Nov. 22, 1932. A. MOORE 1,888,283

LIFE BELT

Filed Dec. 3, 1931

FIG. 1

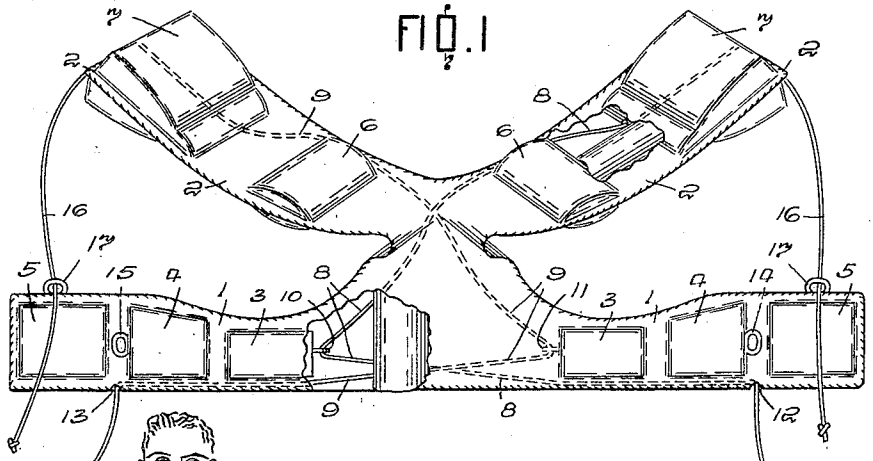


FIG. 2

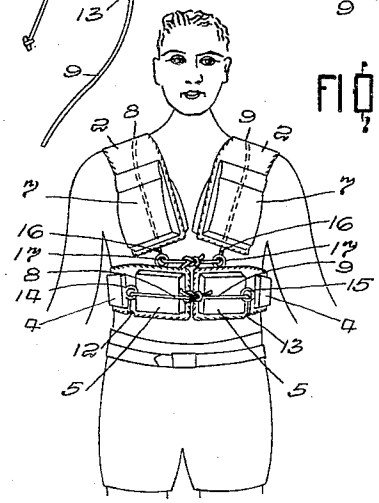


FIG. 3

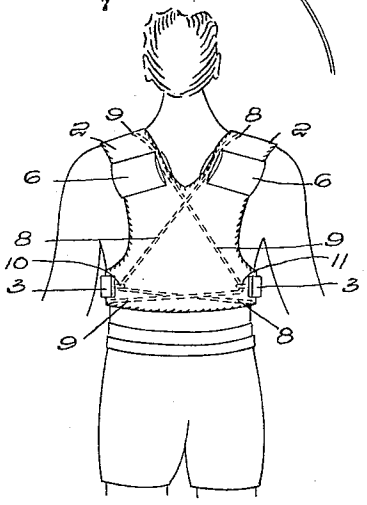
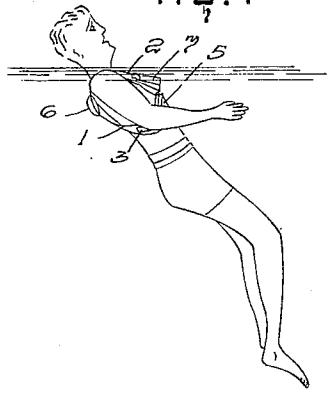


FIG. 4



A. Moore
INVENTOR

By: Marks & Clerk
Attys.

Patented Nov. 22, 1932 1,888,283

UNITED STATES PATENT OFFICE

ALEXANDER MOORE, OF OKAIN'S BAY, BANKS PENINSULA, NEW ZEALAND

LIFE BELT

Application filed December 3, 1931, Serial No. 578,782, and in New Zealand May 16, 1931.

This invention relates to life-belts adapted to be worn in cases of shipwreck and the like for the purpose of buoying the wearers up in the water and thus preventing them from becoming drowned.

An article of this kind, in order to be thoroughly effective, should possess certain qualities notably, the ability to be easily and quickly donned, to fit securely upon the wearer without danger of becoming displaced, and to maintain the wearer in such a position as to prevent him from drowning or suffocating if unconscious in the water.

In certain previous attempts in this direction the construction has included a portion containing buoyant elements and adapted to encircle the body beneath the arms, and a bifurcated or yoke portion, also containing buoyant elements, such yoke portion being conjoined by a web to the back part of the said encircling portion and the two branches of such yoke being adapted to fit over the shoulders and chest of the wearer and to be secured at their extremities to the front part of said encircling portion.

In such constructions however the said buoyant elements have been continuous or arranged at equidistantly spaced intervals throughout both the encircling member and the branches of the yoke.

