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2,733,712

ORTHOPEDIC BELT

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Fig. 1

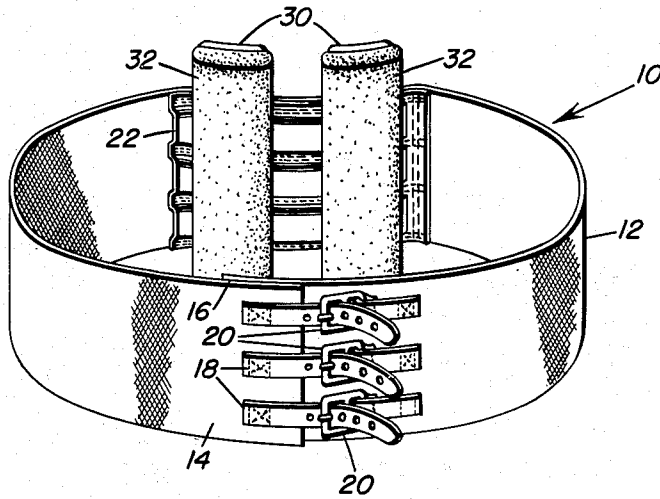


Fig. 3

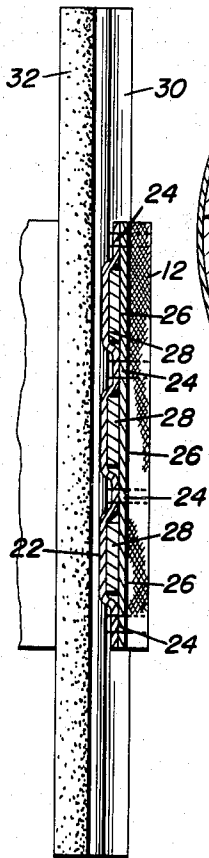
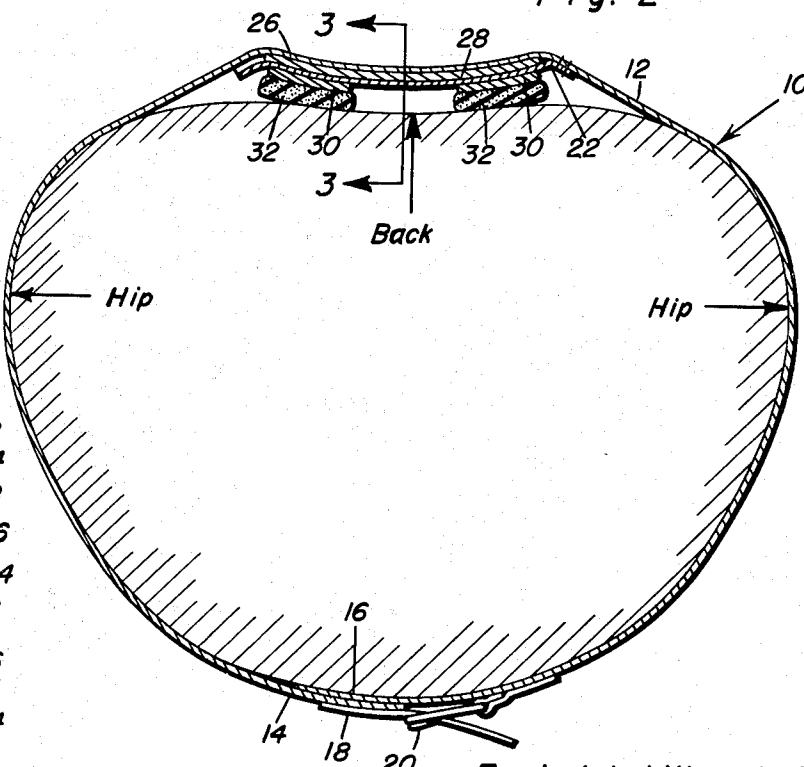


Fig. 2



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ORTHOPEDIC BELT

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2 Claims. (Cl. 123—78)

This invention relates in general to orthopedic appliances, and more specifically to an orthopedic belt.

