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ATHLETIC VESTMENT

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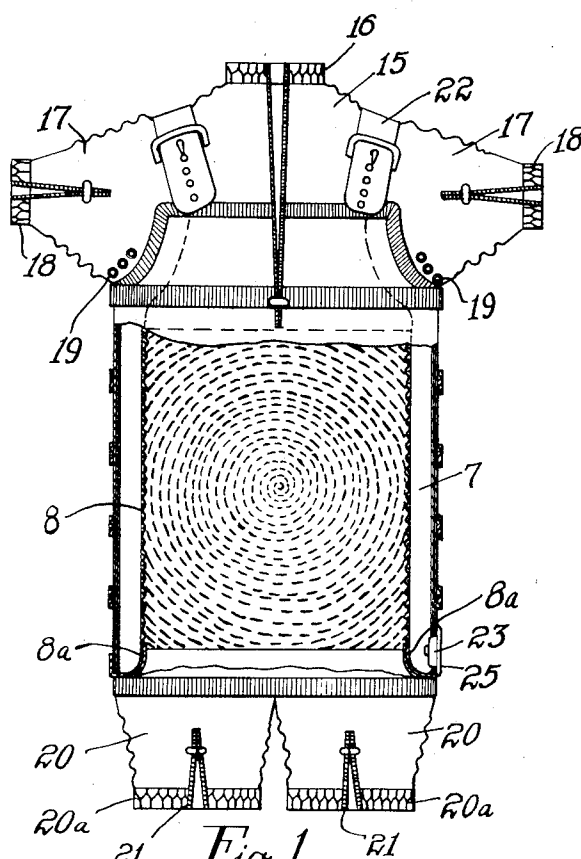


Fig. 1.

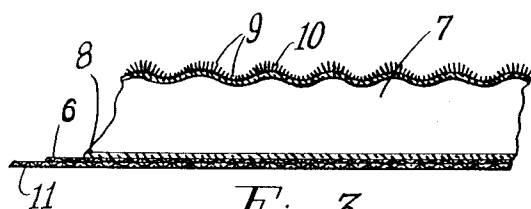


Fig. 3.

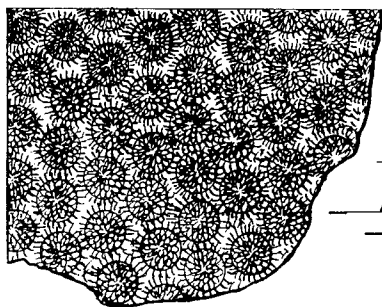


Fig. 4

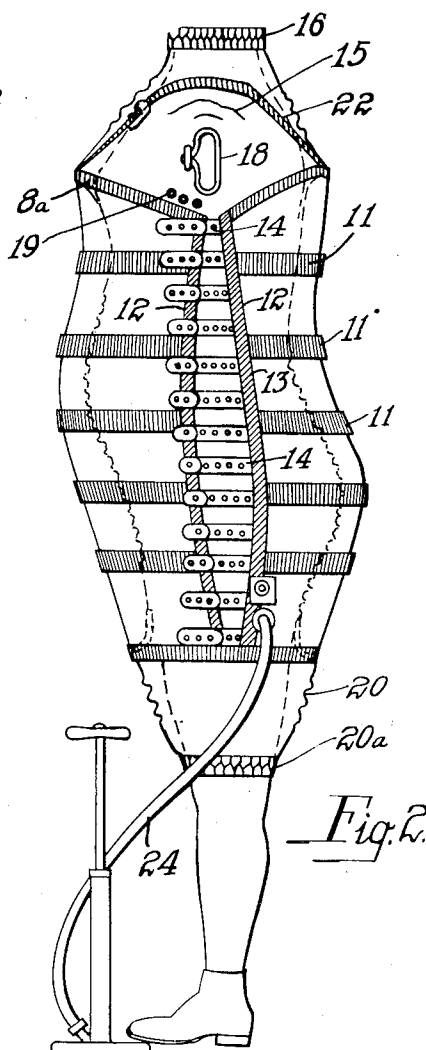


Fig. 2.

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ATHLETIC VESTMENT

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8 Claims. (Cl. 128—62)

This invention relates to physical culture apparatus, and particularly to a vestment for accentuating the beneficial effect of bodily movement or exercise.

5 An object of the invention is to produce a vestment which snugly fits the torso of the wearer and which encloses the chest and shoulders and at least a portion of the upper and lower limbs and thereby retains the body heat and protects 10 the body from drafts and evaporative effect of the atmosphere.

