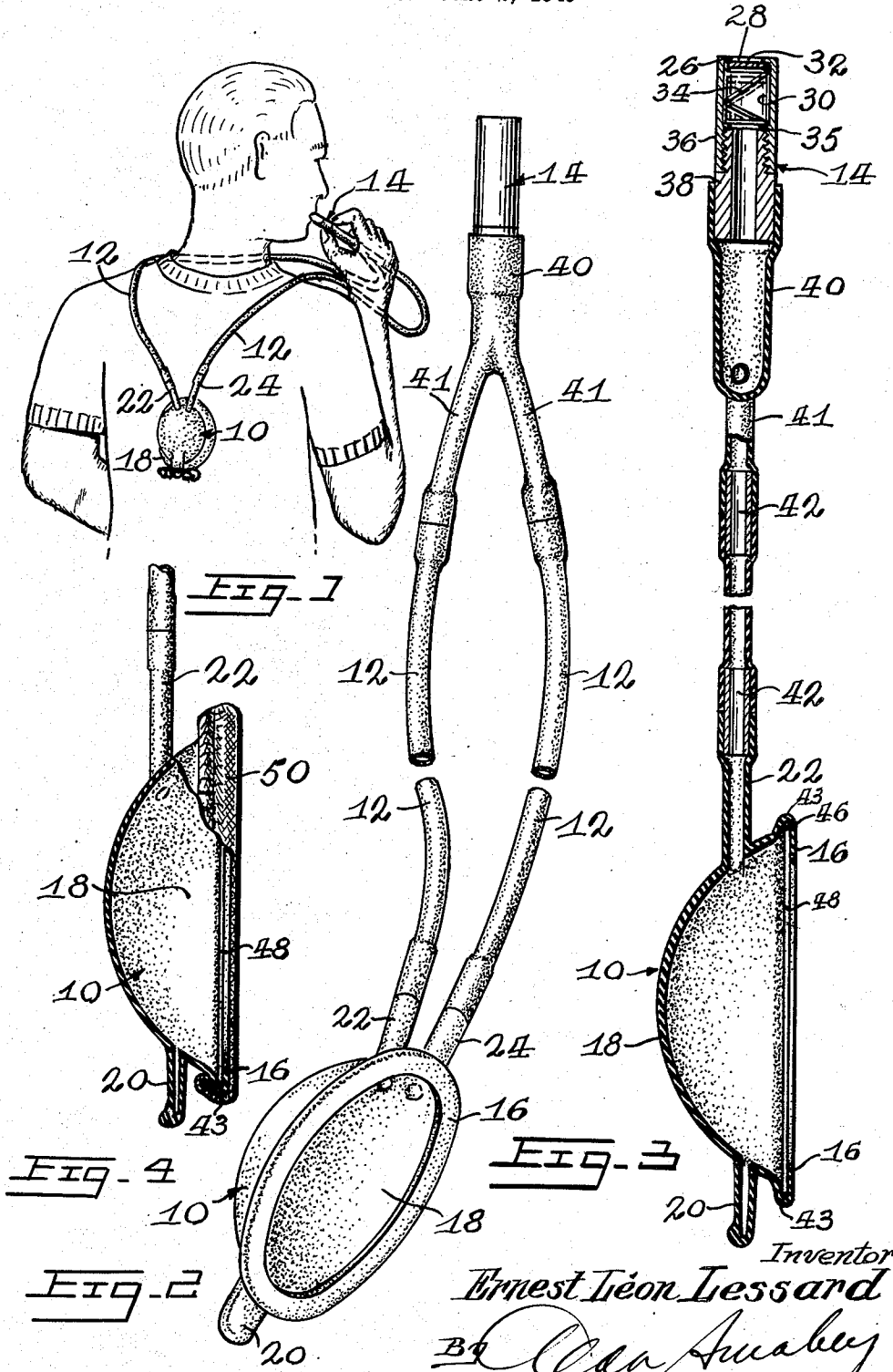


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APPARATUS FOR HEATING THE HUMAN BODY
WITHOUT USING ANY EXTERNAL POWER
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APPARATUS FOR HEATING THE HUMAN BODY WITHOUT USING ANY EXTERNAL POWER

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4 Claims. (Cl. 126—204)

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The present invention relates to an apparatus for conveying heat from one part of the human body to another part.

Prior art

In the past, many attempts have been made to utilize the thermal properties of the air exhaled from the lungs to supply heat to other portions of the human body. These attempts not having been based on scientific principles and a thorough knowledge of the human anatomy have not proven entirely satisfactory.

