United States Patent [19]

Rohr

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[54] **ELECTRIC MATTRESS**

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[51] **Int. Cl.** **H05b 1/00**

[58] **Field of Search** 219/211, 212, 527–529, 219/549, 545; 338/208–210; 128/379; 139/425

[56] **References Cited**

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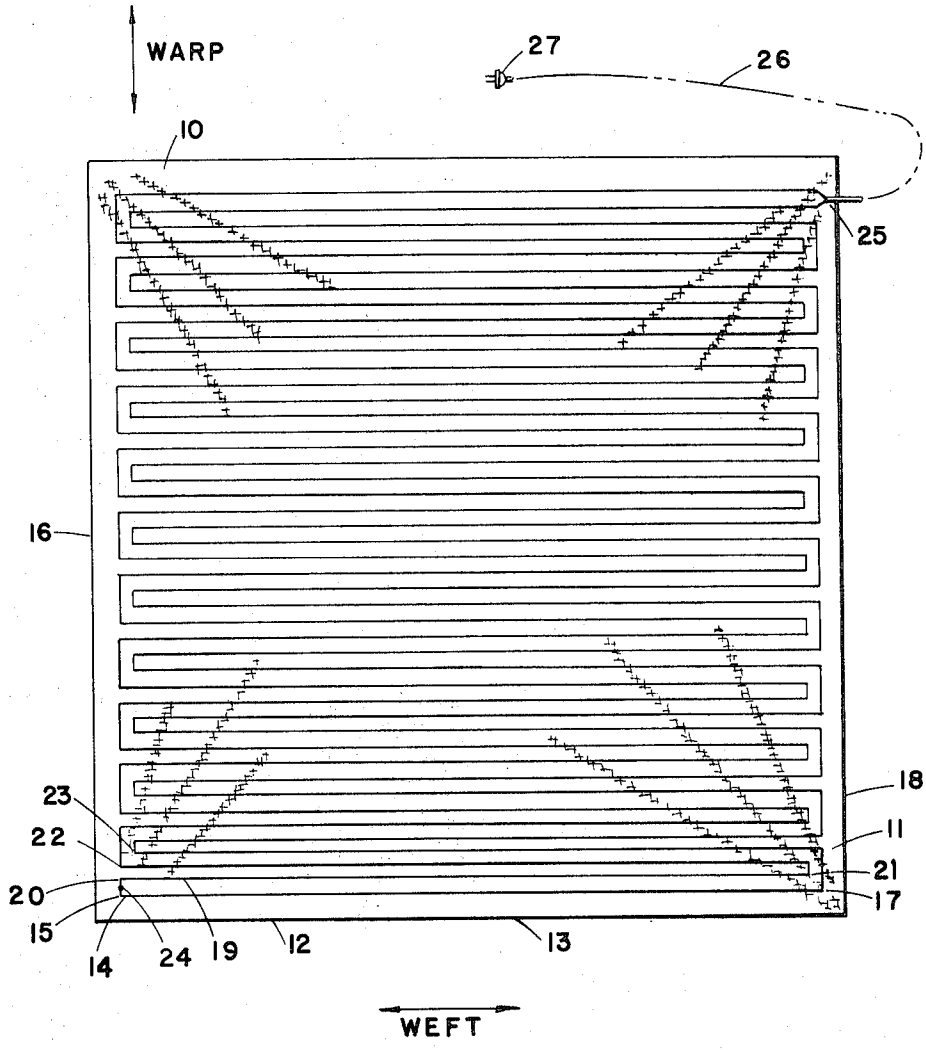
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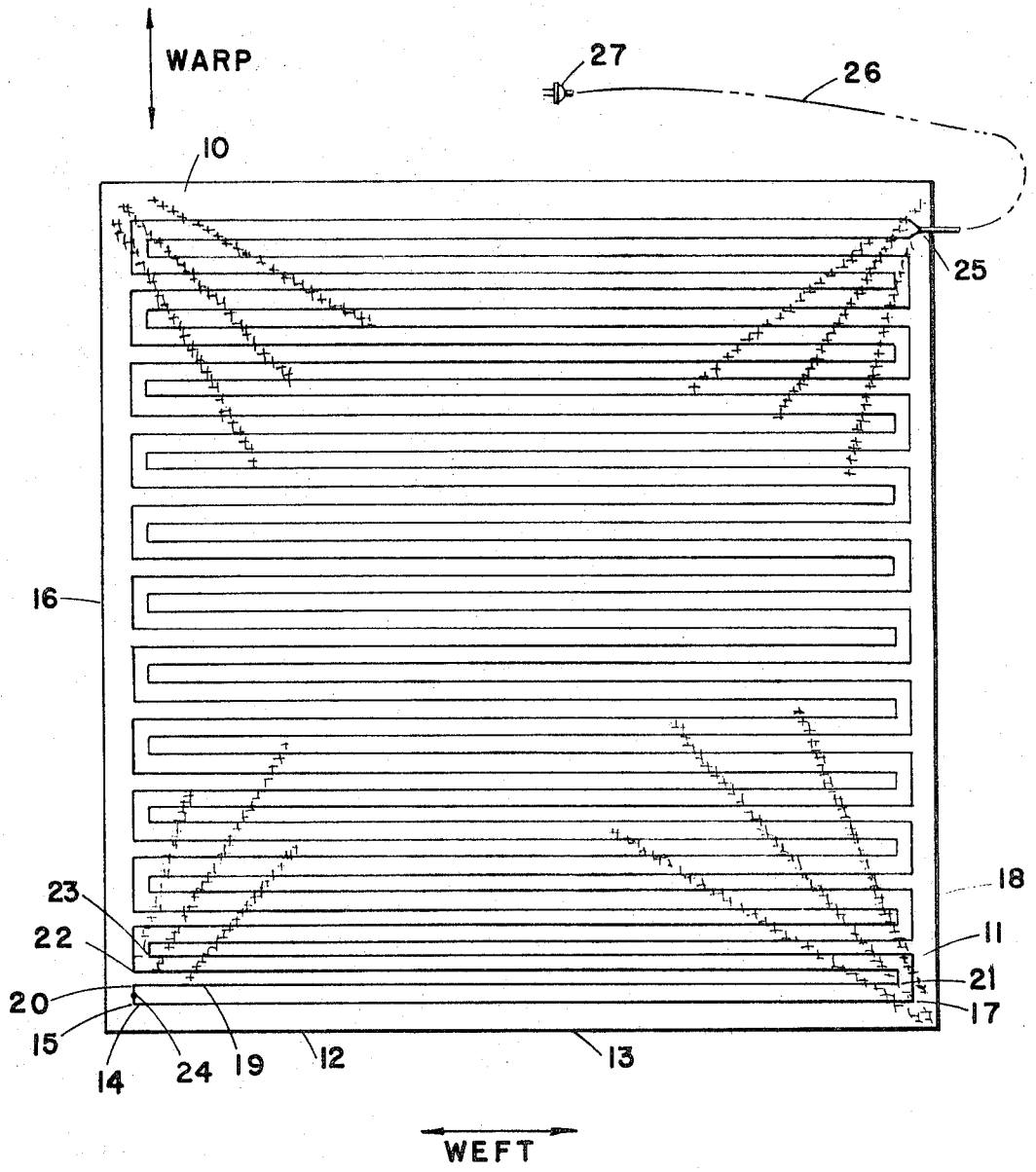
Primary Examiner—C. L. Albritton

