

Oct. 6, 1953

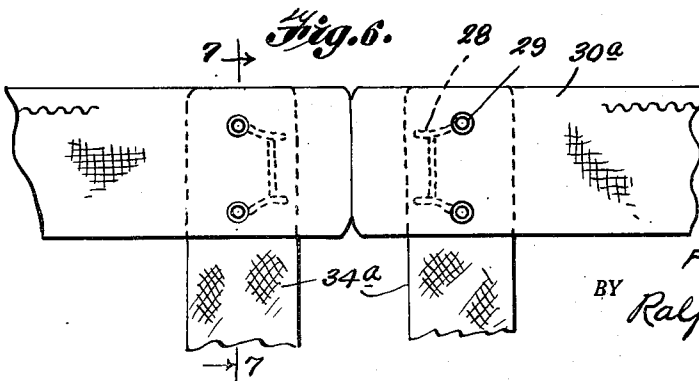
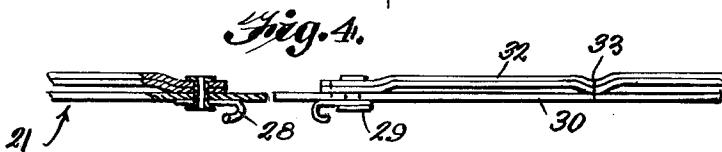
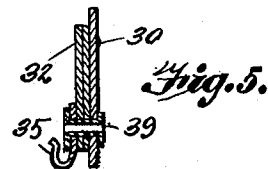
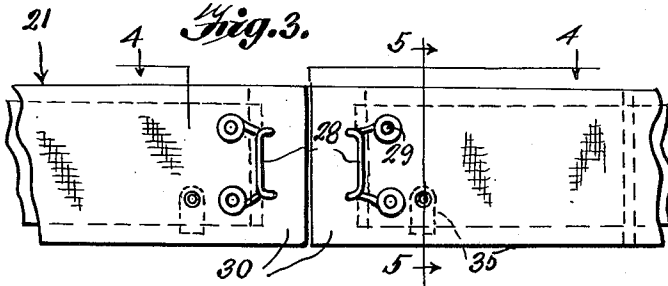
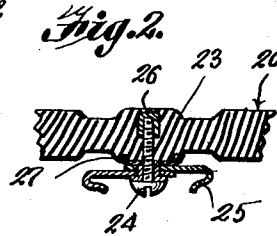
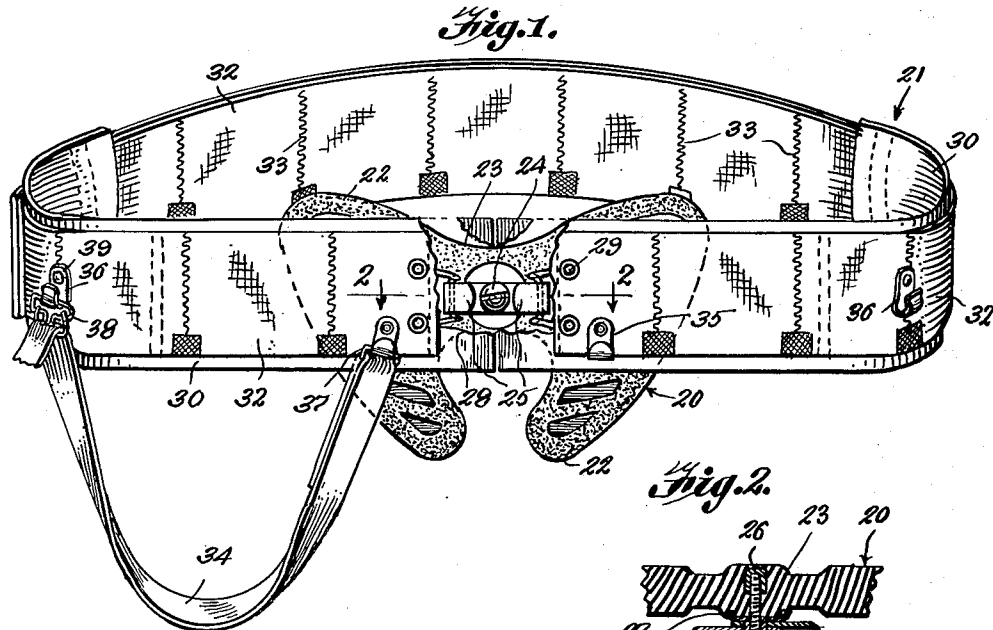
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2,654,366

