pair of rear legs or feet 19 and lug-like portions 20, the latter together with the front legs or feet 12, 12^x providing a grooved portion 21 which fits over the side of the tray 1, as best shown in Fig. 1 of the drawing, thus holding the reservoir from movement toward and from the tray and holding it interengaged with the same.

The synthetic sponge 3 comprises a material having the property of conveying the liquid from the reservoir outlet under the entire area of the rubberized fabric 7 by capillary attraction. The synthetic sponge has greater capillary action than does the sponge rubber 6.

In Figs. 3 and 6 I have shown a slight modification in which, in place of the synthetic sponge layer 3, I provide a layer 3^a of a denser material and on the under side of which I provide a series of longitudinal and transverse grooves 22 for conveying the liquid from the outlet of the reservoir to the various holes 8^a. The embodiment of the invention employing the synthetic sponge layer 3 is preferable, however, to the modified form using the grooved plate in obtaining an even distribution of the liquid through the chamber 2.

In practice, after assembling the tray unit the reservoir 10 is inverted and then filled with the healing liquid to be used, after which a valve unit 13 is placed over an opening in the bottom of the inverted leg 12 and fitted tightly thereon, a spring clip 4 being provided to hold the unit 13 in place, as best shown in Fig. 2. The reservoir is then turned over to its upright position, whereupon the valve 16 closes the outlet 15. Upon

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assembling the two separable units, namely, the reservoir 10 with the tray unit 1, the button 18 will engage the bottom of the chamber 2 and through the stem 17 raise the valve 16 far enough from its seat in the valve unit 13 to allow liquid to flow from the reservoir outlet 15 into the tray.

The synthetic sponge layer is provided to hold a surplus of liquid in the bottom of the tray. This liquid will be brought up through the holes in the sponge rubber when the sponge rubber is stepped on. The action of the synthetic sponge is entirely different from that of the sponge rubber since the liquid will climb up and completely saturate the synthetic sponge, while the sponge rubber is more or less repellant to the liquid.

I have found that a one-fourth inch layer of the synthetic sponge on the floor of the tray will milk off the contents of a gallon feed bottle with the bottle mouth only one-eighth inch off the bottom of the tray. The liquid will not run out of the bottle or reservoir mouth without contact with the synthetic sponge until the mouth of the bottle is three-eighths inch up from the bottom of the tray. Then when liquid does start running out it fills up in the tray to one-eighth inch or less from the inverted bottle mouth level. By the use of a one-fourth inch layer of synthetic sponge on the floor of the tray the level of the liquid in the tray can be kept much lower than in any other way and splash waste of the liquid can thus be avoided. As one steps upon the sponge rubber, the liquid is forced up through the adjacent holes 8 and around the foot. The capillary layer 3 serves to soak up the liquid that spills over the edge of the sponge rubber 6, and the liquid is thus prevented from overflowing the tray.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction, operation, and advantages of the invention will be clear to those skilled in the art.

What I claim is:

1. Foot-treating apparatus including two separable units, one of said units comprising a reservoir having a pair of front legs one of which pair is an outlet leg, the other unit comprising a tray having a recess or chamber, a layer of material possessing high capillary characteristics on the bottom of the tray, and a layer of sponge rubber having a rubberized fabric sheet on its bottom, said layer of sponge rubber lying on the first mentioned layer of material and having a plurality of vertical holes through the sponge rubber and its rubberized fabric sheet, said layers having portions removed to provide spaces for the front legs of the reservoir, said reservoir having portions interengaged with the rear wall of the tray and having rear legs for supporting the reservoir outside of the tray.

2. Foot-treating apparatus composed of two separable units, one of said units comprising a tray having a marginal wall embracing a chamber, and the other unit comprising a liquid reservoir, said reservoir unit including front and back legs and means to fit over the marginal wall of the tray with the front legs located in the tray and the back legs supporting the reservoir outside the tray, one of said front legs constituting an outlet for the liquid from the reservoir to the tray, and a valve in said outlet leg for closing the outlet when the reservoir is lifted from the tray.

