

No. 774,623.

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S. S. WALES.
FLEXIBLE ELECTRIC HEATER.
APPLICATION FILED APR. 30, 1904.

NO MODEL.

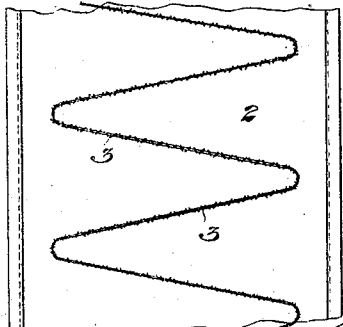
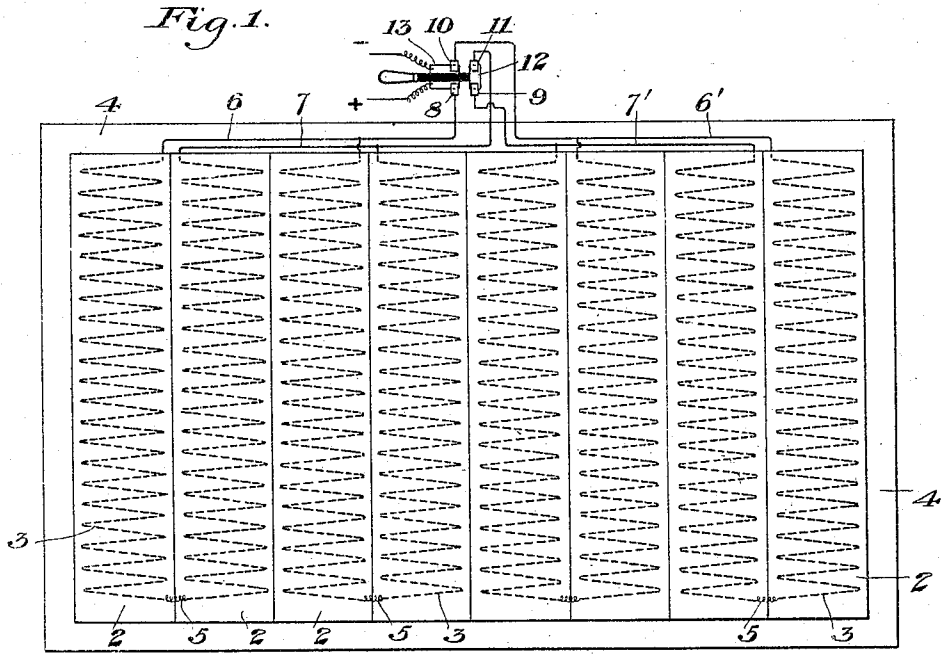
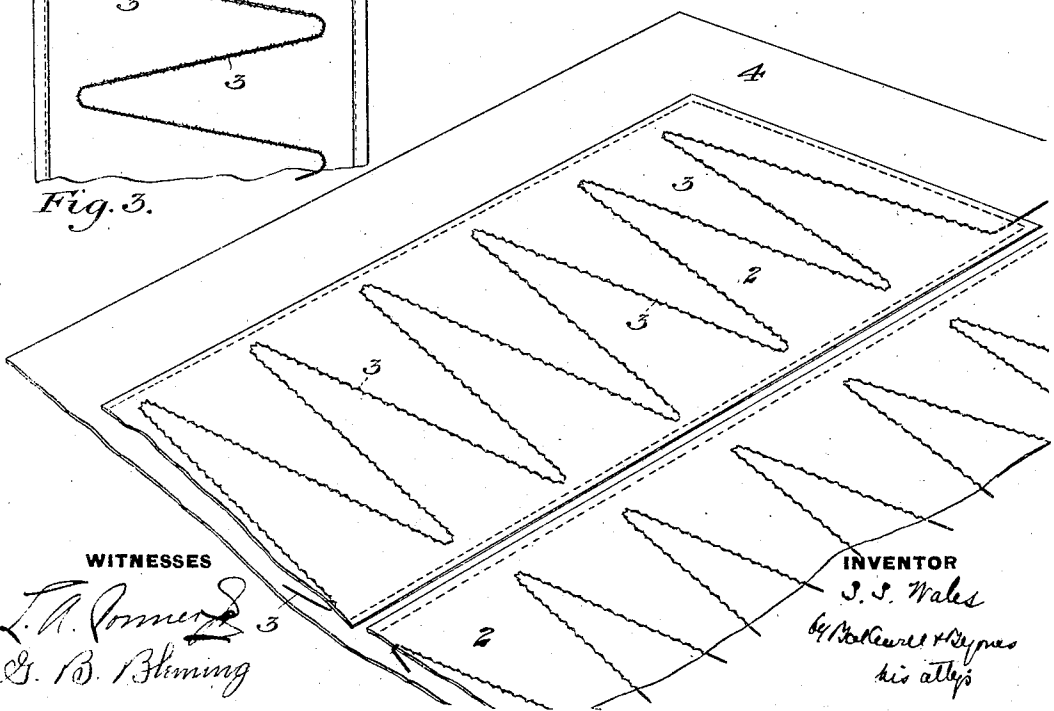


Fig. 3.

