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(54) **BURN, SUNBURN, AND CELLULITE TREATMENT SYSTEM**

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(76) **Inventor: Linda A. Carter, Irving, TX (US)**

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Correspondence Address:  
**Michael A. O'Neil**  
**Michael A. O'Neil, P.C.**  
**Suite 820**  
**5949 Sherry Lane**  
**Dallas, TX 75225 (US)**

(57) **ABSTRACT**

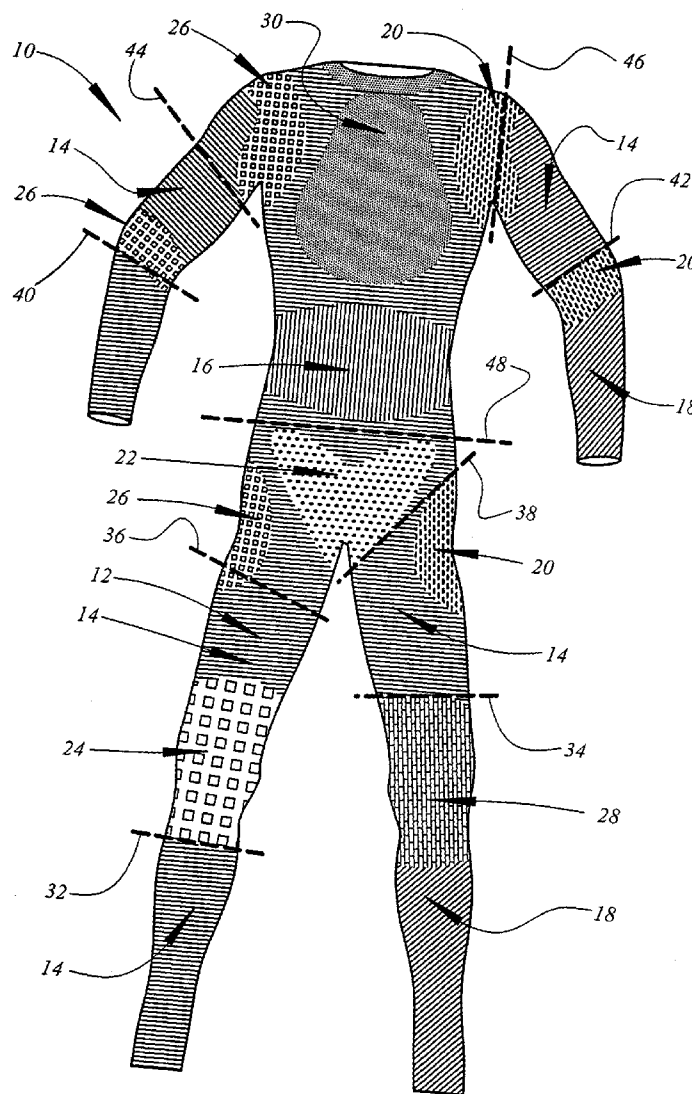
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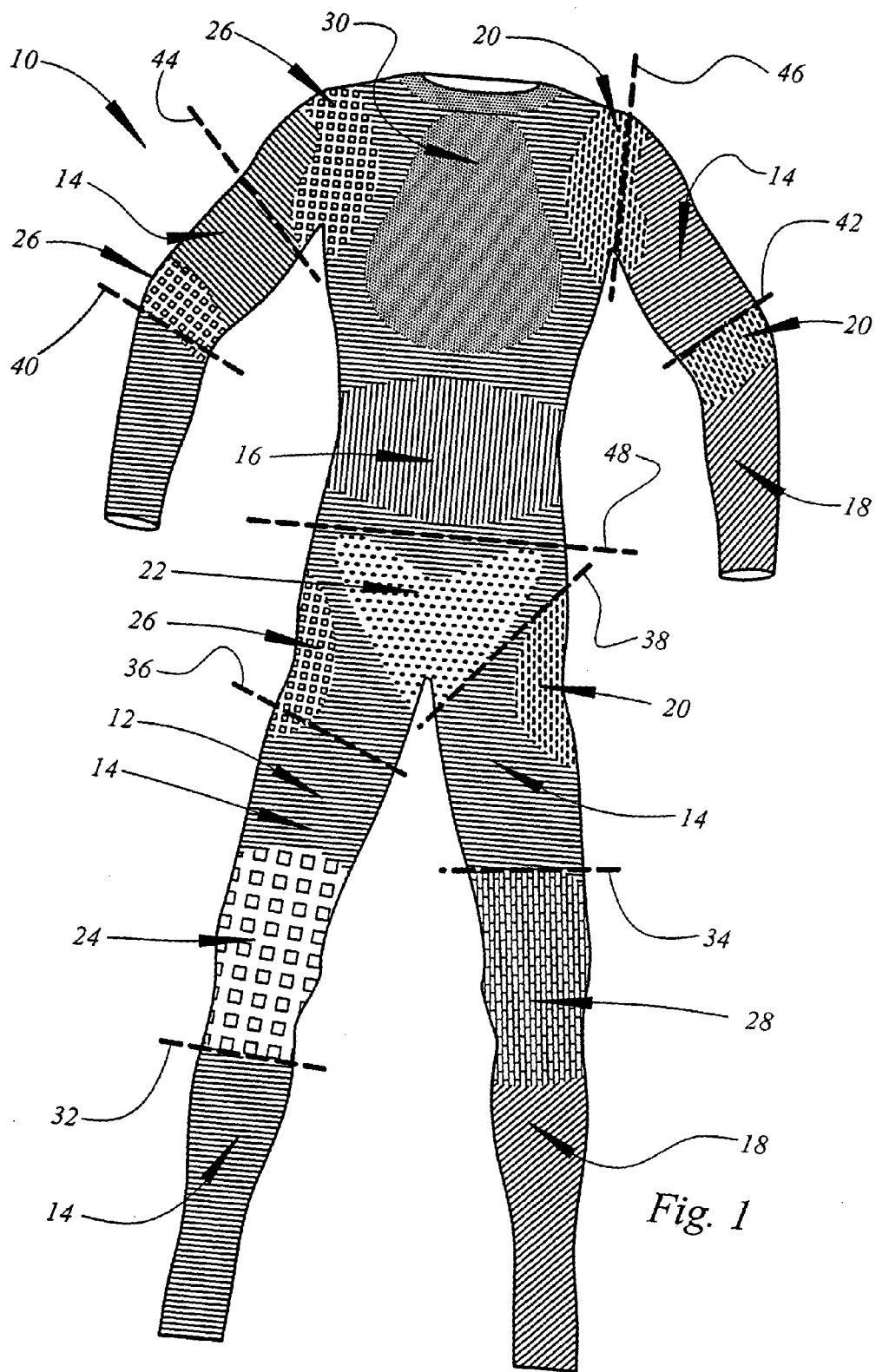
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A treatment fluid dispensing apparatus comprises a fluid impervious layer and an overlying treatment fluid dispensing layer. The fluid treatment dispensing layer comprises a finely woven fabric formed from natural or synthetic fibers which normally retains the treatment fluid and which dispensing the treatment fluid responsive to pressure and/or body temperature. The treatment fluid dispensing layer is configured to dispense treatment fluid to areas of the human body over a prolonged period of time.