3. Foot-treating apparatus composed of two

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separable but cooperative units: one of said units comprising a tray having a marginal wall surrounding a recess, and liquid distributing means in said recess, said means having openings adjacent one marginal wall; the other unit comprising a liquid-holding vessel having a pair of legs adapted to rest on the ground, and a second pair of legs to fit over said wall of the tray adjacent which said openings are located, said second pair of legs extending into said openings, one of said second pair of legs having a bottom opening to deposit liquid in said tray recess.

4. Foot-treating apparatus composed of two separable but cooperative units: one of said units comprising a tray having a marginal wall surrounding a recess, and liquid distributing means in said recess, said means having openings adjacent one marginal wall; the other unit comprising a liquid-holding vessel having a pair of legs adapted to rest on the ground, and a second pair of legs to fit over said wall of the tray adjacent which said openings are located, said second pair of legs extending into said openings, one of said second pair of legs having a bottom opening to deposit liquid in said tray recess, said liquid-distributing means including a sponge rubber mat beneath which is located a layer of material having greater capillary action than has the sponge rubber, said sponge rubber mat having a plurality of vertically disposed holes for conveying liquid from said layer of material through said sponge rubber mat to the top of the same when the mat is stepped on.

5. Foot-treating apparatus composed of two separable but cooperative units: one of said units comprising a tray having a marginal wall surrounding a recess, and liquid distributing means in said recess, said means having openings adjacent one marginal wall; the other unit comprising a liquid-holding vessel having a pair of legs adapted to rest on the ground, and a second pair of legs to fit over said wall of the tray adjacent which said openings are located, said second pair of legs extending into said openings, one of said second pair of legs having a bottom opening to deposit liquid in said tray recess, and a valve and seat unit fitted onto the leg having the bottom opening, said valve and seat unit including a valve seat and a valve normally resting on said seat, said valve having a depending stem which will on contact with the bottom of the tray raise the valve from its seat.

6. Foot-treating apparatus including two separable units, one of said units comprising a liquid reservoir; the other unit comprising a tray having a marginal wall defining a liquid receiving chamber, said reservoir having a grooved portion formed therein detachably engaging the marginal wall of said tray with a portion of the reservoir positioned within the tray, the portion of said reservoir positioned within said tray having an outlet therein for the passage of liquid from said reservoir to the tray and means in said tray for distributing liquid from said reservoir.

7. Foot-treating apparatus including two separable units, one of said units comprising a liquid reservoir, the other unit comprising a tray having a marginal wall defining a liquid receiving chamber, said reservoir having a grooved portion formed therein for detachably engaging the marginal wall of said tray with a portion of the reservoir positioned within the tray the

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portion of said reservoir positioned within said tray having an outlet therein for the passage of liquid from the reservoir to the tray.

8. A foot-treating apparatus including a tray having a chamber for a medicating liquid, a layer of synthetic sponge material positioned on the bottom of said tray, said sponge material having high capillary characteristics for holding the liquid in said chamber, a layer of sponge rubber positioned in said tray on said first layer and yieldable under the weight of a person stepping thereon to force the liquid from the first layer of material through the second layer of material for applying the liquid to the foot of said person.

9. A foot-treating apparatus including a tray having a chamber for a medicating liquid, a layer of synthetic sponge material positioned on the bottom of said tray, said sponge material having high capillary characteristics for holding the liquid in said chamber, a layer of sponge rubber having a rubberized fabric sheet positioned in said tray with said rubberized fabric

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sheet engaging said first layer of material, said layer of sponge rubber and rubberized fabric sheet having a plurality of holes therethrough, said layer of sponge rubber yielding under the weight of a person stepping thereon to force the liquid from the first layer of material through said holes for applying the liquid to the foot of said person.

ALEX. HYDE.

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The following references are of record in the file of this patent:

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