

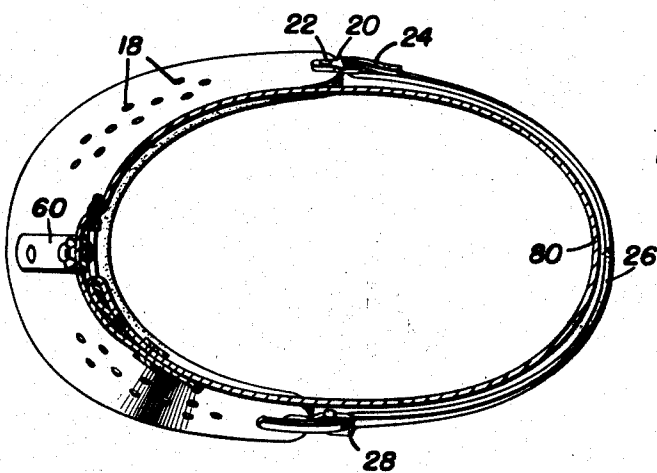
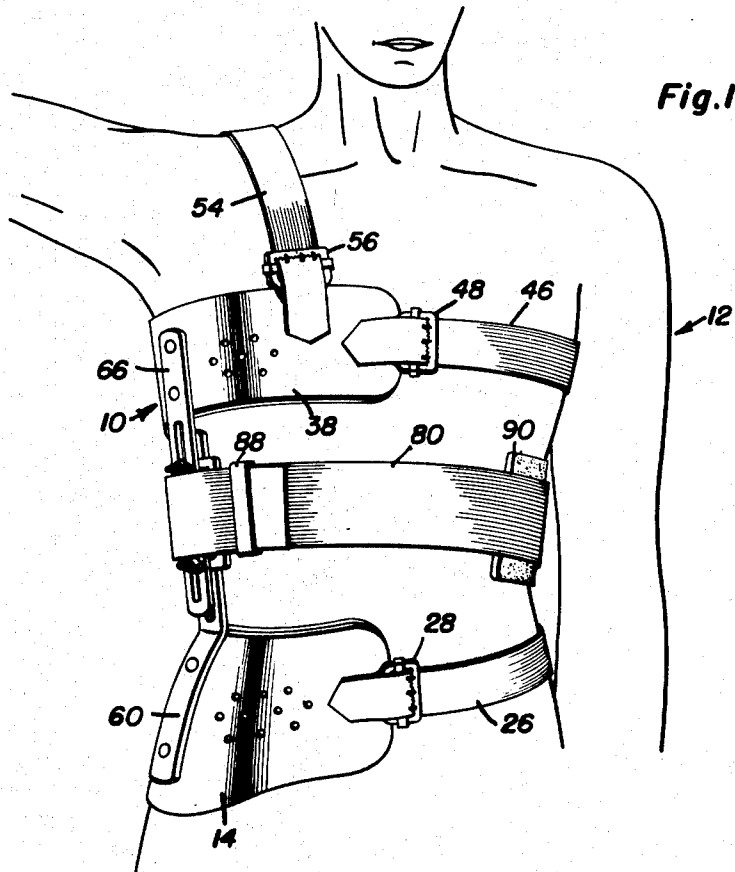
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E. E. TALKISH
SCOLIOSIS BRACE

