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2,926,663

TRUSS

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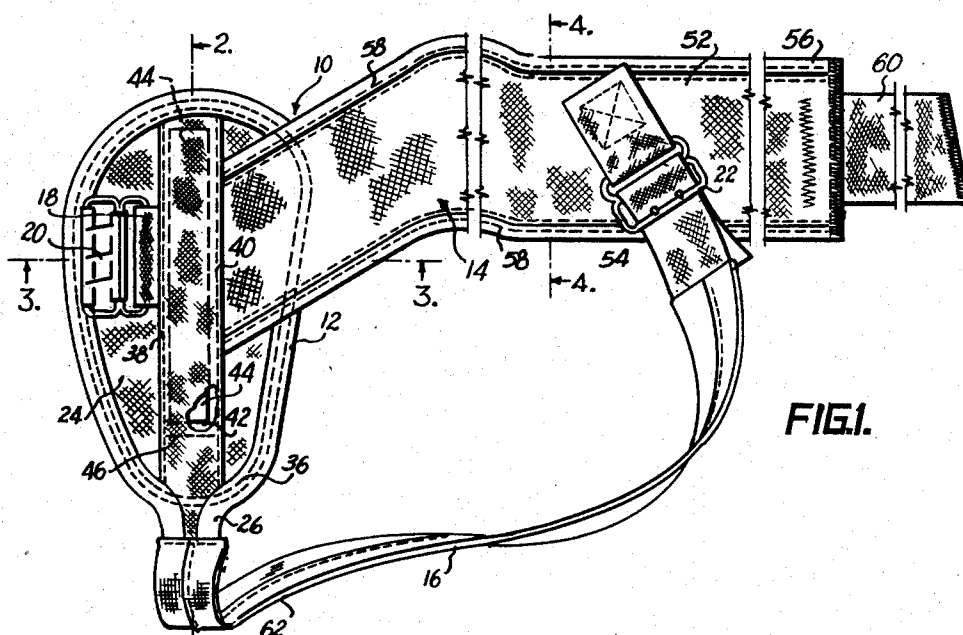


FIG. 1.

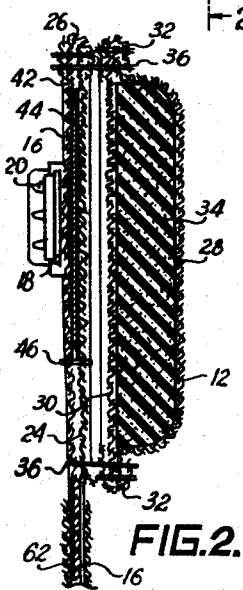


FIG. 2.

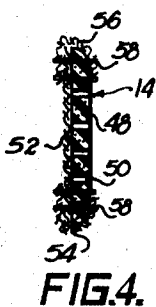


FIG. 4.

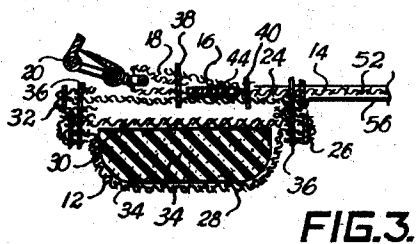


FIG. 3.

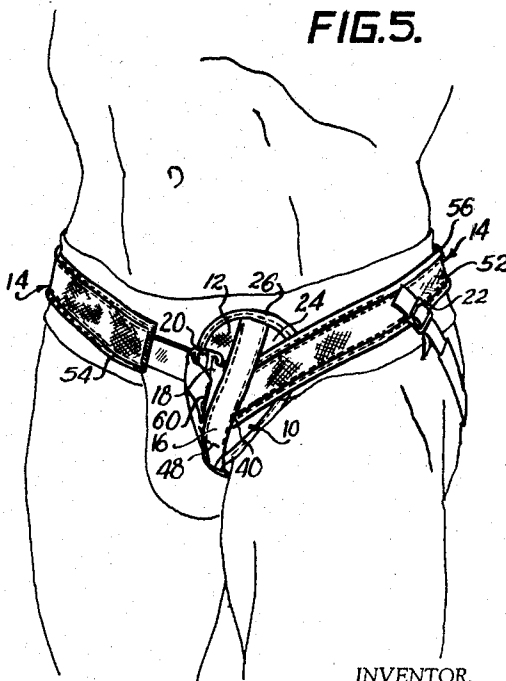


FIG. 5.

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2,926,663

TRUSS

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5 Claims. (Cl. 128—100)

This invention relates to surgical appliances and more particularly to a truss to be worn by human beings.

The primary object of this invention is to provide a truss which is composed in its entirety of materials which are so formed as to give the appliance a comfortable wearing quality but yet are fully satisfactory in providing the needed support for the injured area of the human body.

