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2,552,475

TRUNK DEFORMATION CORRECTING DEVICE

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Fig. 1.

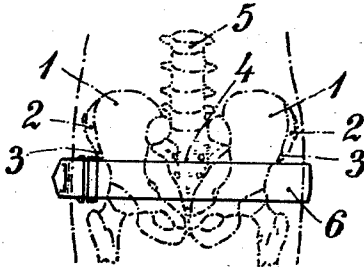


Fig. 2.

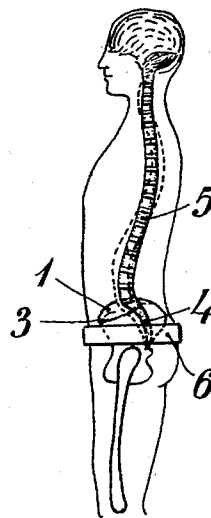
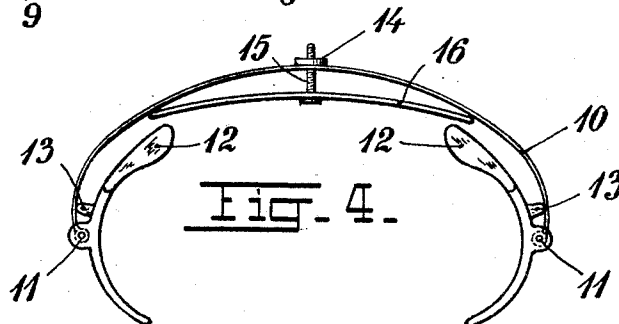
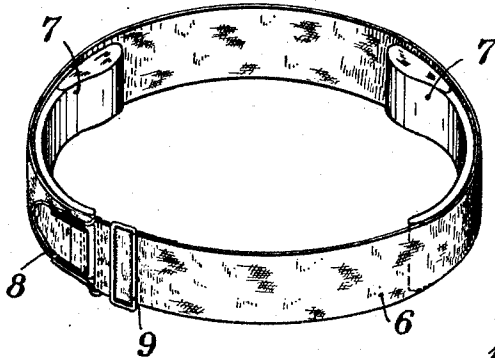


Fig. 3.



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TRUNK DEFORMATION CORRECTING
DEVICEOlav Austlid, Oslo, Norway, assignor to Bernay
Agency Inc., Brooklyn, N. Y.Application December 3, 1946, Serial No. 713,758
In Norway July 28, 1945Section 1, Public Law 690, August 8, 1946
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2 Claims. (Cl. 128—78)

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Many deformations or distortions of the human trunk are due to an incorrect position of the sacral bone, which by means of somewhat movable articulated joints interconnects the rear abutting parts of the two iliac bones of the pelvis and which support the spine. It is found, in fact, that in a great many cases the sacral bone has become sunk or lowered into the pelvis, which means that it is displaced somewhat forwards in-between the iliac bones. At the same time the iliac bones are swung a little more than normal out from each other. Due to the sunk or lowered position of the sacral bone, the lower part of the spine is forced forwards, and since, for obtaining the correct position of the centre of gravity of the trunk, a corresponding displacement of the more elevated parts of the spine must by necessity take place, a heavy hump-shoulderedness (kyfosis) or other deformations will occur, which may cause diseases of different types.

The object of the present invention is to correct such distortions of the human trunk, which are caused in the above described manner, thus improving the posture and preventing or healing such diseases as are caused by such deformations.

The invention is principally characterised by a clamping or pressure device adapted to be placed so as to surround the hips of the wearer, suitably just below the spina iliaca, so as to thrust the iliac bones towards each other and thus press the sacral bone rearwardly.

According to a further feature of the invention said pressure device may comprise a girth of special construction or a springy or resilient device, as described in detail below.

The invention is illustrated by way of example in the accompanying drawing, in which:

Fig. 1 is a front view of the pelvis of a person shown in dotted lines, and of a girth-shaped pressure device in position surrounding the hips.

Fig. 2 is a side view of a person, parts of his skeleton being indicated.

Fig. 3 is a perspective view of a girth-shaped pressure device, and

Fig. 4 is a part plan view of a pressure device having the shape of a springy loop.

Referring to Fig. 1 the so-called iliac bones 1 form the major part of the pelvis. The front edge of each iliac bone, viz. the hip edge, terminates at its lower end in the spina iliaca 3. As seen from above the iliac bones form a V, in the rear acute angle of which the sacral bone 4 is located. The sacral bone and the iliac bones

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are interconnected by somewhat articulated joints. The spine 5 is connected to and rests upon the top end of the sacral bone.