A further object is to produce such a vestment which is not only provided with means for causing it to exert a yielding and adjustable pressure on parts of the body of the wearer, but which is 15 so arranged as to produce a massaging effect on parts of the body, in response to movements of the body.

20 A further object is to produce a vestment which is provided with a pneumatic chamber or compartment so arranged as to exert a yielding pressure on a part of the body of the wearer.

A further object is to produce such a vestment provided with massaging projections adapted to be 25 yieldingly held in contact with a part of the body of the wearer and so arranged that body movements will occasion a massaging effect.

Considerable attention is being paid to procedure and apparatus for reducing obesity. It has 30 been fairly well established that rolling is an excellent and beneficial exercise and has the effect of reducing the abdomen and even the hips. The individual, in taking the rolling exercise, lies prone on the floor or other flat surface and calls into 35 play such muscles as are necessary to roll the body over and over, and from side to side. When this exercise is prolonged a sufficient time and entered into with sufficient energy the circulation of the blood and the body temperature are materially 40 increased. It has also been found that heat applied to the body in such a way as to produce a copious flow of perspiration is beneficial in that it opens the pores and causes the skin to function properly as an excreting organ, thus throwing off 45 waste and poisonous material and breaking down, or at least preventing congestions which may result in unsightly enlargements of parts of the body. It has also been determined that massaging of fatty and enlarged parts of the body is 50 effective in obtaining a material reduction of such parts.

The apparatus illustrated as an embodiment of this invention is of such character that all the above mentioned beneficial results may be 55 obtained in connection with proper exercise and

with a minimum amount of exertion on the part of the wearer of the apparatus. That is to say, the apparatus or vestment is primarily designed to accommodate and facilitate a rolling exercise. It is also so arranged that it protects the body 60 from cold and retains the body heat, thus accentuating the effect of the exercise by rapidly increasing the body temperature and thereby aiding in increasing circulation. The increase in body temperature stimulates the skin, causing 65 it to function properly as an excreting organ. In addition to this, the rolling exercise massages a large portion of the body in a manner very similar to a finger tip massage and thus further stimulates the circulation through the capillaries of 70 the skin and consequently further stimulates the skin in performing its normal function. Combining exercise with a material increase in body temperature while the skin is being massaged is quite effective in reducing obesity and particularly reducing the size of the fatty envelope 75 encasing such parts of the body as are subjected to the direct effect of the massage. That is to say, where the vestment is designed, as illustrated, to not only enclose the abdomen, but to also subject 80 that portion of the body to a massaging effect while the pores of the skin of the abdomen are stimulated by the confined heat, the vestment has a very beneficial effect and where the use of the vestment and appropriate exercises are systematically continued for a reasonable time the 85 fatty tissues are broken down in a normal and natural way without endangering the health of the individual.

In the drawing accompanying and forming a 90 part hereof Figure 1 is a view partially in section and partially in front elevation of a vestment embodying my invention;

Fig. 2 is a diagrammatic view of the vestment in place on a form and illustrates the position 95 it occupies on the body of a wearer;

Fig. 3 is a fragmental sectional view through a portion of the vestment and illustrates structural features of the vestment; and

Fig. 4 is a fragmental elevation of a portion of 100 the inner surface of the vestment and illustrates the arrangement of massaging protuberances formed on the vestment and adapted to be held in yielding contact with the skin of the wearer by a yielding pressure, such as a pneumatic pressure. 105

As illustrated the vestment resembles a corset in that it is provided with a portion designed to snugly fit the torso, but it is provided with leg and arm enclosures and also an enclosure for 110

the chest and shoulders, all so arranged as to retain the body heat and protect the wearer from the cooling effect of drafts and rapid evaporation of body moisture. One of the fundamental features of the vestment is that it is provided with an air compartment so arranged that an inner and flexible surface of the vestment may be forced into intimate contact with the body of the wearer and retained in such contact by pneumatic pressure, and this flexible surface is provided with soft pliable protuberances of about the same size and character as the finger tips. With this arrangement the protuberances are gently pressed against the body and any movement of the body will cause or tend to cause a relative movement between the protuberances and the body with the result that the skin of the wearer of the vestment is subjected to a gentle but extremely effective massage, and under such conditions as not to irritate the skin.

Another feature of the vestment is that it is so designed as to facilitate a rolling exercise. That is to say, the air or pneumatic compartment envelopes the abdomen and hips and thus provides an air cushion between the floor or flat surface and the heavier portions of the body of the wearer, with the result that the rolling exercise is rendered more comfortable, but under such conditions that the effort put forth on the part of the wearer to accomplish the rolling movement is not materially reduced.

