

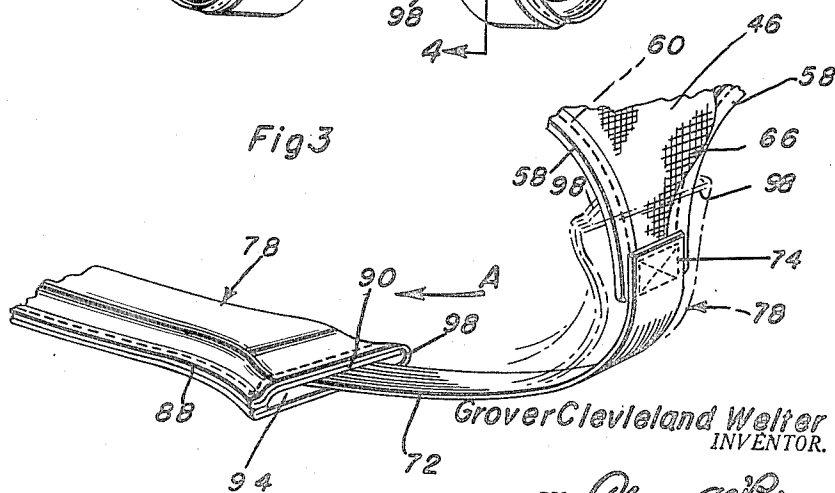
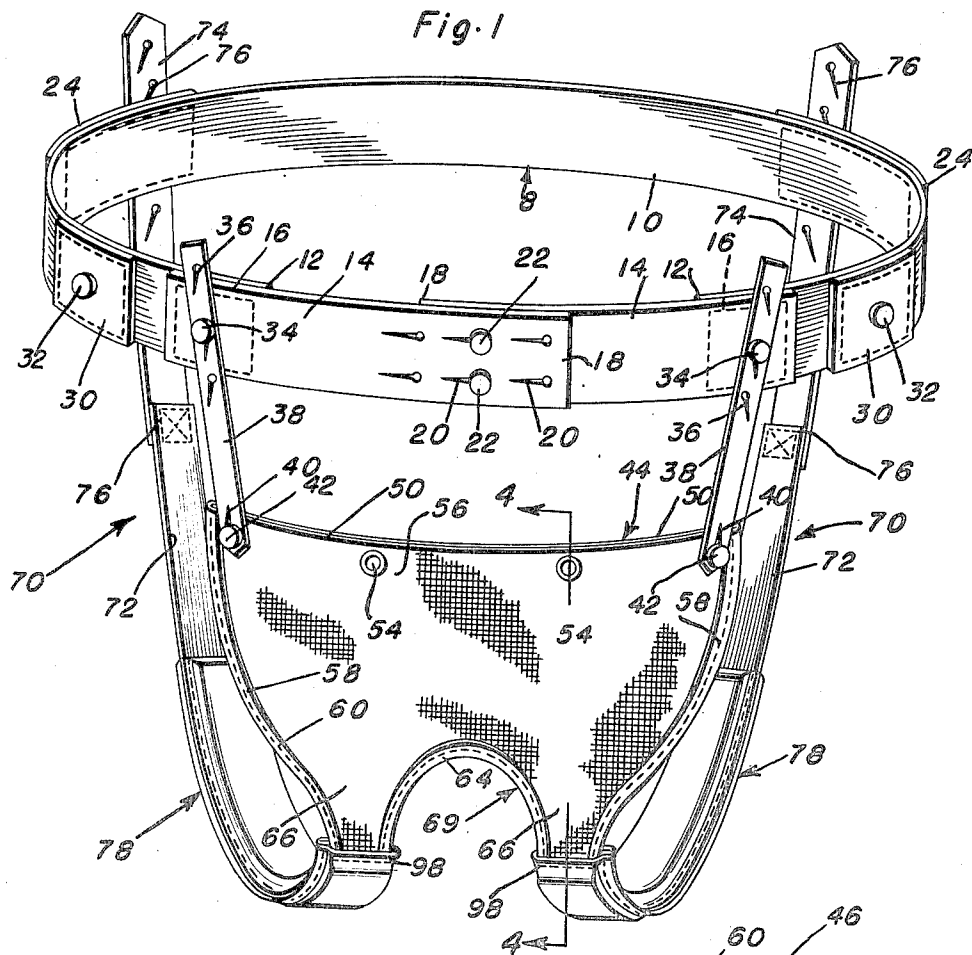
Nov. 23, 1954