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2 Sheets-Sheet 1



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2 Sheets-Sheet 2

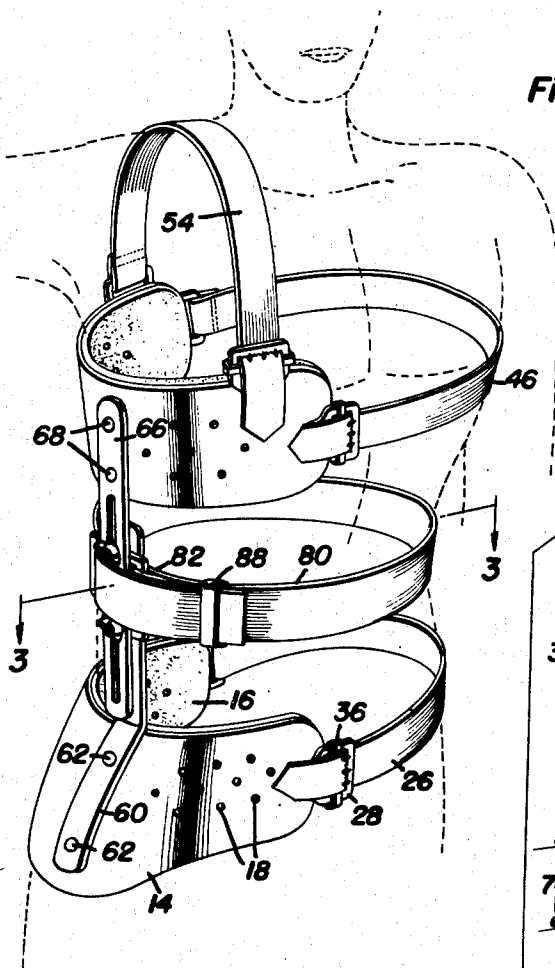


Fig. 2

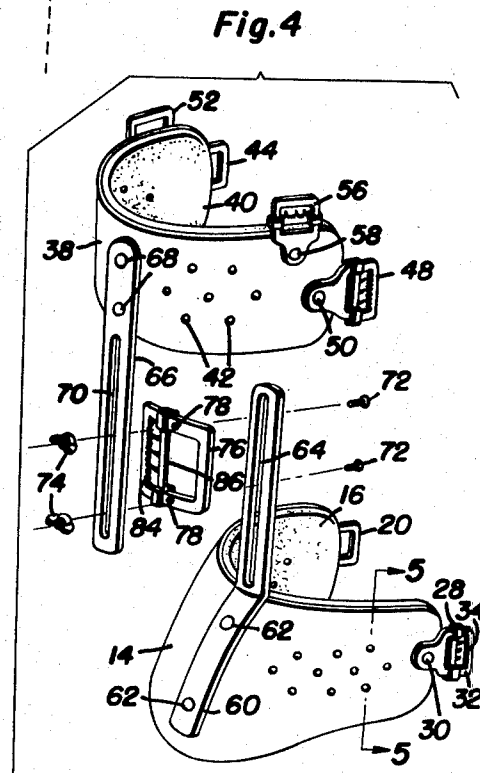


Fig. 4

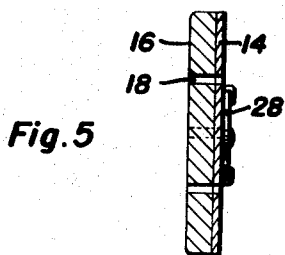


Fig. 5

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SCOLIOSIS BRACE

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2 Claims. (Cl. 128-78)

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This invention relates generally to orthopedic appliances for treating lateral curvature of the spine (scoliosis), and more specifically to scoliosis corrective braces which are adjustable to fit the contour of a body.

The primary object of this invention is to provide an improved scoliosis brace which is designed to firmly brace one side of the body at the upper and lower ends of the curvature of the spine and to have adjustable tension means for engaging the body tangential to point of greatest convexity of the spine.

Another object of this invention is to provide an improved scoliosis brace which is provided with hip and chest engaging pads formed of metal to conform to the body contour.

Another object of this invention is to provide an improved scoliosis brace having hip and chest pads which are adapted to be secured to the body of a person suffering from scoliosis by straps.

Another object of this invention is to provide an improved scoliosis brace which is provided with chest and hip pads and corrective tension straps carried by said pads.