Fig. 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

SAMUEL S. WALES, OF MUNHALL, PENNSYLVANIA.

FLEXIBLE ELECTRIC HEATER.

SPECIFICATION forming part of Letters Patent No. 774,623, dated November 8, 1904.

Application filed April 30, 1904. Serial No. 205,782. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. WALES, of Munhall, Allegheny county, Pennsylvania, have invented a new and useful Flexible Electric Heater, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a blanket constructed in accordance with my invention, showing electric connections diagrammatically. Fig. 2 is a partial perspective view of the same on a larger scale, and Fig. 3 is a partial lower face view of one of the strips before securing it to the blanket.

My invention relates to the electric heating-blankets which are designed to be wrapped about a person or an arm or limb to supply heat electrically thereto. Heretofore in the manufacture of these heating-blankets the wire resistance has been sewed between layers of the blanket; but the blanket thus formed was stiff and could not easily be wrapped about the limb or person to be heated. It is necessary to frequently wash the blanket, which soon causes the resistance-conductors to rust, while the rough handling received during such washing bends and breaks the conductors. Moreover, in the use of the blanket the wires became kinked and bent, and the device soon deteriorated and became useless. My invention is designed to overcome these difficulties; and it consists in securing a series of resistance-wires to separate strips of fabric, which fabric strips are removably secured parallel to each other to the blanket, the strips being capable of folding endwise on account of the zigzag form of the wire, while the strips can be folded over each other sidewise to make a neat compact package. Flexibility is thus given in two directions to the heater, which enables it to be easily wrapped about the part to be heated without injury to robe or blanket. The flexible strips, with the attached resistance-conductors, may be easily and quickly removed and replaced and the blanket washed without injury to the strips and conductors.

In the drawings, 2 2 represent a series of separated fabric strips, each having sewed to its under face a zigzag resistance-wire 3.

This wire may be sewed directly to one face of the strip, which is preferably of rectangular form. A series of these rectangles is then laid side by side, with the wires underneath, and the series sewed to or slipped into pockets formed on a larger piece of fabric 4, which may be of blanket or other form. The strips 2 are preferably hemmed around the edges, and the wire of one strip may be flexibly connected to that of the next by a connection 5, as indicated in Fig. 1. At the other side of the blanket the lead-in and lead-out wires 6 and 7 may be twisted together to form a small cable leading to a socket, which may be fitted into a lamp-socket. I have shown the lead-in wires 6 and 7 as connected to the contacts 8 and 11, and the lead-in wires 6' 7' from the other half of the blanket as connected to contacts 9 and 10. The sliding switch-plug has a forward connecting-bar 12, arranged to connect the contacts 9 and 11, and two rear longer blades 13, which form the live portions of the switch and in the position shown connect the contacts 8 and 10. In this position the two parts of the blanket are in series position, thus giving a low even temperature. If a higher temperature is desired, the plug is pushed forward until the blades 13 connect 8 and 9 on one side and 10 and 11 on the other. This places the sections in parallel, giving a higher temperature.

The advantages of my invention result from the use of the separate fabric strips, which are secured together along their edges, thus giving a cover which can be folded or bent in either of two directions at right angles to each other. The blanket or cover may thus be easily wrapped around the person or arm to be heated without injuring the wires and without danger of bending or breaking them.

The fabric strips, with their attached resistance-wires, may be easily and quickly removed from the blanket and the blanket washed whenever necessary without injury to the strips or wires. By attaching the resistance-conductors to one face of the removable strips they are always open to inspection, and repairs to the conductors may be easily and quickly made.

Variations may be made in the form and

arrangement of the separated wires, the fabric pieces, the manner of attaching the pieces to the blanket, &c., without departing from my invention.

5 I claim—

1. A blanket or cover comprising separate resistance-conductors of zigzag form secured to the blanket in parallel series, substantially as described.
- 10 2. A blanket or cover comprising separate resistance - conductors secured to separate flexible strips, in zigzag form longitudinally of each strip, flexible connections for the conductors and a blanket to which the flexible
- 15 strips are removably attached; substantially as described.
3. The combination with a heating blanket

or cover having a series of separate flexible strips removably attached side by side to the blanket, of separate conductors permanently 20 secured to the strips in zigzag form; substantially as described.

4. A heating - blanket, separate flexible strips removably attached to the blanket in serial order, separate resistance-conductors 25 secured to each strip and flexible connections between the conductors; substantially as described.

In testimony whereof I have hereunto set my hand.

SAMUEL S. WALES.

Witnesses:

JOHN D. GAGE,
C. P. BYRNES.