G. C. WELTER
TRUSS

2,695,019

Filed March 30, 1953

2 Sheets-Sheet 1



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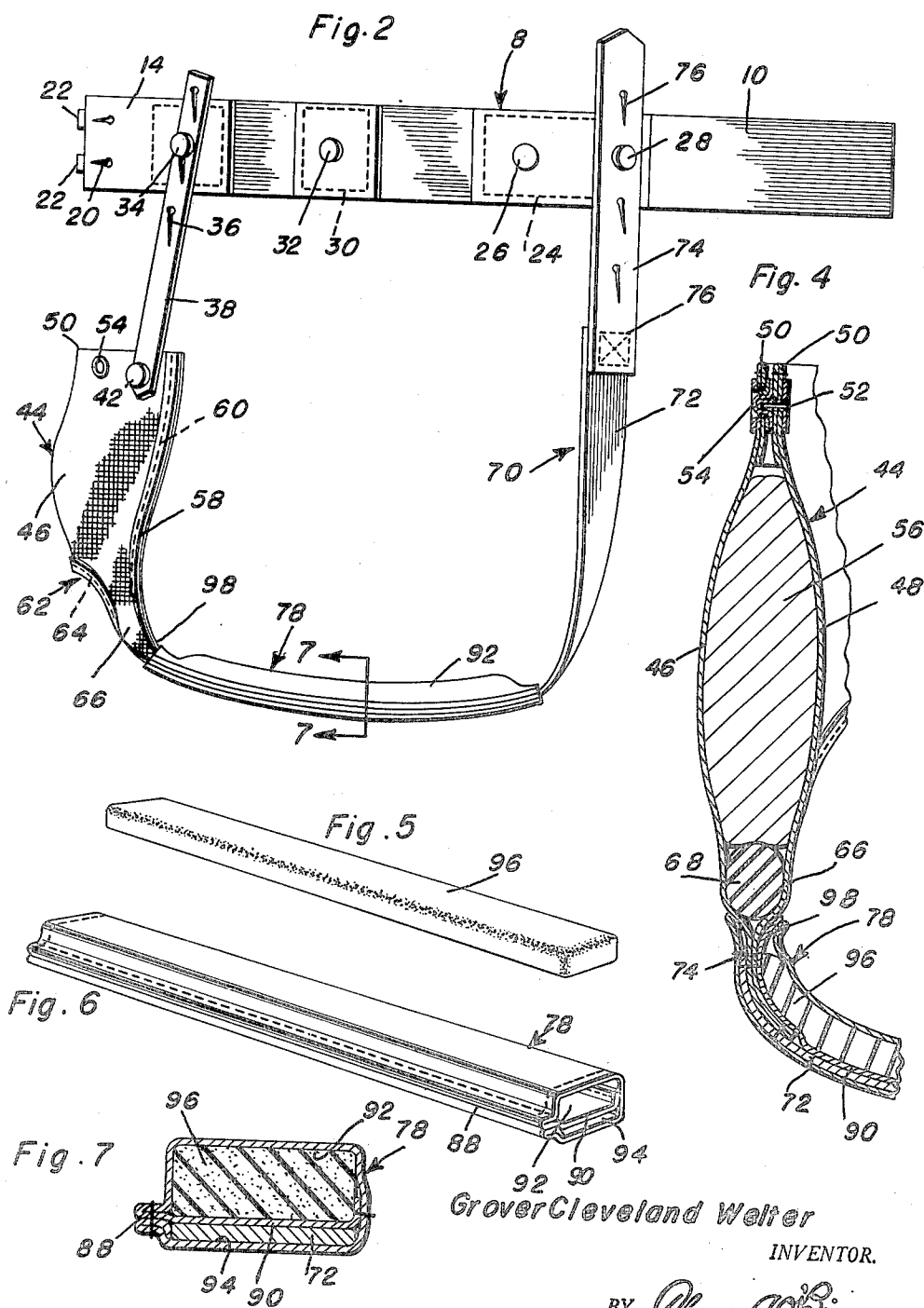
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2 Sheets-Sheet 2



2,695,019

TRUSS

Grover Cleveland Welter, Roswell, N. Mex.