A further object of this invention is to provide an improved scoliosis brace which is provided with chest and hip pads rigidly and adjustably secured together to form a rigid brace adapted to be supported on the hip and chest of a user.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claims, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a perspective view of the improved scoliosis brace, which is the subject of this invention, the brace being illustrated as being positioned on a human body;

Figure 2 is a perspective view of the improved scoliosis brace similar to Figure 1, the human body being shown in dotted lines in order to clearly show the details of the brace;

Figure 3 is an enlarged transverse horizontal sectional view taken substantially upon the plane indicated by the section line 3-3 on Figure 2 and showing the arrangement of the tension strap and hip pad supporting strap with respect to the hip pad;

Figure 4 is an exploded view of the scoliosis brace as illustrated in Figure 1, the securing and tensioning straps being omitted; and

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Figure 5 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 5-5 of Figure 4 and showing the manner in which a strap securing buckle is attached to the hip pad.

Similar characters of reference designate similar or identical elements and portions throughout the specification and throughout the different views of the drawings.

Referring now to the drawings in detail, the scoliosis brace, which is the subject of this invention, is referred to in general by the reference numeral 10 and illustrated as being mounted on a human body 12.

The scoliosis brace 10 includes a hip pad 14 which is shaped to conform to the shape of the hip of the body 12. It will be noted that the hip pad rests on the hip in such a manner that the hip forms a support for the hip pad 14 where-by the hip pad may be rigidly seated thereon. In order that the hip pad 14 will not irritate the hip of the body 12, it is provided with a felt lining 16. Both the hip pad 14 and its associated felt lining 16 are provided with aligned apertures 18 therethrough in order to form air vents through which the hip on which hip pad 14 is mounted may be properly ventilated.

Attached to the rear edge of the hip pad 14 on its outer side is a strap connector 20, the strap connector is secured to the hip pad 14 by a conventional rivet 22 and has secured thereto a loop portion 24 of a web securing strap 26. Carried at the forward edge of the hip pad 14 and secured to the outer surface thereof is a buckle member 28. The buckle member is secured to the hip pad 14 by a conventional rivet 30. The buckle member 28 is provided with a rectangular strap receiving opening 32 having a serrated edge 34 for engaging the web strap 26 and maintain the same in its adjusted position. The strap 26 is urged against the serrated edge 34 by a sliding retaining member 36 on the buckle member 28.

As is clearly illustrated in Figure 1, the hip pad 14 is secured in place by the strap 26 which passes around the body 12 and engages the opposite hip.

The scoliosis brace 10 also includes a chest pad 38 which engages the chest, the upper ribs and a portion of the back of the body 12. In order to prevent irritation of those portions of the body engaged by the chest pad 38, the chest pad is provided with a felt lining 40. The chest pad 38 and its associated felt lining 40 are provided with a plurality of aligned apertures

42 which are similar to the apertures 18 of the hip pad 14, and are intended to ventilate the areas of the body 12 covered by the chest pad.

Secured to the rear edge of the chest pad 38 on its outer surface thereof is a strap connector 44 identical to the strap connector 20 carried by the hip pad 14. The strap connector 44 carries a web strap 46 which passes around the upper portion of the body 12 and has its free end secured to the front edge of the chest pad 38 by a buckle 48. The buckle 48 is identical to the buckle 28 and secured to the outer surface of the chest pad 38 by a conventional rivet 50.

Secured to the rear upper edge of the chest pad 38 on the outer surface thereof adjacent the strap connector 44 is a second strap connector 52. Carried by the strap connector 52 is the looped end of a web strap 54 which extends over the shoulder of the body and is secured to the front upper edge of the chest pad 38 by a strap buckle 56. The buckle 56 is identical to the buckles 28 and 48 and is secured to the outer surface of the chest pad 38 adjacent the buckle 48 by a conventional rivet 58.

The hip pad 14 is provided with a vertical extending connecting bar 60 secured thereto in the central portion thereof by rivets 62. The connecting bar 60 has a portion extending upwardly beyond the hip pad 14 and is provided with an elongated slot 64.