As illustrated, the corset or torso fitting portion of the vestment consists of an outer sheath of fabric 6, which is preferably quite pliable, but at the same time, substantially air tight. This encasing element may be made from such material as mercerized silk and the air cushion 7 is cemented or otherwise rigidly secured to it. As shown, the air cushion consists of an outer wall 8, contacting with and secured to the fabric sheath 6, and an inner wall 9 so secured to the outer wall as to enclose an air chamber capable of retaining a relatively high air pressure, viz., an air pressure of from three to ten pounds above atmospheric pressure. The walls enclosing the air chamber—that is, the walls 8 and 9—are preferably formed of rubber and the inner wall 9 is formed of very soft and pliable rubber and is provided on its inner surface with a plurality of protuberances 10 formed from soft pliable material such as rubber. The surfaces of these protuberances are finely corrugated so as to avoid having a smooth rubber surface contacting with the skin. A smooth rubber surface will stick to the skin, particularly where the skin is wet with perspiration. The corrugations may be so fine that they approximate the texture of silk or even the texture of the finger tips.

The walls 8 and 9 of the air compartment are secured together so as to form an air tight enclosure. Reinforcing straps or belts 11 are secured to the fabric sheath 6 and preferably terminate in reinforcing edge members 12 which are secured to the opposite edges of the fabric sheath 6 along an opening 13 on one side of the torso portion of the vestment. These bands are preferably at least an inch wide and are spaced about three inches apart.

It should be understood that the rubber walls of the air chamber are continuous and in effect form an uninterrupted girdle around the body of the wearer, of such width that it extends from just below the arm pits to well below the hips of the wearer. The sheath 6 is, as stated, rigidly secured to the outer wall of this air compartment,

but is interrupted at the opening 13 to permit the vestment to be drawn on to the wearer over the feet and legs and then upwardly into position around the torso. In order to close this opening I provide a number of closely spaced straps 14 which are secured to opposite edges of the opening and are provided with the usual buckle or other convenient locking device capable of locking opposed straps in adjusted position so that the sheath 6 more or less conforms to the contour of the torso or enclosed part.

In order to prevent the unreinforced rubber wall 8 from bulging outwardly between the straps 14 I preferably extend a free portion of the sheath 6 so as to in effect provide a tongue which extends across the opening 13 and is located between the straps 14 and the wall 8. In order to prevent bulging of the soft pliable walls of the air chamber at the top and bottom of the torso portion of the vestment I reinforce these portions of the combined walls 8 and 9 with a heavy fabric 8a such as a heavy mercerized silk. It will, of course, be apparent that other means may be provided for reinforcing the top and bottom edges of the air compartment, for example, a soft rubber filler may be employed at the junction of the walls 8 and 9 and may be either cemented or integrally formed with the walls 8 and 9.

A coat-like portion 15 is secured to the upper portion of the torso portion and is provided with an extensible or adjustable neck band 16, arm extension 17 and extensible or adjustable arm bands 18. This portion of the vestment is preferably made from a soft pliable fabric such as mercerized silk and is integrally attached to the sheath 6, or formed as a part of the sheath. Air vents 19 may be provided as shown in the region of the arm pits and adjustable fasteners, such as the connections shown may be provided for the neck and arm openings. A convenient form of fastener is the well known and so called zipper fastener.

Leg extensions 20 are provided on the lower portion of the vestment, and each is provided with an extensible or adjustable leg band 20a. These leg extensions like the portion 15 are preferably formed of mercerized silk and are preferably secured to the sheath 6, although they may be formed as a part of the sheath. Adjustable fasteners such as zippers 21 may also be provided for the leg openings. The neck, leg and arm bands may be formed of resilient material such as rubber or they may be individually adjustable.

I have also shown shoulder straps 22 for securing the corset or torso portion of the vestment in place. These straps are preferably wide, are adjustably secured together by means of buckles or the like, and are secured to the sheath 6. One feature of the adjustable devices forming a part of the vestment is that they are all operated from the front of the vestment except the strap 14 and even here the buckles are so located that they are easily accessible from the front of the vestment.