In many cases, the design of the apparatus employed was such that the heat of the air was dissipated before it came in contact with the body and further the portions of the body to which the heat was transmitted, in most cases the hands or the feet, were not conducive to the efficient transmission of heat to the entire body.

Applicant's development

It is a principal object of the present invention to provide an apparatus whereby the warm air exhaled from the lungs is transmitted to a particular portion of the human body whereby the heat is transmitted to other parts of the body. More specifically, this is accomplished by a particular device for warming the body which comprises an air-localizing cup having a substantially flat rim adapted to hug a relatively flat portion of the back of the body to surround a minor area to be warmed. The cup is adapted when in use to stand off from the body to form with the portion of the body surrounded by the rim an air concentrating chamber. The cup is formed with an air inlet and the rim portion is sufficiently inflexible normally to retain its form. The device is also provided with means for conveying air to the inlet whereby warm air may be blown into the chamber and thus concentrated on a part of the body.

The location on the human body on which the cup is placed is of prime importance to the efficient operation of the apparatus. This is preferably placed on the back of the human body at about the fifth dorsal vertebrae or between the scapulae. This specific part of the human body is known as the heating zone and when a source of heat is applied to this zone, the heat is transmitted to other parts of the body.

Description

The present invention will be more fully understood by referring to the following drawings in which:

Figure 1 shows the preferred form of an apparatus constructed according to the invention as it may be positioned on a human body when in use.

Figure 2 is a diagrammatic view of the apparatus in perspective elevation.

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Figure 3 is a sectional view in side elevation of the preferred form of the apparatus as shown in Figure 2.

Figure 4 is a diagrammatic view partially in section of the open cup to further illustrate the construction thereof.

With particular reference to Figure 1, illustrating a preferred construction of the device positioned in operative contact with the human body, the apparatus consists of an open cup 10 of resilient material connected to a pair of flexible conduit tubes 12 which are connected to a mouthpiece 14.

The flexible tubes 12 are preferably of natural rubber and have been molded so that the elongated flexible conduits are shaped centrally so as to provide a substantially U-shaped shoulder engaging portion.

The open cup is preferably formed so as to have a substantially hemispherical and of concavo-convex form terminating in an outwardly projecting bead or rim 16 which surrounds the periphery of the cup so as to provide air confining contact with the point of application. Preferably the wall 18 of the cup 10 is formed so as to provide a protruding tongue-like portion or projection 20 which serves as an attaching means. The wall 18 of the cup 10 is also formed so as to provide a pair of tube-like extensions 22 and 24 that are adapted to be connected to the flexible conduit tubes 12 in order to transmit the air from the mouthpiece 14.

Preferably the mouthpiece 14 is made as being in two portions 36, 38 that are threadably connected. The portions 36, 38 are of cylindrical form with the portion 36 having an annular valve seat 26 formed at one end and including a central bore 30. The valve seat 26 is formed so as to provide a centrally disposed opening 28 for the admission of air and a disc-like clappet valve 32 fits loosely in the bore 30 and is retained against the valve seat 26 by a spring 34. The spring 34 is retained in position by engagement over the annular shoulder 35 or any other suitable means.

A flexible main conduit tube 40 engages over the lower portion 38 of the mouthpiece. This flexible conduit tube 40 divides centrally into two tubes 41 of smaller diameter. The tubes 41 are joined to the flexible conduit tubes 12 by a metallic joining sleeve 42. This form of joint is also employed to join the tubular extensions 22 of the cup 10 to the opposite end of the flexible tubes 12.

At the base of the open cup 10, the wall 18 extends outwardly at 43 and inwardly at 16. There is thus formed an annular groove or pocket 46 in which is positioned a resilient wire 48 so as to reinforce the outer periphery of the

cup rim 16. It has been found that the apparatus is more efficient when the cup is not applied directly to the skin. In normal use the cup is fastened to the undergarment of the wearer. The cup being made of flexible material is collapsible and is thus adapted to assume a relatively flat form under pressure of the wearer's garments when not in use. However, so that the apparatus may be applied without attachment to the outer garments of the wearer, a fabric masking disc or cap 50 is provided that fits over the open face of the cup and is retained in position by the engagement of a band of resilient material surrounding the marginal edge with the resilient wire 48 reinforcing the cup rim 16 as shown in Figure 4. This masking disc is preferably of a closely woven material, for example, cotton.