[57] **ABSTRACT**

A heating cover such as a blanket for therapy having a pair of heating wires woven directly onto the cover and insulated by the fill of the cover material.

1 Claim, 1 Drawing Figure





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ELECTRIC MATTRESS

BACKGROUND OF THE INVENTION

In ordinary electric blankets the heavy wool adds weight and delays the transfer of heat from the hot wires to the patient who is usually covered with a rubber sheet. In addition, insulated wire within an insulating wall will further decrease the efficiency of the heat transfer from the hot wires to the person on the bed.

SUMMARY OF THE INVENTION

It is therefor the primary object of this invention to provide a woven thermal cover made of cotton fabric.

It is also an object of this invention to provide a woven thermal cover having flexible resistance wire woven in a controlled pattern into the warp.

It is also an object of this invention to have the cotton fill weft threads provide the insulation for the resistance wires.

DESCRIPTION OF THE DRAWINGS

A better understanding of the invention may be obtained from the drawings and description forming a part of this disclosure and in which:

The FIGURE is a top view of the thermal cover showing the weaving pattern.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in the figure, a plurality of warp threads **10** of suitable material such as cotton are placed in a normal pattern for weaving.

A weft thread **11** of suitable material such as cotton similar to the warp threads **10** is woven full width through the warp threads in a conventional manner for a distance of approximately one inch to form the bottom border **12** of the thermal cover **13.**

When this predetermined amount of weaving has been reached, a flexible resistance wire **14** is entered into the weft pattern at point **15** which is approximately 1 inch inside the left hand edge **16** of the cover **13.** The wire **14** is woven through the warp **10** to emerge at point **17** which is approximately 1 inch inside the right hand edge **18** of the cover **13.**

The weft pattern is again picked up by the thread **11** and approximately one half inch of full width of the cover **13** is woven.

A second flexible resistance wire **19** similar to wire **14** is then introduced into the weft pattern at point **20** which is approximately one inch inside the left hand border **16,** and woven into the warp **10** to emerge at point **21** which is approximately 1 ½ inches inside the right hand edge **18.**

The weft pattern is again picked up by thread **11** and approximately one half inch of full width of the cover **13** is woven.

At this point wire **19** is moved up over the weft **11,** parallel to the warp **10,** and entered into the weave where it is thrown to the left to emerge at point **22** which is approximately one inch inside the left hand edge **16.**

The weft pattern is again picked up by thread **11** and approximately one half inch of the full width of the cover **13** is woven.

Wire **14** at point **17** is then moved up over the weft and parallel to the warp **10** for a distance of approximately 1½ inches where it is entered into the weave

and thrown to the left to emerge at point **23** which is approximately 1½ inches inside the left hand edge **16** of the cover **13.**

The weaving pattern continues as follows:

a. Weave one half inch of thread **11** full width of the cover **13.**

b. Move the resistance wire which is 1½ inches inside the edge of the cover **13** up one half inch, outside the weft, and parallel to the weft. Enter the wire into the weave pattern and throw it through the warp to emerge one inch inside the edge of the cover **13.**

c. Weave one half inch of weft fill full width of the cover **13.**

d. Move the resistance wire which is one inch in from the edge of the cover and closest to the bottom of the cover up parallel to the warp for a distance of 1½ inches. Enter the wire into the weave pattern and throw it through the warp to emerge at a point one and one half inches from the edge of the cover **13.**

Keep repeating steps a, b, c and d until the dimensional length is only short 1 inch. Bring the two resistance wires **14** and **19** out of the weave at a point one inch from the edge of the cover. Weave a final inch of full width fill **11** to make the top border.

The finished thermal cover will have these characteristics:

a. A 1 inch border around its periphery.

b. Two continuous resistance wires woven through the warp, parallel to the bottom and the sides, and separated by weft fill so that they remain approximately one half inch apart. This will preclude any short circuiting of the wires.

The remote ends of the two wires **14** and **19** are joined. At one end by suitable means **24** such as soldering. At the other end by suitable means **25** such as soldering and the use of connecting thimbles to a length of insulated electric conducting wire **26** which terminates in an electrical connector plug **27.**

The weaving of the resistance wires **14** and **19** into the cover **13** will provide insulation and the amount of unprotected wire where the wires move up at the edges is minimal. However, it is a matter of prime concern that this blanket only be used in conjunction with another item which will insulate the user fully from the blanket.

As an example, for heat therapy, the blanket would be spread on a support item such as a mattress, a rubber hospital sheet would be spread over the entire blanket. The user would lie on one half the rubber sheet and blanket, the other half would be folded over him and the blanket plugged into the current supply.

When the user is finished, the blanket should be disconnected from the current before moving the top covering.

Use of this type of an electric blanket provides a light weight item with a minimum of thermal insulation.

Use of the blanket in a hospital will provide a theraputic blanket which by its simplicity will result in a substantial savings.

I claim:

1. A woven thermal cove including warp strands of insulation material interwoven with continuous weft strands of insulation material having two continuous flexible resistance wires woven into said warp in a spaced parallel pattern, said wires being soldered together at their remote end; the other ends of said resistance wires being connected to one end of an insulated

electrical cable exterior of said thermal cover and which at its other end is attached to an electric connector plug, said spaced, parallel wires being separated about one-half inch from each other, and 1 inch from the peripheral edge of said cover, said soldered ends of

said wire being at one corner of said cover, while the opposite ends of said wires connected to said cable being located at an opposite corner of said cover.

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