**BURN, SUNBURN, AND CELLULITE TREATMENT SYSTEM**

**BACKGROUND AND SUMMARY OF THE INVENTION**

[0001] As is well known, burn and sunburn damage to the skin is often treated by the application of treatment fluids. As used herein, the term fluid includes liquids, gels, lotions, creams, and all other non-solid flowable materials. The term treatment fluids includes over-the-counter preparations and also includes preparations prescribed by doctors for the treatment of more serious burn or sunburn damage.

[0002] Treatment fluids almost always require continuous application in order to achieve maximum benefit. However, the daily activities of most people preclude the continuous application of treatment fluids which results either in ineffective treatment or the requirement for frequent re-application of the treatment fluid being used.

[0003] The present invention relates to the continuous application of treatment fluids to all or portions of the human body which overcomes the foregoing and other problems which have long since characterized the prior art. In accordance with the broader aspects of the invention, there is provided a two layer structure, including a first fluid impervious layer which retains a treatment fluid and a second layer formed from a fine mesh of either natural or synthetic fibers which normally retains the treatment fluid but which releases the treatment fluid upon the application of pressure and/or body temperature. The treatment fluid dispensing layer may be subdivided in accordance with predetermined patterns better to control the release of treatment fluid therethrough.

[0004] In accordance with the present invention, there is provided a full body treatment suit adapted to cover the entire torso, arms, and legs of a person being treated for burn, sunburn related skin damage, or cellulite treatment. Depending on the nature of the injury, condition, or problem being treated, selected portions of the full body treatment suit can be removed by cutting. Alternatively, the full body treatment suit may comprise a plurality of sections which are selectively joined together by conventional fasteners such as hook-and-loop type fasteners, snaps, buttons, zippers, etc. The full body treatment suit may comprise a fluid dispensing layer comprising a plurality of predetermined patterns which are aligned with particular sections of the body.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0005] A more complete understanding of the present invention may be had by reference to the following Detailed Description when taken in connection with the accompanying Drawings, wherein:

[0006] **FIG. 1** is a diagrammatic illustration of the invention.

**DETAILED DESCRIPTION**

[0007] Referring now to the Drawing, there is shown an apparatus for applying treatment fluids to the human body **10** comprising the present invention. The apparatus **10** comprises a full body suit or covering which covers the torso, arms, and legs of a person receiving treatment. The apparatus **10** includes a fluid impervious layer (not shown)

and a skin engaging fluid dispensing layer **12**. The layer **12** is formed from finely woven natural or synthetic fibers, and is configured to normally retain a treatment fluid therein and to cause treatment fluid to flow therethrough upon the application of pressure and/or body temperature.

[0008] The treatment fluid dispensing layer **12** may assume a wide variety of configurations. For example, the layer **12** may comprise spaced, parallel transversely extending sections **14**; or spaced, parallel longitudinally extending sections **16**; or spaced, parallel angularly extending sections **18**. Portions of the treatment fluid dispensing layer **12** may comprise a generally open configuration which is secured to the overlying fluid impervious layer by a plurality of connection points as shown at **20** and **22**. The treatment fluid dispensing layer **12** may also comprise large individual sections **24** or small individual sections **26** configured to dispense smaller amounts of treatment fluid. Another option is to configure the treatment fluid dispensing layer **12** in a checkerboard pattern **28** which affords precise control over the dispensing of treatment through the treatment fluid dispensing layer **12**. The treatment fluid dispenser layer may also comprise a very fine mesh **30**. As will be appreciated by those skilled in the art, the treatment fluid dispensing layer **12** may be configured in a wide variety of configurations depending upon the requirements of particular applications of the invention.

[0009] In accordance with one embodiment of the invention, the treatment fluid dispensing apparatus **10** is supplied in a full body configuration which covers the torso, legs, and arms of the person being treated. Depending upon the requirements of particular applications of the invention, the suit or covering comprising the apparatus **10** may be cut below the knee as indicated by the line **32**, above the knee as indicated by the line **34**, at mid-thigh as indicated by the line **36**, at the intersection of the leg and torso as indicated by the line **38**, below the elbow as indicated by the line **40**, above the elbow as indicated by the line **42**, below the shoulder as indicated by the line **44**, or at the shoulder as indicated by the line **46**. The suit or covering comprising the apparatus **10** may also be separated at the waist as indicated by the line **48** thereby providing upper and lower body components.

[0010] In accordance with another embodiment of the invention, the suit or covering comprising the apparatus **10** is supplied in a plurality of components, such as lower leg components, an upper leg/lower torso component, an upper torso component, and arm components. If so supplied, the components comprising the apparatus **10** are adapted for connection by conventional fasteners such as hook-and-loop type fasteners, snaps, buttons, zippers, etc.