It is often found, that the sacral bone has sunk into the pelvis, which means that it is displaced forwards in relation to its normal position. Generally this means that the angle between the sacral bone is a little greater than normal. Such incorrect position of the sacral bone will cause distortions of the trunk, for instance hump-shoulderedness (kyfosis), the lower part of the spine being pulled forward by the sacral bone, such displacement automatically being accompanied by the elevated parts of the spine being curved backwards in order that the centre of gravity of the trunk shall maintain its correct position.

In Figure 2 the normal or correct positions of the sacral bone and of the spine are indicated in full lines, whereas the dotted lines indicate a forwardly displaced position of the sacral bone and a corresponding deformation of the spine. Such deformations as are caused in this manner often give rise to different diseases.

However, investigations and experiments have shown that such deformations may be corrected by causing the sacral bone to be pressed rearwardly, towards its normal position, by means of continued influence. This may be effected by so acting upon the hip edges that the iliac bones 1 of the pelvis are pressed towards each other in such a manner that in the course of time they are swung a little towards each other, the positions of the iliac bones and of the sacral bone being so, and their interconnection being such that a momentum is established, which tends to force the sacral bone backwards, when the iliac bones are swung towards each other. By a suitably protracted treatment of the person in question the entire spine will become straightened, as indicated in full lines in Figure 2.

For exerting pressure upon the iliac bones of the pelvis there is used a device which may take the shape of a girth 6, as shown in Figures 1, 2 and 3. Preferably such girth is placed surrounding the pelvis somewhat below spina iliaca. The girth thus will press from each side against the muscles between the spina iliaca and the top part of femur, and through the muscles the pressure is transferred to the iliac bones. This will serve to eliminate such pain or grievance as would occur if the pressure were exerted directly against the iliac bones.

At the inner side thereof the girth is provided with two rigid pressure plates 7, adapted to rest

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against the hip portions of the wearer and shaped accordingly, i. e., as shown in Figure 3, shaped so that each has a substantially thickened smoothly contoured portion at one end thereof. Preferably the abutment surfaces of the pressure plates are provided with a soft covering. In order to obtain a good pressure action the girth is provided with a tightening device 8 acting upon the lever principle. Moreover the girth has an usual adjustment device 9, for adjusting the width of the girth.

Instead of a girth may as pressure device be used an open loop, made of resilient metal, as indicated at 10 in Figure 4. To the ends of the loop are, by means of hinges 11, connected rigid pressure plates 12, shaped to accommodate the wearer's hip parts, in the manner mentioned above. Suitably the pressure plates are provided with abutments 13, which limit their movement in the one direction. When the hoop is to be used it is first extended and then placed in position. Upon releasing of the hoop the resilience thereof acts to exert the pressure necessary.

For adjusting the width of the hoop may be used a screw arrangement comprising for instance a bolt 15 and a nut 14, said bolt extending through the central part of the hoop and a rigid rod 16 arranged at the inner side of the hoop. Said rod has a radius of curvature greater than that of the hoop, and the ends of the rod abut against said hoop. As will be seen, when the nut is tightened towards the hoop, the ends of the rod are pressed against the hoop, thereby extending the same. When the hoop is placed in position around the hips the nut is screwed outwards, whereby the hoop is relieved from the rod 16 and exerts pressure upon the wearer's body.

The constructional details of the device may, moreover, be effected in other ways without departing from the spirit of the invention.

I claim:

1. A device for correcting deformations of the

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human trunk due to the fact that the sacral bone extends too far into the pelvis, comprising a girth for engagement about the wearer's hips, a tightening member on said girth, and two substantially rigid pressure plates attached to the inner side of said girth and adapted to engage the hips just below the spina ileaca, each of said pressure plates having substantially the same breadth as the girth and being curved in the length direction of the girth so as to fit closely to the hips, neither said girth nor said pressure plates reaching above the spina ileaca, each of said pressure plates being characterized by a substantially thickened smoothly contoured portion at one end thereof.

2. A device for correcting deformations of the human trunk due to the fact that the sacral bone extends too far into the pelvis, comprising a pressure member consisting of a resilient hoop for engagement about the wearer's hips, articulated pressure plates shaped to conform to the wearer's hips and attached to the ends of said hoop, a rigid rod of greater radius of curvature than the resilient hoop arranged within the latter, the ends of said rod abutting against the hoop, and means attached to the pressure member for varying the distance between the hoop and the rod, at will.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,940,904	Dayton et al.	Dec. 26, 1933
1,983,829	Ziminski	Dec. 11, 1934

FOREIGN PATENTS

Number	Country	Date
55,098	Germany	Jan. 7, 1890