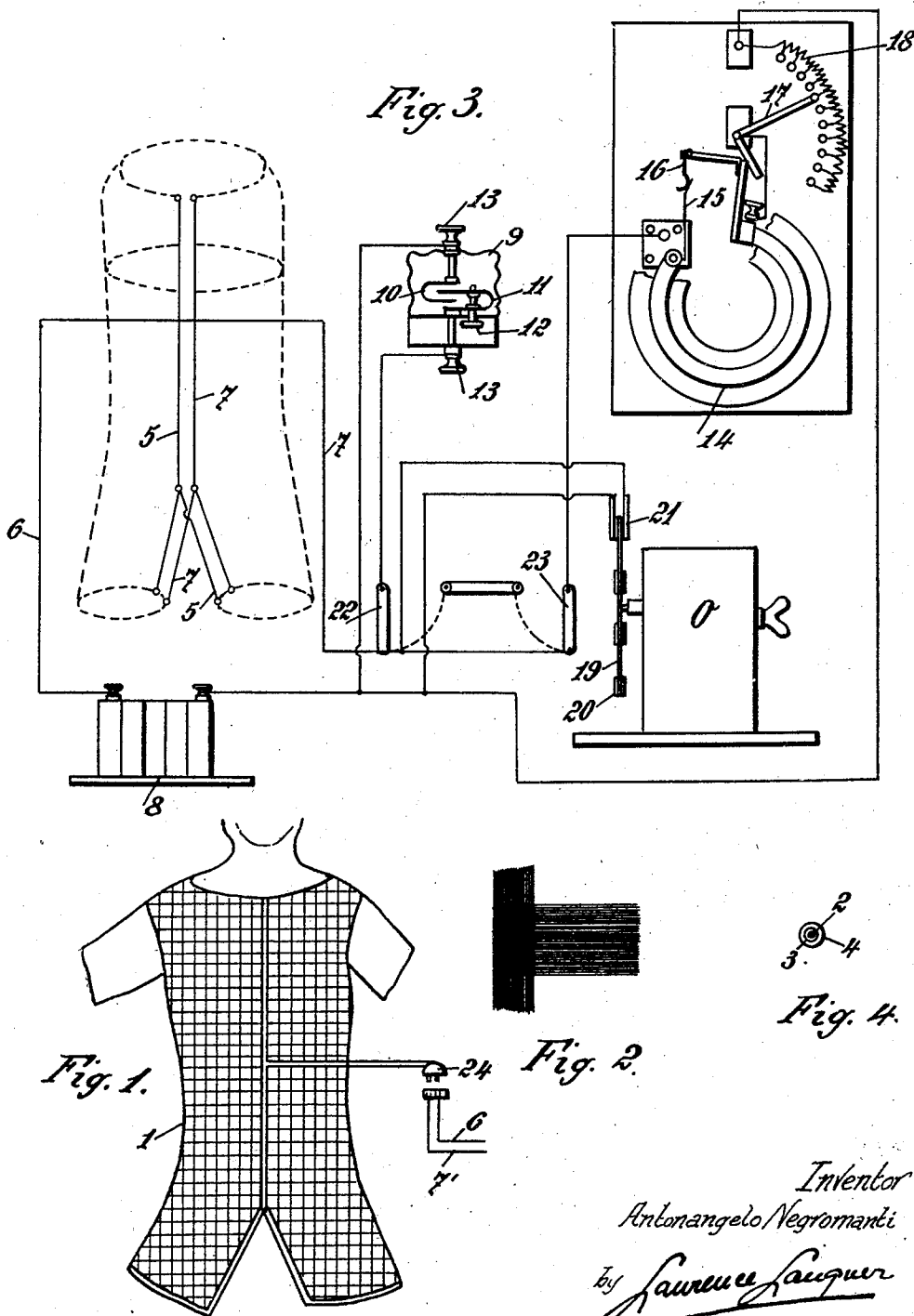


A. NEGROMANTI.
ELECTRICALLY HEATED COAT.
APPLICATION FILED APR. 4, 1919.

1,379,356.

Patented May 24, 1921.



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UNITED STATES PATENT OFFICE.

ANTONANGELO NEGROMANTI, OF MILAN, ITALY.

ELECTRICALLY-HEATED COAT.

1,379,356.

Specification of Letters Patent.

Patented May 24, 1921.

Application filed April 4, 1919. Serial No. 287,427.