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8 Claims. (Cl. 128—96)

The present invention relates to certain new and useful improvements, both structurally and functionally, in a truss for use by human beings.

An object of the invention is to improve upon known prior art trusses, generally speaking, and to improve, more specifically, on the truss disclosed in Patent 2,423,215 granted to me on July 1, 1947.

In order to comprehend and appreciate the nature of the improvements herein revealed brief reference to the previous Patent 2,423,215 will show that it is characterized by a pad and removable straps for supporting the pad on the body of the wearer, the pad including a pocket or pouch which is open at its upper end and formed of fabric with the upper open end or mouth straight across in a horizontal direction, the side walls being curved inwardly toward the bottom, the bottom being centrally notched, there being a filler or pad of sponge rubber or the like removably fitted into the pocket, the filler serving to bring to bear the desired pressure of the pad against the affected area in a now generally well known manner.

In carrying out the principles of the present invention an improved pressure pad is provided. This is novelly distinct in that it comprises a pouch having a readily openable and closable mouth portion at its upper end, said pouch being adapted to contain an insertable and removable pressure pad of compressibly resilient material, separable fasteners being carried by the upper free edge portions of the mouth-forming front and back walls of the pouch, said front and back walls being made of launderable coarse-woven porous material susceptible of promoting ventilation and more aptly cooling the area of the body against which the pad, by way of suitable suspension means, is conformingly held in its useful position.

Another object of the invention has to do with a body encircling belt which is primarily elastic but includes leather or equivalent components carrying attaching buttons, the connectible ends of the belt being overlapped adjustably to provide an endless element to completely encircle the body and to permit the belt to be worn as high on the body as desired.

Another object of the invention is to suspend the pouch-like pad from the forward body encircling belt portion through the medium of attachable and adjustable suspension straps detachably joined at their lower ends to upper corner portions of the pouch or pad and detachably and adjustably connected at their upper ends to selected buttons on the encircling belt, whereby to permit the over-all truss to be applied and worn with requisite nicety and to thus insure more efficacious results.

A further improvement has to do with the formation of relatively narrow extensions on the lower portion of the pouch to the left and right of the centrally notched lower edge and to provide satisfactory means for permanently attaching the forward ends of leg straps which, when properly adjusted by attachment to the rear portion of the belt, insure effective retention of the truss and effectual application of the intended pressure forces.

And last, but in no manner least, the truss herein disclosed is characteristically unique because of means incorporated therein and which serves to prevent rubbing and chafing of the permanently attached forward end of the leg straps, this being accomplished through the medium of protector cushions which are washable and contained in launderable casings or sleeves, the sleeves being removable from the leg straps and the cushions from the casings and said protectors serving, when in use, to relieve straining pressure on the groins of the wearer.

Objects and advantages in addition to those enumerated will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a view in perspective of a truss constructed in accordance with the principles of the present invention;

Figure 2 is a side elevation of the same;

Figure 3 is a fragmentary perspective view showing one of the leg straps and a portion of one of the protector cushions and illustrating, in full and dotted lines the manner in which the cushion may be slid off of the strap for laundering or replacement as the case may be;

Figure 4 is an enlarged fragmentary section taken on the vertical line 4—4 of Figure 1, looking in the direction of the arrows;

Figure 5 is a perspective view of the insertable and removable sponge rubber or equivalent cushion;

Figure 6 is a perspective view of the enveloping and attaching sleeve for said cushion; and

Figure 7 is an enlarged cross-section on the line 7—7 of Figure 2 looking in the direction of the arrows.