A further object of this invention is to provide a truss having a single substantially elliptical pad of flexible material held in place by a body-encircling belt also composed of flexible material and a leg strap interconnecting the pad with the body-encircling belt.

A yet further object of this invention is to provide a pad for trusses which has a filling of resilient, compressible material having one face thereof covered with a soft fabric which bears against the injured part of the body and also has a stay carried by the opposite face of the pad and which serves to maintain the pad in its desired position and fully against the body of the wearer.

A yet further aim of this invention is to provide a truss which is easily and quickly adjustable by means of the non-extensible body-encircling belt and the non-extensible leg strap, whereby the need for any elastic members is eliminated and the truss may at all times be held in place merely by tightening the belt and strap to the desired snugness.

Other objects of this invention are the novel manner in which the pad, belt and strap are constructed from various layers of material; the novel manner of interconnection of said parts; and other details of construction which will become apparent from the following specification referring to the accompanying drawing wherein:

Figure 1 is a fragmentary, perspective view of the truss;

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken along line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken along line 4—4 of Fig. 1; and

Fig. 5 illustrates the truss as it is worn by the user thereof.

The truss, broadly designated by the numeral 10, is basically composed of a pad 12 which is substantially elliptical in plan configuration and has interconnected therewith a body-encircling belt 14 and a leg strap 16 adapted to be releasably interconnected to belt 12. Also connected to pad 12 is a short loop of material 18 which carries a buckle 20 for releasably receiving the free end of belt 14. A second buckle 22 is carried by body-encircling belt 14 and releasably receives the end of strap 16 opposite to that secured to pad 12.

As best seen in Fig. 2, pad 12 is composed of a plurality of layers of material and has a front wall 24 preferably formed from a light canvas fabric such as duck or the like. Front wall 24 has a binding 26 about the marginal edge thereof. A back wall 28 of a loosely knit

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fabric such as flannel or the like, the nap surface of which is disposed to be against the body of the wearer of the truss, is interconnected with an intermediate wall 30, the back wall 28 and the intermediate wall 30 having their marginal edges bound together throughout the lengths thereof by binding 32. Held between walls 28 and 30 is a filling layer 34 of resilient material, preferably sponge rubber or a similar resilient, compressible material. Binding 26 and binding 32 are interconnected throughout substantially the entire lengths thereof by lines of stitching 36, the only exception to said interconnection being at the lowermost portion of the respective walls where binding 32 is directly secured to front wall 24 by lines of stitching 36. This for the reason that at the lowermost portion of front wall 24 the binding 26 extends downwardly and serves to bind the adjacent edges of leg strap 16.

Leg strap 16 overlies front wall 24 and traverses the longitudinal axis thereof, said strap 16 being secured along its marginal edges to front wall 24 by lines of stitching 38 and 40. Line of stitching 36 traverses leg strap 16 at the opposite ends thereof which are in overlying relationship to wall 24 and additionally secures strap 16 to said wall 24. A pocket 42 is formed as a result of the manner of stitching strap 16 to front wall 24, the pocket being disposed between lines of stitching 38 and 40 and between the inner face of leg strap 16 and the outer face of wall 24. Carried by pocket 42 is a stay 44 of resilient material such as plastic or the like. Stay 44 is substantially rectangular in configuration and is designed to fill pocket 42, the longitudinal movement of stay 44 being prevented by a line of stitching 46 which secures strap 16 to front wall 24 and thus forms a bottom for pocket 42.

Loop 18 is also secured to front wall 24 by suitable stitching and has the free ends thereof disposed between strap 16 and front wall 24 whereby to more securely hold loop 18 in place, additional strength being provided by line of stitching 38 which also traverses the free inner ends of loop 18. Buckle 20 which is swingably carried by loop 18 is of conventional nature and has a series of teeth adapted to pierce the free end of belt 14 and hold the same tightly in place.

Belt 14 is obliquely secured to front wall 24 of pad 12 and as a result of being so secured enables truss 10 to be placed on the body in the manner shown by Fig. 5. The angularity of belt 14 with respect to pad 12 enables the pad to be placed at any point against the lower abdomen of the wearer and yet allow the belt 14 to encircle the wearer at substantially the normal waist line thereof. The end of belt 14 secured to the front wall 24 is disposed partially between leg strap 16 and front wall 24 and is held in place by line stitching 40. Line of stitching 36 also traverses belt 14 and secures the same to a portion of the marginal edge of front wall 24 and binding 26.