TRUSS HEAD AND MOUNTING THEREFOR

Filed Dec. 27, 1950

2 Sheets-Sheet 1



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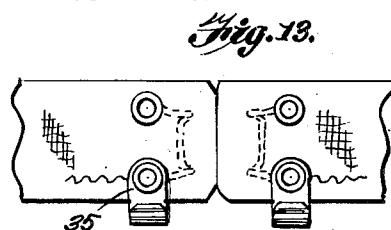
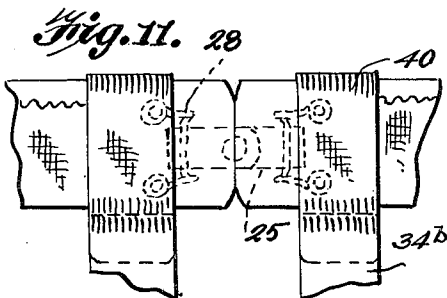
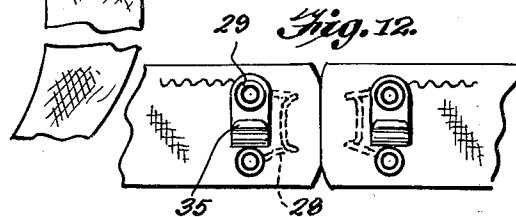
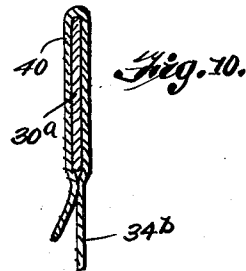
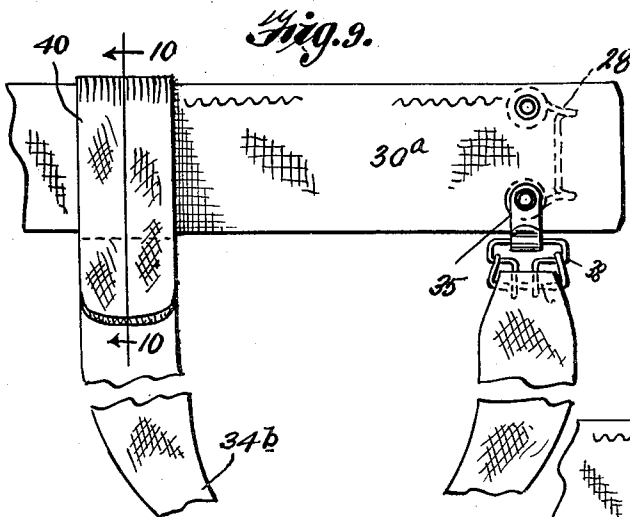
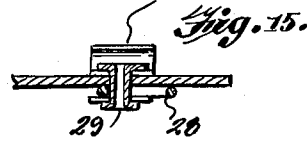
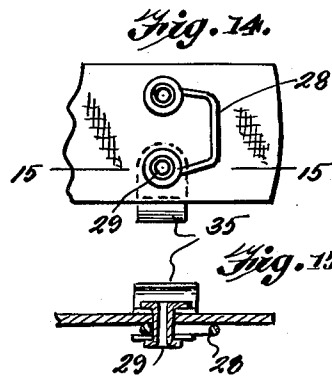
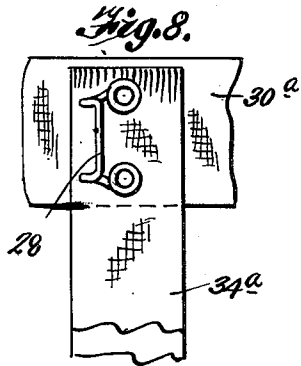
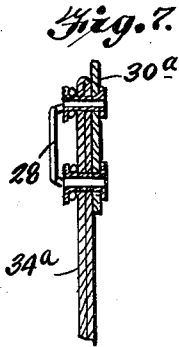
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TRUSS HEAD AND MOUNTING THEREFOR

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2 Sheets-Sheet 2



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TRUSS HEAD AND MOUNTING THEREFOR

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7 Claims. (Cl. 128—107)

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This invention relates to trusses and especially to improvements in truss heads or pads and their supporting and positioning appendages.