Referring now to the drawings with the aid of reference numerals and accompanying lead lines designating the various components and features it will be seen that the body encircling belt is denoted, as a unit, by the numeral 8. This comprises a length of elastic band denoted at 10 and of suitable over-all length. Stitched or otherwise joined to the free ends 12—12 are complementary leather or equivalent connector extensions 14—14. These are stitched in place as at 16—16. The adjacent ends 18—18 are intended to be overlapped for connecting and adjusting purposes. One of the ends 18, the one to the left in Fig. 1, is formed with suitably designed button holes 20 to selectively engage the headed studs or buttons 22—22 carried by the other end 18. The numerals 24—24 denote leather tabs or patches stitched on the exterior surface of the intermediate or rear portions of the band 10. These are provided, as best shown in Figure 2, with selectively usable longitudinally spaced buttons 26 and 28. There are other similar patches of leather toward the front and these are denoted by the numerals 30—30 and they too are provided with buttons 32—32 cooperating with the adjacent buttons 34—34. These buttons 32 and 34 serve to accommodate the selectively usable button holes 36 at the upper ends of a pair of depending suspension straps 38—38. The lower button holes 40—40 are intended for separable connection with additional buttons 42—42 on the upper corner portion of the shield-like pouch 44. Because of this construction the belt height and also the desired elevation of the pouch 44 may be had and maintained.

The pouch is also a washable or launderable component of the over-all truss. The pouch is characterized by a pair of duplicate forward and rearward walls 46 and 48 (see Fig. 4) and these are of coarse-woven fabric and the cut pattern of each wall is the same in outline and the marginal edges are matched to form the receptacle or pocket portion of the pouch. The upper edges 50—50 form an openable and closable mouth. These edges are horizontal and straight across. Suitable male and female snap fasteners 52 and 54 are attached as shown in Figure 4 and serve to close the pouch. The pouch is adapted to contain a wad of cotton, or a filler of sponge rubber or the like as denoted at 56 in Figure 4 and this bulges the pocket to provide the desired pressure contacting result. By snapping the fasteners together the filler is placed under compression and a firm but never-the-less yielding pad (pouch and filler together) is had. It will be noted that the vertical end portions are suitably overlapped and are secured by a binding tape or the like, the respective tapes being denoted by the numerals 58—58 and being stitched in place at 60. The central lower edge portions are notched and this is referred to broadly as notch means 62. The edges forming the notches are also bound with an edging tape or tapes 64. The portions of the walls on opposite sides of the notches, that is to the right and left are formed into narrow extensions 66—66 and these form auxiliary pockets into which individual fillers 68, as shown in Figure 4, may be fitted. These fillers are to prevent the

pad means 56 from being forced and jammed down into the narrow leg-like extensions 66 to interfere with inserting and removing the pad, as is obvious. With reference now to the leg straps, these are duplicates and are denoted by the numerals 70—70. Each strap comprises an elastic forward portion 72 which is permanently stitched or secured as at 74 (see Fig. 3) to the terminal of the extension 66. The other end is stitched as at 76 to a corresponding end of the leather extension strap 74 which latter strap is provided with button holes 76 for selectively engaging the buttons 26 and 28 already described. This provides for proper fitting of the truss to persons or wearers of varying sizes, as is obvious. With this wide range of adjustment of raising and lowering the belt and properly positioning the pouch and properly tensioning the leg straps it will be perfectly clear that a truss of satisfactory construction is thus provided. Adding to the over-all utility are the attachable and detachable groin protectors each of which is denoted by the numeral 78. Each protector is of soft fabric. It takes the form of an elongated envelope or sleeve which is best shown in Figures 3 and 6. The edges 88 are properly stitched together and the sleeve is open at its ends and there is a lengthwise partition or divider at 90 and this defines an inner larger passage 92 and a smaller passage 94. The elastic strap passes through the passage 94 and the insertable and removable cushion 96 is fitted in the passage or pocket 92. The unit 78 is removable for washing, repair or replacement as the case may be. It will be noted that the sleeve, in practice, will be of soft flannel for comfort and laundering and cleanliness. Also, the fabric will be possessed of requisite elasticity so that one end forms a sort of a bell mouth as is denoted at 98 in Figure 4. This mouth portion slips up over the junctural connection between the lower extremity of the extension 66 and the attached end 74 of the elastic leg strap 72. This is brought out in Figures 3 and 4. Figure 3 is also employed to clarify that the entire protector cushion 78 may be slipped endwise in the direction of the arrow A off of the free end portion of the leg strap. This makes it possible to completely detach the cushion and to then pull the pad or cushion 96 out of its pocket 92 so that it may be washed and dried and so that the complete sleeve or envelope itself may likewise be washed for desired sanitation purposes.