In the drawings, the apparatus is shown as having two conduit tubes. The present invention also contemplates an apparatus in which there is only one conduit tube extending from the mouthpiece to the open cup.

Operation

In operation the apparatus is employed as shown in Figure 1. The cup 10 is attached to the undergarment of the wearer in a position relative to the human torso so that the cup confines the warm air to the body of the wearer in the region of the fifth dorsal vertebrae or between the scapulae. When the air is exhaled from the lungs into the mouthpiece 14, it is conveyed through the conduit tubes 12 to the cup 10 and is prevented from returning through the mouthpiece by the clappet valve 32 and spring 34. It has been found in actual use that a person wearing the present apparatus has only to blow a few puffs of warm air into the mouthpiece and immediately a feeling of warmth is felt. This application is a continuation-in-part of application Serial No. 19,764, filed April 8, 1948, now abandoned.

I claim:

1. A device for warming the body, comprising, an air-localizing cup having a substantially flat rim adapted to hug a relatively flat portion of the back of the body to surround a minor area to be warmed, said cup being adapted when in use to stand off from the body to form with the portion of the body surrounded by the rim an air concentrating chamber, the cup being formed with an air inlet, the rim portion being sufficiently inflexible normally to retain its form, and means for conveying air to the inlet, whereby warm air may be blown into said chamber and thus concentrated on a part of the body, the cup being concavo-convex, hemispherical and of resilient material and adapted to assume a relatively flat form under pressure of the wearer's garments when not in use, but adapted to assume a position removed from the body so as to form said chamber when in use, the rim being substantially circular and including an inwardly-extending flange adapted to form a base for contact with the surface of the body, there being means forming an outwardly-extending pocket in the cup intervening the cup and flange and a resilient ring in said pocket adapted to support the cup adjacent the flange.

2. A device for warming the body, comprising, an air-localizing cup having a substantially flat rim adapted to hug a relatively flat portion of the back of the body to surround a minor area to be warmed, said cup being formed with an

air-inlet, and adapted when in use to stand off from the body to form with the portion of the body surrounded by the rim an air-concentrating chamber, said cup being of resilient material and being substantially hemispherical and concavo-convex in form, said rim being a flange on said cup, the portion of the cup adjacent the flange being out-turned and then in-turned to form the flange, a resilient ring located in the pocket formed between the out-turned and in-turned portions thereby to retain the rim in extended position, the rim portion being normally sufficiently inflexible to retain its outline and means for conveying air to the inlet whereby warm air may be blown into said chamber, and thus concentrated on a part of the body.

3. A device, according to claim 2, which is provided with a cap of textile material fitting over said rim and extending across the opening and enclosed by said rim, the cap adapted to rest against the body of the wearer.

4. A device for warming the body, comprising, an air-localizing cup having a substantially flat rim adapted to hug a relatively flat portion of the back of the body to surround a minor area to be warmed, said cup being adapted when in use to stand off from the body to form with the portion of the body surrounded by the rim an air concentrating chamber, the cup being of resilient material and concavo-convex in form, the cup being formed with an air-inlet, and a rim portion which is a flange on the cup, the portion of the cup adjacent the flange being out-turned and then in-turned to form the flange, the rim being retained in extended position by a resilient ring located between the out-turned and in-turned portions, a pair of flexible extending tubes from said air-inlet and being adapted to extend over the shoulders of the user, the end of the tubes remote from the cup being connected to a flexible main conduit tube connected to an inflation head adapted to be placed in the mouth of the wearer, said first named tubes being adapted to support the cup adjacent the upper portion of the flange, the cup also being provided adjacent its lower portion with an outwardly-extending projection adapted to be engaged by a fastener extending from a garment to retain the lower part of the cup against the body.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
185,962	Steiger	Feb. 6, 1877
400,261	Small	Mar. 26, 1889
596,171	Meinhardt	Dec. 28, 1897
912,527	Batter	Feb. 16, 1909
1,339,510	Hoffman	May 11, 1920
1,775,704	Suter	Sept. 16, 1930
2,221,822	Tays	Nov. 19, 1940
2,424,502	Polite	July 22, 1947
2,429,234	Miller	Oct. 21, 1947
2,453,364	Fears	Nov. 9, 1948
2,460,269	Appeldoorn	Feb. 1, 1949

FOREIGN PATENTS

Number	Country	Date
12,564	Great Britain	of 1910
75,337	Switzerland	July 2, 1917
176,552	Great Britain	Mar. 16, 1922
677,600	France	Dec. 18, 1929