More particularly, the present invention is concerned with improvements in heads of the type designed to protect a double hernia, and in supporting belts and appended leg straps for use in association with the heads.

It is the primary object of my invention to devise a truss head having a suspension attachment which permits comfortable mobility of the torso and legs, with automatic adjustment of the parts of the truss head but yet without releasing those parts from positions for application of holding contacts with the ruptured portions of the body. In this connection, it is especially desirable to form the head of two flexibly interconnected soft pads, with the novel attachment fastened to the interconnecting member in such manner that the pads may adjust themselves somewhat independently of belt movement without, however, losing their dependence upon the belt for proper support.

Another major object of the present invention resides in the provision of an improved belt for the support of many types of trusses but that is particularly designed for connection to a truss head of the type above mentioned. This belt further is fashioned for connection with the improved leg straps of my invention.

A further important object is to provide improved leg straps, especially for use in association with the belt just mentioned.

It will be seen, therefore, that the present invention contemplates a novel assembly of improved parts, each contributing something to the whole and all designed to afford the utmost comfort and protection to the afflicted wearer of the truss.

The foregoing and other important objects of the invention should become readily apparent from a study of the following description when taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a view somewhat in perspective of a complete assembly of the truss head and its supporting belt, with a leg strap added to show one mode of strap attachment;

Fig. 2 represents a fragmentary section taken vertically along line 2—2, Fig. 1, with belt detached.

Fig. 3 is a view, truss head detached, looking forwardly from the inside of the belt;

Fig. 4 is a view looking downwardly on Fig. 3 along the line 4—4;

Fig. 5 represents a cross section taken on line 5—5, Fig. 3;

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Fig. 6 is a face view of a modified arrangement for joining the leg straps to the belt;

Fig. 7 is a sectional view taken on line 7—7 of Fig. 6;

Fig. 8 is a rear or inside view of the strap hook-up of Fig. 6;

Fig. 9 illustrates another modified form of strap connection;

Fig. 10 represents a section taken along line 10—10, Fig. 9;

Fig. 11 is a face view of an arrangement alternative to that of Fig. 9;

Figs. 12 and 13 show modifications in the manner of attaching leg strap hooks to the belt;

Fig. 14 is a detail view looking at the back of one of the belt ends of Fig. 13; and

Fig. 15 shows a section taken along line 15—15 of Fig. 14.

With continued reference to the drawings where like numerals are used throughout to designate identical parts, and with particular reference first to Figs. 1—5, the truss head is indicated generally by the numeral 20, and its supporting belt is indicated in entirety by the numeral 21.

The illustrated head comprises two laterally separated pads 22, having inclined recesses or cut-outs as shown to impart flexibility thereto and integrally joined by a bridge 23. The entire head preferably is formed of a smooth, resilient and flexible material such as soft rubber or imitation thereof so that the pads may twist, bend and flex individually as well as relative to each other.

A screw 24 is utilized at the exact center of the bridge 23 to secure the apertured inner ends of a pair of metal (or plastic) clip elements 25 to the head; and a thimble 26, preferably fibrous, may be embedded in the bridge to augment the holding action of the screw. The connection is a frictional one, the clip ends being pressed together and against the base of a special bushing 27 so that they may swing about the pivot independently of each other as well as unitarily. This entire arrangement is a highly important feature of the invention as it permits considerable mobility of the pads and allows them to automatically adjust themselves relative to the adjacent portions of the anatomy. For example, if the wearer gets up or down, or crosses or uncrosses his legs, the pads will remain properly applied to the afflicted parts with just the right amount of holding pressure for protection of the hernia. All of this can better be seen from the following description of the supporting belt.

The illustrated belt has at its meeting front ends a pair of U-shaped hooks 28 that readily slip-snap into connection with the bent ends of

the clips 25. These hooks are secured at the inside of the belt by pairs of rivets 29. The belt body preferably has a pair of soft fabric liners 30 which extend from the ends to points behind the hips, the purpose of these liners being to give comfortable abdominal support and to absorb perspiration. They are stitched to a double walled belt proper 32, that completely encircles the wearer's body. The stitches are in lines 33 that are vertical and substantially separated so as to form open spaces between each pair of lines for the purposes of ventilation and of augmenting the flexibility of the belt.