While there have been devised many orthopedic belts which are being worn and giving comfort to their wearers, the average orthopedic belt is, in fact, no more than a support. When one places a belt around them, no matter how tight they pull the belt, an average belt can produce no more than a squeezing effect on its wearer inasmuch as it is limited to tension and accordingly it cannot exert the desired inward pressure required for many types of ailments.

It is the primary object of this invention to provide an improved orthopedic belt which includes means for exerting inwardly directed pressure at a predetermined point.

Another object of this invention is to provide an improved orthopedic belt which is provided with springs for exerting inwardly directed pressure, the pressure being variable by both varying the tension of the belt and to the number of springs.

Another object of this invention is to provide an improved orthopedic belt which is of an extremely simple construction and which is formed of readily obtainable material so as to be economically feasible.

A further object of this invention is to provide an improved orthopedic belt which utilizes springs for exerting inwardly directed pressure at a predetermined point, said belt having associated therewith body engaging pads at the point of inwardly directed pressure, said pads extending vertically beyond the confines of the belt so as to extend the pressure over a relatively large area.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the orthopedic belt which is the subject of this invention and shows the general outline thereof;

Figure 2 is an enlarged transverse sectional view taken substantially through the center of the belt and shows the same applied to one's body; and

Figure 3 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 2, and shows the manner in which the springs are carried by the belt.

Referring now to the drawings in detail, it will be seen that the orthopedic belt, which is the subject of this invention, is referred to in general by the reference numeral 10. The orthopedic belt 10 includes a flexible belt member 12, having overlapping ends 14 and 16. Carried by the end 14 and extending longitudinally as a continuation thereof is a plurality of vertically spaced straps 18. The straps 18 are adjustably associated with buckles 20 carried by the end 16 of the belt member 12 in vertical alignment with the straps 18.

Disposed at the rear of the belt member 12 and secured to the inner face thereof is an elongated piece of material 22 which is secured to the belt member 12 by a plurality of vertically spaced, longitudinally extending

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rows of stitching 24 to form vertically spaced pockets 26.

Disposed at each of the pockets 26 is a leaf spring. It will be noted that the leaf springs 28 are curved in a direction opposite to the normal curvature of the belt member 12. In this manner, when the belt member 12 is tensioned, there is a tendency to straighten out the leaf springs 28 with the result that an inwardly directed pressure is applied at the location of the leaf springs 28.

In order that the inwardly directed pressure applied by the leaf springs 28 may be applied over a large area, there is secured to the material 22 a pair of spaced, vertically extending stiffeners 30. The stiffeners are faced with a padding 32 which is intended to engage the wearer's body to facilitate the comfort of a wearer.

It will be understood that the pressure exerted onto the back of a wearer of the orthopedic belt 10 by the padding 32, may be varied by either varying the number of leaf springs 28 or by varying the tension in the belt member 12. It will be understood that the tension belt member 12 may be varied through the adjusting of the straps 18.

It will be understood that the particular arrangement illustrated and described is for one's back if there be desired to exert pressure thereon at spaced points. Should it be desired to exert the pressure on the center of the back, the stiffeners 30 and the padding 32 may be replaced by a sheet of padding (not shown) which extends the full length of the sheet of material 22 and does not extend vertically above and below the belt member 12.

Although the orthopedic belt 10 has been illustrated and described for use with the wearer's back, it will be understood that the position of the leaf springs 28 may be varied so as to provide comfort for one suffering from abdominal rupture. Also, it is intended that the orthopedic belt 10 be of different sizes so that the same may be utilized on one's wrist, arm, leg, or other portions of the human body. It is also within the scope of this invention to utilize the orthopedic belt 10 as a tourniquet. In such case, the leaf springs 28 will apply the desired pressure on the vein or artery.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An orthopedic appliance comprising a belt having ends, tensioning means on said ends, a plurality of vertically spaced longitudinally extending pockets on the inner side of said belt between said ends, leaf springs in said pockets extending longitudinally of the belt and longitudinally curved in a direction opposite the normal curvature of the belt, and a plurality of laterally spaced vertically extending stiffeners of rigid material secured to said pockets at the inner side of the belt transversely of said springs and extending beyond both edges of the belt for transferring pressure from the springs to the body of a wearer of the belt.

2. An orthopedic appliance according to claim 1, said stiffeners having padded inner sides.

References Cited in the file of this patent

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