Such belts, as previously constructed, although to some extent satisfactory, have been found in practice to be incapable of suitably positioning in the water wearers who may be unconscious or for other reasons are unable to make the necessary effort to maintain the mouth and nostrils above the surface of the water, while it has been impossible to vary the proportions of standard belts of this kind to make them fit accurately wearers of different sizes and figures.

It is the object of the present invention to provide a belt of this description of novel and improved construction whereby the same will be capable, in the absence of effort on the part of the wearer, of placing and maintaining the latter in a position with the body at an angle of approximately 45° to the vertical with the face upward, and whereby such belt may be simply and conveniently adjusted to fit and conform to the requirements of various wearers.

In order that the nature of the invention and its construction may be clearly understood, it will now be fully described and explained with reference to the accompanying drawing, in which:—

Fig. 1 shows a belt in accordance with the present invention spread out in a more or less flat condition and in which portions of the web are shown torn away to more clearly reveal the means employed in attaining the size adjustment,

Figs. 2 and 3 illustrate respectively the front and back of the belt in place upon the wearer, and,

Fig. 4 shows, by way of illustration, a position in which the wearer would be placed by the belt in the absence of effort on his part.

The belt is composed as customary of a web, of canvas or other flexible material, whereby are enclosed and interconnected buoyant elements which may be of any appropriate material but preferably consisting of slabs or cork, such belt comprising in form a body-encircling member 1 adapted for fastening together at the front and a yoke 2 united to said body-encircling member at the back thereof and providing a pair of branches adapted to pass over the shoulders of the wearer and to be attached at their extremities to the front part of the said encircling member as in certain previous constructions.

According to the present invention however the body-encircling member 1 is provided with buoyant elements as 3, 4 and 5 which commence at the two side portions adapted to fit beneath the arms of the wearer, and extending from thence to the terminations of such member at the front, while the yoke 2 is provided in each of its branches with buoyant elements 6 adapted to fit behind the shoulders of the wearer, at or about the part at which the shoulder-blades occur, and, at an interval from such elements, with further buoyant elements 7 which commence at the parts which bear against the front of the shoulders and extending from thence to the

extremities of the branches to fit against the chest of the wearer.

The said buoyant elements of the body-encircling member are preferably arranged to increase in bulk from their points of commencement at the sides to their terminations at the front, this being preferably accomplished by making the successive elements as 3, 4 and 5 of increasing thickness and depth and those elements of such member which extend around the front, such as 4 and 5 are preferably tapered in thickness from their upper to their lower edges.

According to the present invention also the buoyant elements 7 which extend at the front or chest of the wearer are of increasing bulk from their upper to their lower terminations, this being preferably accomplished by making such elements of substantially wedge-shape as here shown so as to gradually increase in thickness towards their lower ends and by which special formation the desired arrangement of their buoyancy is attained without making such elements cumbersome or hampering to the wearer.

By the present construction the back portion of the belt, extending between the rear terminations of the elements 3, consists of flexible web entirely devoid of buoyant material save for the elements 6 of the yoke and from which elements extend further non-buoyant web-portions adapted to pass over the shoulders of the wearer and connecting with the elements 7.

According to the present invention a pair of tapes or cords as 8 and 9, connecting one with each of the buoyant elements 7 at the terminations of the yoke, are led to extend slidably along its respective branch of the yoke and down the back portion of the belt where such cords are passed one through each of a pair of guides located at the lower part of the back portion one near each of the two lateral terminations thereof, the arrangement being such that if the portions of the cords extending beyond the guides are drawn together such cords will tend to cause puckering of the non-buoyant portions of the yoke and back thus reducing both the length of the yoke and the width of the back portion of the belt.

In the preferred form of the construction the said cords are interlaid between the two layers of fabric of which the web is composed and such cords are preferably arranged in cross-wise relation with each other at the back so as to extend in substantially diagonal directions each to the guide located at the opposite lateral side of the belt to that at which its connected buoyant element of the yoke occurs.

The said guides may consist simply of outlet openings formed in the web and through which the ends of the cords may protrude to permit of their being tied together at the back.

On account of the fact that the size adjustment is necessarily effected when the belt is in place upon the wearer, the operation of tying the cords at the back is apt to be inconvenient and to overcome this difficulty the cords, after passing through the guides, are preferably led in cross-wise relation to extend around the body-encircling portion to the front.

Thus in the preferred form of the arrangement as here shown such guides consist of a pair of eyes or the like as 10 and 11 suitably fixed in the interior of the web as by attaching them to the rear terminations of the buoyant elements 3 of the body encircling member and from which eyes the ends of the cords are led in cross-wise relation to extend through the web of such body-encircling member to outlet openings as 12 and 13 located in the front part of the said member.