It is believed that persons skilled in the art to which the invention relates will clearly grasp the significance of all of the structural components revealed and described. It will be obvious that the body encircling belt 8 fits around the body of the wearer and may be raised or lowered in respect to the waist line to insure a comfortable over-all fit of the truss. Additional adjustment is had by way of the adjustable suspension straps 38 from the forward portion of the belt and adjustments as to stress and strain of the padded pouch 44 are had by way of adjusting the leg straps at the back. The leg straps may be moved toward and from each other, depending on the stature of the wearer.

Minor changes in shape, size, materials and rearrangement of the cooperating components may be resorted to in actual practice without departing from the spirit of the invention or the subjoined claims.

What is claimed as new is as follows:

1. A truss comprising a pouch having a readily openable and closable mouth at its upper end, said pouch being adapted to contain an insertable and removable pressure pad of compressibly resilient material, separable fasteners carried by the upper free edge portions of the front and back walls of said pouch, said front and back

walls being made of launderable coarse-woven porous material susceptible of promoting needed ventilation, a body encircling belt, a pair of suspension straps carried by said pouch and detachably and adjustably connected at their upper ends with said belt, and leg straps connected at forward ends to respective lower portions of said pouch and detachably and adjustably connected at their rear ends to rear portions of said belt.

2. The structure defined in claim 1, wherein said belt is elastic and has overlapping adjustably connected ends, whereby when the ends are joined together, said belt is then endless in form.

3. The structure defined in claim 1, wherein the upper corner portions of said pouch are provided with buttons, the lower ends of said suspension straps being apertured and releasably joined to their respective buttons.

4. The structure defined in claim 1, wherein the forward portions of said leg straps are elastic and are permanently secured to said lower portions of said pouch.

5. The structure defined in claim 1, and the combination therewith of cushioning means carried by the median and forward end portions of said leg straps and flexibly conformable to and contactable with the groins of the wearer.

6. The structure defined in claim 5, wherein each cushioning means comprises a launderable soft fabric elongate sleeve which is slidable on the leg strap, said sleeve having a washable cushion removably fitted therein.

7. A truss comprising a pouch having a readily openable and closable mouth at its upper end, said pouch being adapted to contain an insertable and removable pressure pad of compressibly resilient material, separable fasteners carried by the upper free edge portions of the front and back walls of said pouch, said front and back walls being made of launderable coarse-woven porous material susceptible of promoting needed ventilation, said front and back walls each having horizontal straight across upper edges, curvate vertical end edges, and centrally notched lower edges, the end edges and lower edges being superimposed upon each other in mating relationship and joined by way of edge bindings stitched in place, the portions of the walls to the right and left of the notches being narrow and providing leg strap hold-down extensions, a body encircling belt, a pair of suspension straps carried by said pouch and detachably and adjustably connected at their upper ends with said belt, and leg straps connected at forward ends to their respective hold-down extensions and detachably and adjustably connected at their rear ends to rear portions of said belt.

8. For use on a leg strap of a truss, a new article of manufacture comprising an elongate open ended soft fabric sleeve with an internal lengthwise fabric divider defining a passage for a leg strap and a cushion receiving and containing pocket, and a washable insertable and removable sponge rubber cushion contained in and co-extensive in length with said pocket.

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