To all whom it may concern:

Be it known that I, ANTONANGELO NEGROMANTI, engineer, of Milan, Italy, (2 Via Lupetta,) have invented certain new and useful Improvements in and Relating to Electrically-Heated Coats, of which the following is a specification.

This invention relates to electrically heated coats. An object of the invention is to form electrically heated coats from a fabric containing, as warp or weft threads thereof, an electrical wire duly coated with insulating material and capable of being heated by electric currents.

Another object of the invention is the provision of current-controlling means adapted to be connected to the electric wires of said fabric.

In the annexed drawing is represented by way of example, a form of construction of the invention as applied to a coat for aeronautical passengers.

Figure 1 shows a coat forming one object of the present invention.

Fig. 2 represents a detail of the fabric.

Fig. 3 shows a diagrammatic arrangement of instruments and devices which forms part of the present invention.

Fig. 4 is a detail of the electric wire.

The coat —1— is formed of a fabric woven out of threads of which either the warps or the weft or both comprise an electrically resistant wire —2—, duly coated with textile fireproof insulating material —3—, preferably asbestos and silk —4— or the like (Fig. 4).

In the form of construction, given in the drawing only the weft threads contain the metallic core.

One end of each of said wires is connected to the metallic part of insulated conductors —5—, said conductors being connected to the lead —6—; the other end of said wire is connected in similar way to conductors —7— which are jointed to the lead —7'—, said leads —6—7'— forming part of an electric circuit.

This circuit is connected to a source of electrical current, which may be a battery of accumulators —8—, and also to the following apparatus.

I. A barometer —9— (aneroid), provided with contact —10—11—, and provided with calibrating screw —12—. The barometer is

connected to the circuit by means of terminals —13—. The circuit will be closed through contact pieces —10—11, when the atmospheric pressure decreases releasing the walls of the aneroid vacuum chamber.

As known the temperature decreases as the altitude increases, therefore, the coat will be heated electrically as the altitude increases, because of the barometric control of the electrical current.

II. A thermoscope (thermostatic tube) —14— provided with contact pieces —15—16— and a lever —18—, said lever closing the circuit across a variable resistance.

When temperature decreases, the movable end of the thermoscope, moves and closes the circuit, while with further movement thereof, the spring contacts will be slightly pressed one against the other and lever —18— will be caused to turn and disconnect some resistance, thus increasing the intensity of the heat generating current.

III. A time interrupter comprising insulated rotatable dial —19— of a clockwork —20—; said insulating dial bearing metallic plates —20— at the necessary angular distances, in order to close the circuit across contacts —21— at and during predetermined times.

The coats provided with the described means, may also be used for the construction of bed-sheets, medical wrappings, and the like.

In botanical hot-houses trees may be for research purposes, provided with wrappings, the temperature of which will be controlled by one of the cited instruments. Similar arrangements I have found are perfectly suitable for hatching boxes.

In the drawing are further shown, by way of example, contact plates —22—23— for disconnection of the cited instruments, for connection in series and parallel.

—24— represents an ordinary plug connector.

Having now described the nature of my invention and the manner in which the same should be performed, I claim:—

1. The combination of an electrically heated aviator's garment having heat producing electric wires embedded in the fabric thereof; a source of current connected to the wires of said fabric; current control-

ling means interposed between the source of current and the wires of said garment; and a barometer connected to said current controlling means to automatically operate the same.

2. The combination of an electrically heated aviator's garment having heat producing electric wires embedded in the fabric thereof; a source of current connected to the wires of said fabric; regulating means interposed between the source of current and the wires of said garment comprising a rheostat; and a thermoscope connected to said current regulating means to operate the same to increase the intensity of the current in proportion to the decrease in temperature.

3. The combination of an electrically heated aviator's garment having heat producing electric wires embedded in the fabric thereof; a source of current connected to the wires of said fabric; and means for intermittently and automatically connecting

the source of current to the wires of said garment.

4. The combination of an electrically heated aviator's garment having heat producing electric wires embedded in the fabric thereof; a source of current connected to the wires of said fabric; a switch interposed between the source of current and the wires of the garment; a barometer for operating said switch to open and close the circuit; a rheostat electrically connected to said source of current and the wires of the garment; a thermoscope connected to control the rheostat; and means for connecting said switch and rheostat to the source of current and the wires of the garment in series.

In testimony whereof I affix my signature, in presence of two witnesses.

ANTONANGELO NEGROMANTI.

Witnesses:

G. G. GUARNIER,

G. P. WILSON.