By this arrangement the protruding ends of the cords 8 and 9 may be passed through the usual loops as 14 and 15 provided upon the exterior of the belt and then tied together, thus serving also as the necessary means for fastening the body encircling member at the front.

Any suitable means may also be provided for connecting the terminations of the branches of the yoke to the front of the encircling member, such means consisting conveniently of cords or tapes 16 attached to the terminations of the branches and adapted to be passed through loops 17 provided in the upper edge of the front portion of the encircling member as customary.

The belt is preferably made also with its two surfaces identical to allow of its being donned either side out, as customary.

In operation, in donning the belt as here shown, the body-encircling member 1 will be placed around the body and the yoke 2 passed over the shoulders and secured to the body-encircling member by means of the cords 16 and eyes 17. This being accomplished the ends of the cords 8 and 9 will be drawn tight and tied together at the front, thereby, at one operation, adjusting the size of the belt to the requirements of the wearer and fastening together the body-encircling member 1, as here illustrated in Fig. 2.

It will be seen that by the construction of the belt as herein described the great preponderance of its buoyancy will occur at the portion which fits over the chest of the wearer, thus owing to the absence of buoyancy in the lower portion of the back, tending to raise the chest while the relatively lesser buoyancy of the buoyant elements 6 fitting against the back of the shoulders will provide a support for the body at this point. As the result therefore a belt of this construction will, in

the absence of effort on the part of the wearer, serve to place the latter in an upwardly inclined position, such as that shown in Fig 4, in which the body lies at an angle of about 45° to the vertical with the face upward so that the mouth and nostrils will lie well above the water.

I claim:

1. A life-belt comprising a body-encircling member having buoyant elements commencing at the parts which fit against the two lateral sides of the wearer and extending from thence around the front, and a yoke united to the back portion of said body-encircling member and having two branches designed to pass over the shoulders and chest of the wearer and provided with buoyant elements at the parts which fit behind the shoulders of the wearer and at an interval from such elements with further buoyant elements designed to fit over the chest of the wearer.

2. A life-belt according to claim 1, wherein the buoyant elements of the encircling member are made of increasing dimensions from their points of commencement at the sides of the terminations at the front.

3. A life-belt comprising a body-encircling member having buoyant elements provided in the side and front portions only, a yoke united to said body-encircling member at the back thereof and providing a pair of branches designed to pass over the shoulders and chest of the wearer, said branches being provided with buoyant elements at the parts which fit behind the shoulders of the wearer, with non-buoyant webs fitting over the tops of the shoulders, and with further buoyant elements extending from the portions which fit at the front of the shoulders to the terminations of the branches.

4. A life-belt according to claim 3 wherein the said front buoyant elements of the yoke are of gradually increasing dimensions from their upper to their lower terminations.

5. A life-belt according to claim 2 wherein said front buoyant elements of the yoke are subsequently wedge-shaped in form to gradually increase in thickness from their upper to their lower terminations.

6. A life-belt composed of a web of flexible material enclosing and interconnecting buoyant elements and comprising a body-encircling member wherein the buoyant elements are located in the portions which fit at the lateral sides and front of the wearer only and a yoke united to the back of said body-encircling member and providing a pair of branches designed to fit over the shoulders and chest of the wearer and having its buoyant elements located in the portions which fit behind the shoulders and in the terminations of its branches which fit against the chest of the wearer only and a pair of cords connecting one with each of said buoyant elements at the front terminations of the yoke, said cords being led to extend slidably each along its respective branch and down the back portion of the belt and being passed one through each of a pair of guides located at the lower part of said back portion one near each of the two lateral terminations thereof, thereby to enable the dimensions of the belt to be adjusted by drawing together the portions of said cords exending beyond said guides.

7. A life-belt according to claim 6 wherein said adjusting cords are interlaid between the two layers of fabric of which the web is composed.

8. A life-belt according to claim 6 wherein said adjusting cords are arranged in cross-wise relation with each other at the back to extend in substantially diagonal directions each to the guide located at the opposite lateral side of the belt to that at which its connected buoyant element of the yoke occurs.

9. A life-belt according to claim 6 wherein the said adjusting cords after passing through the said guides are led in cross-wise relation to pass around said body-encircling member to the front where they are adapted to be fastened together thereby to serve also as a means for securing together said body-encircling member.

10. A life-belt according to claim 6 wherein said adjusting cords are interlaid between the two layers of fabric of which the web is composed, and wherein said cords are arranged in cross-wise relation with each other at the back to extend each to the guide located at the opposite lateral side of the belt to that at which its connected buoyant element of the yoke occurs, and wherein the portions of said cords beyond said guides are led in cross-wise relation to extend through the web of said body-encircling member to protrude through outlet openings located at the front part of said member.

In testimony whereof I have signed my name to this specification.

ALEXANDER MOORE.