[0011] It will therefore be understood that the present invention comprises a structure which extends across the entire body of an individual or one or more selected portions thereof to effect the application of treatment fluids thereto. A treatment fluid dispensing layer normally retains the treatment fluid to be applied, but responds to the application of pressure and/or body temperature to dispense the treatment fluid in controlled amounts. In this manner the treatment fluid is applied over an extended period of time.

[0012] The suit or covering comprising the apparatus **10** is designed in such manner so that an individual can wear the lightweight apparatus comfortably under his/her clothing.

Thus, a person with a sun burn can be treated with sun burn medication dispensed through the treatment fluid dispensing layer 12 without staining his/her clothing. This apparatus also has a beneficial use of minimizing the appearance of cellulite on an individual's leg, arm, buttocks, etc.

[0013] In the case of severely burned patients, the present invention can also take the form of a sheet which is laid over the burned portions of the patient's body. The invention can also take the form of poncho-like construction having a hole for receiving the head of the patient and thereafter engaging the chest, back, and arms of the patient. The invention can also take the form of a mask-like covering for the face of the patient.

[0014] Although preferred embodiments of the invention have been illustrated in the accompanying Drawings and described in the foregoing Detailed Description, it will be understood that the invention is not limited to the embodiments disclosed, but is capable of numerous rearrangements, modifications, and substitutions of parts and elements without departing from the spirit of the invention.

1. An apparatus for applying treatment fluids to the human body comprising:

- a first fluid impervious layer; and
- a treatment fluid dispensing layer secured to and overlying the fluid impervious layer;
- the treatment fluid dispensing layer comprising a finely woven fabric which normally retains the treatment fluid and which dispenses the treatment fluid in response to pressure and/or body temperature.

2. The treatment fluid dispensing apparatus according to claim 1 having the configuration of the human torso, arms, and legs.

3. The treatment fluid dispensing apparatus according to claim 2 further comprising lower leg components, and upper leg/lower torso component, and upper torso component, and arm components and wherein the components comprising the treatment fluid dispensing apparatus are interconnected by fasteners.

4. The treatment fluid dispensing apparatus according to claim 3 wherein the fasteners are selected from the group consisting of hook-and-loop type fasteners, snaps, buttons, and zippers.

5. The treatment fluid dispensing apparatus according to claim 1 wherein the treatment fluid dispensing layer comprises a plurality of configurations each aligned with a predetermined section of the human body.

6. The treatment fluid dispensing apparatus according to claim 5 wherein at least one of the configurations comprising the treatment fluid dispensing layer includes spaced, parallel transversely extending sections.

7. The treatment fluid dispensing apparatus according to claim 5 wherein at least one of the configurations comprising the treatment fluid dispensing layer includes spaced, parallel longitudinally extending sections.

8. The treatment fluid dispensing apparatus according to claim 5 wherein at least one of the configurations comprising the treatment fluid dispensing layer includes spaced, parallel angularly extending sections.

9. The treatment fluid dispensing apparatus according to claim 5 wherein at least one of the configurations comprising the treatment fluid dispensing layer includes checkerboard pattern sections.

10. The treatment fluid dispensing apparatus according to claim 5 wherein at least one of the configurations comprising the treatment fluid dispensing layer includes a very fine mesh configuration.

11. The treatment fluid dispensing apparatus according to claim 1 wherein the treatment fluid dispensing layer comprises a generally open configuration which is secured to the underlying fluid impervious layer by a plurality of connection points.

12. An apparatus for applying treatment fluids to the human body comprising:

- a first fluid impervious layer; and
- a treatment fluid dispensing layer secured to and overlying the fluid impervious layer;
- the treatment fluid dispensing layer comprising a finely woven fabric which normally retains the treatment fluid and which dispenses the treatment fluid in response to pressure and/or body temperature;

treatment fluid dispensing apparatus having the configuration of the human torso, arms, and legs, and comprising a plurality of configurations each aligned with a predetermined section of the human body.

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