The chest pad 38 is provided with a downwardly extending connecting bar 66 which is secured to the intermediate portion thereof by a plurality of rivets 68. The connecting bar 66 has a portion extending below the chest pad 38 which is provided with an elongated slot 70.

The chest pad 38 is secured to the hip pad 14 by the overlapping extending portions of the connecting bars 60 and 66 which are secured together by a plurality of bolts 72 passing through the elongated slots 64 and 70 of the connecting bars 60 and 66, respectively. The hip pad 14 may be adjusted with respect to the chest pad 38 by moving the pads to their desired relation and clamping same by wing nuts 74 on the bolts 72.

Located between the connecting bars 60 and 66 is a buckle member 76. The buckle member 76 is secured in place by the bolts 72 passing through apertures 78 therein. A tension belt 80 is secured to the buckle member 76 by a loop portion 82. The free end of the belt 80 is passed around the central portion of the body 12 with its free end secured to a serrated edge 84 on the other side of the buckle 76. The strap 80 is maintained in engagement with the serrated edge 84 by a retaining member 86 slidably mounted on the buckle 76. The strap 80 is provided with a loop 88 which is adapted to hold the free end of the strap. The strap 80 is provided with a felt pad 90 for engaging the ribs on the opposite side of the body 12.

While the scoliosis brace 10 is described as being mounted on the body 12, it should be understood that the brace 10 may be secured to the body of any person suffering from scoliosis. By placing the brace 10 on the same side of the body as the concave aspect of the scoliotic curve with the felt pad 90 on the convex side of the curve and adjusting the pad so that it is tangent to the spine at its point of greatest convexity, the felt pad is in a position where it can apply a counter force about the part of the body to be treated. The tension strap 80 associated with

the felt pad 90 is then tensioned to apply force to the felt pad. This tension may be varied from time to time in keeping with the progress of the person being treated. The supporting straps 26, 46 and 54 provide a secure and comfortable anchorage for the brace.

This scoliosis brace may be worn with comfort next to the skin, or it may be worn over the underclothing. The use of the brace in no way interferes with traction treatment or other manipulative treatment of scoliosis, nor is its use inconsistent with these forms of treatment.

The hip and chest pads are preferably formed of malleable cast aluminum; it will be understood that they may be made of hammered steel, plastic or any other suitable material.

The operation of this brace will be understood from the foregoing description of the details thereof, taken in connection with the above recited objects and drawings. Further description would appear to be unnecessary.

Minor modifications of the brace, varying in minor details from the embodiment of the brace illustrated and described here, may be resorted to without departure from the spirit and scope of this invention, as defined in the appended claims.

Having described the invention, what is claimed as new is:

1. A scoliosis corrective brace comprising a rigid hip pad conforming to the shape of a wearer's hip, a rigid chest pad conforming to the shape of a wearer's chest, means rigidly connecting said hip and chest pads, supporting straps carried by said hip and chest pads and intended to encircle a wearer's trunk to position said hip and chest pads, a trunk encircling tension strap carried by said connecting means intermediate said hip and chest pads, said connecting means including aligned connecting bars rigidly secured to the chest and hip pads, said connecting bars being overlapped and having aligned elongated slots therein, fasteners clamping said bars together and securing said chest and hip pads in spaced adjusted positions, said hip and chest pads together with said connecting bars forming a rigid beam, a buckle secured to said connecting bars, said tension strap being carried by said buckle and cooperating with said hip and chest pads to apply direct leverage to a spine, said hip and chest pads being intended to be secured to the same side of a body as is the concave aspect of the scoliotic curve, whereby the spine may be continuously and adjustably urged to a straightened position by said tension strap.

2. The scoliosis brace of claim 1 wherein said buckle is adjustably secured to said connecting bars by said fasteners whereby said tension strap may be vertically adjusted.

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