

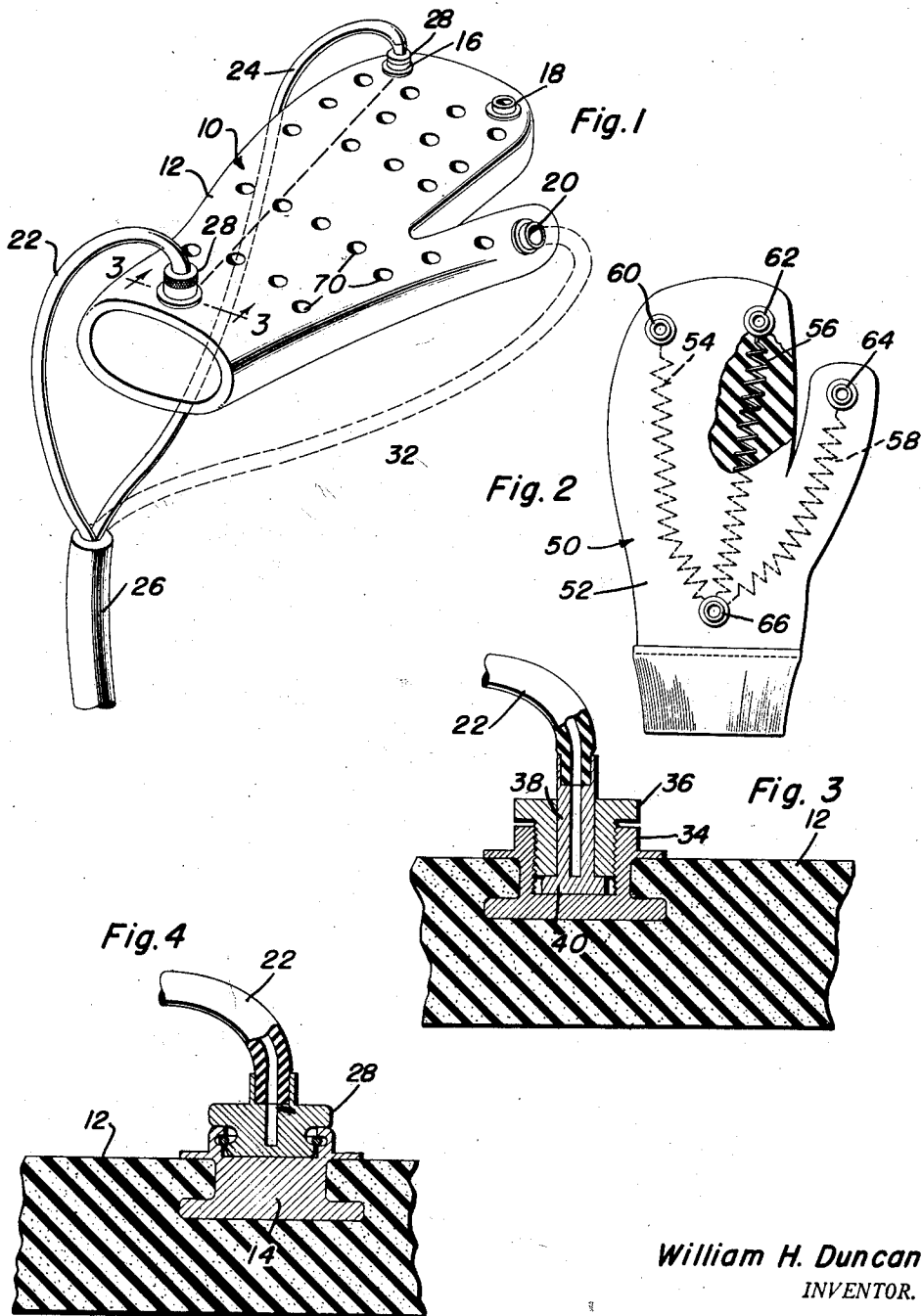
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ELECTRICALLY HEATED GARMENT

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ELECTRICALLY HEATED GARMENT

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1 Claim. (Cl. 219-46)

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This invention relates to new and useful improvements and structural refinements in electrically heated garments, and the principal object of the invention is to facilitate convenient and highly efficient control of the heating effect in any predetermined portion of the garment, so as to assure proper heating of predetermined portions of the body.

The term "garment" as used herein, is employed broadly to designate any kind or type of covering for any particular portion of the body, an example illustrated in the accompanying drawing assuming the form of a glove adapted to be worn on the hand. However, the teachings of the invention may be applied, without structural modifications to other garments such as shoulder pads used by ballplayers, knee pads, leggings, footwear and the like.