Leg straps 34 of soft fabric are detachably connected to clips 35 and 36 by hooks 37 and 38 respectively, the hooks 38 including adjustment buckles as shown. Rivets 39 secure the clips to the belt so that the clips may swing about the axes of the rivets. For convenience of illustration, only one of the straps is shown.

A slight modification of strap hook-up is seen in Figs. 6-8 wherein the elements 35 and 37 are eliminated and the forward ends of the straps (34a) are permanently attached to the belt ends (30a) by the same rivets that anchor the hooks 28.

Still another form of hook-up is shown in Figs. 9 and 10 wherein a modified leg strap 34b is hooked at one end to a clip 35 and is provided at its other end with a loop 40 that is slidable along the belt for comforting adjustment. Here, as in Figs. 6-8, there is no possibility of the strap becoming accidentally and completely detached from the belt. In this form it also will be noted that the clip 35 is secured by one of the rivets of the hook 28.

In Fig. 11 the arrangement of Fig. 9 is reversed, the loops 40 being slidable along the extremities of the belt and the other ends (not seen) hooked to rearwardly disposed clips. Conceivably, both ends of the straps might have loops, but this would make it rather awkward to complete and apply the assembly to the body of the wearer.

Fig. 12 illustrates an arrangement where the clips 35 are attached near the upper edge of the belt, thus locating their lower extremities intermediate the belt edges. This might also be done with the clips 36 but normally they will occupy a position as seen in Fig. 1. The advantage of this arrangement is that in some instances, where desirable because of anatomical shape or posture, the front of the belt is tilted downwardly and inwardly.

Should it be desired to hinge the clips 35 at a low level, it is necessary only to turn the belt of Fig. 12 upside down and reverse it end for end, and then swing the clips through 180 degrees. All of this is illustrated in Figs. 13-15. Figs. 14 and 15 also correspond to Fig. 12 except for the position of adjustment of the clip.

The manner of use of the disclosed truss assembly should now be obvious. One of the head clips 25 is hooked to its end of the belt, the latter is swung around the waist and then the other clip is connected to its hook. During this procedure each strap may be suspended at one end and subsequently passed around the thigh for completing the connection; or, where fully detachable the straps may be initially separate and subsequently applied. As an alternative arrangement the elements 25 might be permanently attached to a belt that is split only at the locus of

girth adjustment and the latter used just like an ordinary belt buckle to apply the belt.

What is claimed is:

1. In a truss assembly, a belt, a head comprising a pair of soft and resilient pads joined by an integral flexible element, a single pair of identical clip elements each always pivotally connected for free movement at one end at a common point to said bridge, the other ends of said clip elements having connections to said belt, whereby mobility of the pad is afforded relative to the belt.

2. A truss belt structure having means at its ends for connection to a truss head, a pair of clips swingingly mounted on the belt adjacent its ends, and a second pair of clips, swingingly mounted on the belt at sufficient distance from said ends to permit leg straps to be added to the combination.

3. In the structure defined in claim 2, at least one of said pairs of clips being pivotally attached close to one side edge of the belt, whereby the latter can be reversed and the clips shifted 180 degrees to permit connection of the leg straps at a different level.

4. In a truss assembly, a belt having hooks at its ends for connection to a head, clips mounted with said hooks, said clips swingable relative to said hooks and designed for connection to leg straps, and a pair of leg straps each connected at one end to one of said clips.

5. A truss belt structure comprising a wide belt having means at its ends for connection to a truss head, and a pair of clips for connection to the usual suspended leg straps, said clips being pivotally attached to the belt close to one side edge of the belt and adjacent the ends thereof, whereby the belt can be reversed and the clips shifted 180 degrees to permit connection of the leg straps at a different level.

6. A truss head comprising a pair of substantially identical pads symmetrically arranged and integrally joined by a flexible bridge, a single pivotal element carried by said bridge in a plane substantially midway between said pads, and a pair of clips freely swingable vertically and independently of each other upon said pivotal element while the head is in use, said clips designed for interconnecting the ends of a supporting belt.

7. In a truss assembly, a belt and leg strap combination comprising a relatively wide belt having means at its ends for connection to a head, leg straps each at one end having a loop slidable along one of the extremities of the belt, the other ends of said straps being carried by said belt at points remote from said extremities, said means comprising hard elements that project beyond the surfaces of the belt ends, and said loops being slidable over said elements.

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