An air valve 23 is suitably secured to the outer wall 8 of the air compartment and is adapted to be connected to a hose 24 for delivering air pressure to the interior of the compartment. This air valve is preferably located below the hip portion of the vestment and is covered by a flap 25 when the air hose is not attached to the air valve. The air valve is so located and so protected that it does not interfere with the bodily movements of the wearer even during a rolling exercise, and is preferably similar to a tire valve in that it

freely permits a flow of air into the compartment and automatically checks a flow in the reverse direction.

In adjusting the vestment, the neck, arm and leg openings are enlarged by the adjustable means employed and, as stated, the vestment is drawn upwardly over the feet and legs into position over the torso. The coat portion of the vestment is then brought to position by placing the arms through the arm openings 18. This brings the neck opening in the proper position and the adjustable connections may then be closed, thus enveloping the chest and shoulders as well as the torso. The shoulder straps are then adjusted to position for the purpose of holding the corset portion in place and the straps 14 are adjusted to suit the comfort of the wearer. After the leg openings are adjusted air pressure is admitted to the air compartment. This may be accomplished by employing any source of air under pressure such as an ordinary air pump located on the floor or in any convenient position, and the wearer can, by means of the pump, introduce sufficient air pressure into the air compartment to cause the inner wall and the protuberance of that wall to snugly contact with the torso. The air hose is then disconnected and the vestment is in the proper condition for any exercise that the wearer may indulge in.

Having described the preferred embodiment of my invention it will be apparent to those skilled in the art that various changes, substitutions, modifications, additions and omissions may be made in its structural details and in its arrangement of parts without departing from the spirit and scope of the invention as defined by the appended claims.

What I claim is:

1. A vestment of the character described, comprising a torso portion having a pneumatic compartment formed therein, a fabric sheath secured to and reinforcing the outer wall of said compartment, means secured to said sheath for adjusting said compartment in place on the body of the wearer of the vestment, and means for delivering fluid under pressure to said compartment.

2. A vestment including a portion having a pneumatic compartment in the form of an uninterrupted girdle, a fabric sheath secured to and reinforcing the outer wall of said compartment, but open along one side thereof, spaced reinforcing members secured to said fabric sheath, adjustable fastenings for securing the open edges of said sheath together, and protuberances formed on the inner wall of the compartment for contacting with the body of the wearer.

3. A vestment including a pneumatic compartment in the form of an uninterrupted girdle for encircling the torso of the wearer of the vestment, said compartment having a soft flexible inner wall provided with soft corrugated protuberances thereon for contacting with the skin

of the wearer, means for delivering fluid under pressure to said compartment, and an adjustable sheath covering and reinforcing said compartment.

4. A vestment including a pneumatic compartment for encircling the body of the wearer, said compartment having a flexible inner wall provided with soft protuberances for contacting with the skin of the wearer, an adjustable sheath for said compartment secured to and reinforcing the outer wall thereof, spaced strap members secured to said sheath, and means for delivering fluid under pressure to said compartment to force the inner wall thereof and the protuberances thereon into intimate contact with the body of the wearer whereby on movement of the body relative to the encircling compartment, the protuberances impart massaging action to the skin of the wearer.

5. A vestment comprising a torso portion having a pneumatic compartment for encircling the body of the wearer, a sheath therefor secured to and reinforcing one wall of said compartment, a non-pneumatic shoulder portion secured to said sheath and having arm extensions, non-pneumatic leg extensions secured to said sheath and adjustable means operable from the front of the wearer for securing said vestment in place on the wearer.

6. A vestment, comprising a torso portion having a pneumatic compartment for encircling the body of the wearer and consisting of an inner flexible wall and an outer wall arranged in air tight relation, a sheath secured to and reinforcing the outer of said walls, means for reinforcing the edges of the walls of said compartment, and adjustable means for adjusting the sheath with relation to the body of the wearer.

7. A vestment comprising a pneumatic torso portion, a non-pneumatic shoulder enclosing portion, and non-pneumatic leg enclosing portions, said pneumatic torso portion having a soft pliable surface adapted to encircle the body and hips of the wearer and having finely corrugated protuberances formed thereon, means for adjusting the vestment on the wearer and means for delivering pneumatic pressure into said torso portion to yieldingly hold said protuberances in contact with the torso and hips of the wearer.

8. A vestment comprising a non-pneumatic shoulder and arm enclosing portion, leg enclosing portions and a torso enclosing portion, having a pneumatic compartment formed therein, said pneumatic compartment having a soft pliable inner wall provided with soft corrugated body-engaging protuberances formed thereon, an outer wall for said compartment, a sheath secured to and reinforcing said outer wall, means for adjusting the sheath to the wearer and means for delivering pneumatic pressure to said compartment.

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