As best seen in Fig. 4, belt 14 is comprised of a primary, normally innermost layer 48 of resilient material such as sponge rubber or the like said material being provided with a plurality of perforations 50 therein to aid in ventilation. The second, normally outermost layer 52 of belt 14 is formed of an elongated strip of light canvas material or the like and similar in nature to that used for front wall 24. Bindings 54 and 56 overlie and serve to interconnect the respective marginal edges of inner layer 48 and outer layer 52, the bindings being secured to said layers by lines of stitching 58. Thus, a continuous, flexible, non-extensible body-encircling belt is formed and the same is rendered comfortable to the wearer as a result of having the resilient, perforated material comprising layer 48 against the body. A webbing strap 60 completes belt

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14 and is adapted to pass through and be held in place by buckle 20.

Leg strap 16 is composed of a length of light non-extensible material. After traversing the longitudinal axis of pad 12 strap 16 extends downwardly and is adapted to encircle the leg of the wearer and be received by buckle 22. To add to the comfort of the wearer a piece of a loosely knit, soft fabric 62 is wrapped about belt 14 between the point of juncture with front wall 24 and the point of normal attachment of strap 16 to buckle 22. Said material is preferably the same as is used to form the back wall 28 of pad 12 and may be flannel or similar substance having the nap portion thereof facing outwardly whereby to engage the body of the wearer of the truss 10.

Thus, it is seen that truss 10 may be placed upon the wearer by positioning the pad over the desired location, encircling the body with belt 14 and then coupling the same with buckle 20. The leg strap 16 should extend about one leg and be held in place by buckle 22. Manifestly, as none of the materials from which the truss 10 is formed are extensible a single buckle adjustment may be accomplished by merely tightening or loosening belt 14 within buckle 20 as is desired by the wearer to bring pad 12 into tight engagement with the body and present a comfortable but yet rigid support for the injury.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A truss comprising a substantially elliptical multi-layer pad of flexible material; a body-encircling belt having one end thereof affixed to said pad; a leg strap releasably interconnecting said pad and said belt; a band forming a continuation of said leg strap and secured to the outermost face of said pad, said band forming a pocket; a stay carried within said pocket; a loop of non-extensible material secured to said outermost face; and means carried by said loop for releasably engaging the opposite end of said belt.

2. A truss comprising a substantially elliptical, flexible pad said pad having a front wall, a back wall and a layer of resilient material between said walls; a body-encircling belt having one end thereof secured to said front wall; a leg strap releasably interconnecting said pad and said belt, said strap being secured to said front wall and traversing the longitudinal axis thereof; a pocket formed between said strap and said front wall; a stay within said pocket; a loop of non-extensible material secured to said front wall; and means carried by said loop for releasably engaging the opposite end of said belt.

3. A truss comprising a substantially elliptical, flexible pad having a front wall of a light canvas material, a back wall of a loosely knit fabric and a layer of resilient material between said walls, the marginal edges of said

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walls being interconnected throughout the lengths thereof whereby to retain said resilient material therebetween; a flexible, multi-layer body-encircling belt having a portion adjacent one end obliquely secured to said front wall; a leg strap interconnecting said belt and said pad, one end of said strap being releasably secured to said belt, the opposite end of said strap extending along the longitudinal axis of said front wall and being secured at its marginal edges to said front wall thereby to form a pocket; a stay of resilient material carried within said pocket; a loop of non-extensible material secured to said front wall; and means carried by said loop for releasably and adjustably engaging the opposite end of said belt.

4. A truss comprising a substantially elliptical, flexible pad, said pad embodying a front wall of a light canvas material bound about the marginal edge thereof, a back wall of a loosely knit fabric, an intermediate wall of flexible material and a layer of resilient material disposed between said back wall and said intermediate wall, the marginal edges of said back wall and said intermediate wall being bound together whereby to retain said resilient material therebetween, said marginal edges being bound to the marginal edge of said front wall; a body-encircling belt having one end thereof obliquely secured to said front wall, said belt being composed throughout substantially the entire body-encircling length thereof of a first, normally outermost, layer of light canvas material and a second, normally innermost layer of perforated, resilient material, the marginal edges of said layers being bound together throughout the lengths thereof, the opposite end of said belt being adapted for releasable attachment to said pad; a leg strap interconnecting said belt and said pad, one end of said strap being releasably and adjustably attached to said belt, the opposite end of said strap traversing the longitudinal axis of said pad and being secured to the front wall thereof in such manner as to form a pocket between said strap and said front wall; a stay of resilient material carried within said pocket; a loop of material secured to said front wall partially beneath said strap; and a buckle carried by said loop for engagement with said opposite end of the belt.

5. A truss as set forth in claim 4, wherein said leg strap is composed of flexible, non-extensible material and provided with a wrapping of a loosely knit, soft fabric thereabout between the point of juncture with said pad and the end adapted to be connected with said belt.

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