Some of the advantages of the invention reside in its extreme simplicity of construction, in its convenient and efficient operation, and in its adaptability to economical manufacture.

With the above more important objects and features in view, and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view illustrating one embodiment of the invention;

Figure 2 is an underside plan view, partially broken away, illustrating a modified embodiment of the invention;

Figure 3 is a fragmentary sectional detail, taken substantially on the plane of the line 3-3 in Figure 1; and

Figure 4 is a fragmentary sectional detail, similar to that shown in Figure 3, but illustrating a modified terminal construction.

Like characters or reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, more particularly to Figures 1, 3 and 4, the general reference character 10 designates a garment, in this instance a glove, which is preferably constructed from so-called electric conductive rubber material 12, or in other words, rubber which is impregnated with electricity conductive particles so as to facilitate flow of electric current therethrough.

The wrist portion of the glove 10 is provided with a conventional snap-type fastener member 14, while two similar members 16, 18 are pro-

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vided at the outer end of the hand portion of the glove, and an additional member 20 is provided on the thumb, as is clearly shown in Figure 1.

Two conductors 22, 24 of an electric cable 26 are provided at the free ends thereof with coacting, snap-type fastener members 28 which are selectively and separably engageable with the members 14, 16, 18 and 20, whereby the conductors 22, 24 may be selectively connected to the conductive material 12 of the glove.

It will be apparent from the foregoing that by connecting the fastener member 28 of the conductor 22 with the member 14 and similarly connecting the member 28 of the conductor 24 with the member 16, the members 28, 14 and 28, 16 will function as terminals, between which there will be established a difference of potential so that an electric current will flow through the material 12 of the glove generally along a straight line path indicated at 30. Owing to the resistance of the material 12, a considerable amount of heat will be generated in the material by the passage of electric current therethrough, and the portion of the glove surrounding the region of the path or line 30 will become substantially heated.

Of course, the two terminals or members 28 may be connected selectively with the members 14, 16, 18 and 20, as exemplified at 32, whereby different portions of the glove may be heated, depending upon the terminals to which the conductors 22, 24 are connected.

A modified form of terminal construction is illustrated in the accompanying Figure 3, wherein the terminals 14, 16, 18 and 20 are substituted by internally screw threaded terminals 34 to receive externally screw threaded terminal members 36 at the ends of the conductors 22, 24. In this instance, the ends of the conductors 22, 24 are provided with studs 38 on which the terminal members 36 are rotatable, the studs 38 having enlarged heads 40 which are positioned and secured in the terminals 34 by the terminal members 36, so as to prevent the conductors 22, 24 from being accidentally disconnected from the glove.

A modified embodiment of the invention is illustrated in the accompanying Figure 2 wherein the glove 50 is formed from any suitable flexible material 52, in which there are embedded a plurality of electric resistance elements 54, 56, 58, extending from the respective terminals 60, 62 and 64 to a common terminal 66.

By connecting one electric conductor to the terminal 66 and the second conductor to any one

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of the terminals 60, 62 and 64, the appropriate element 54, 56 or 58 may be energized, as desired.

It is to be observed that by virtue of the invention, the entire garment need not be heated in instances where heating of predetermined portions thereof is desired, such as for example, when gloves are worn while driving, it is primarily desirable to heat the fingers without necessarily heating the palm or the wrist.

Finally, as is illustrated in Figure 1, the material 12 of the glove 10 may be provided with a plurality of vent openings or apertures 70 so as to prevent perspiration and assure comfort.

It is believed that the advantages and use of the invention will be clearly understood from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

In an electrically heated garment constructed from rubber-like material impregnated with electricity conductive particles to facilitate flow of electric current therethrough, a terminal provided on said garment and comprising an internally screw-threaded socket having a closed bot-

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tom wall, an outturned marginal rim provided at the bottom of the socket, and an outturned annular flange provided on an intermediate portion of the socket, the bottom portion of the socket and said rim being embedded in the material of the garment and said flange abutting the surface of said material, a conductor including a wire core and an insulating jacket thereon, a connector provided at one end of said conductor and including a tubular member having said wire core secured therein and provided at one end thereof with a counterbore receiving said insulating jacket, an enlarged contact head provided at the other end of said member, and a coupling nut rotatably mounted on said member, said nut threadedly engaging said socket and said contact head being clamped against the closed bottom wall of the socket by said nut, whereby to separably connect said conductor to said terminal.

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