

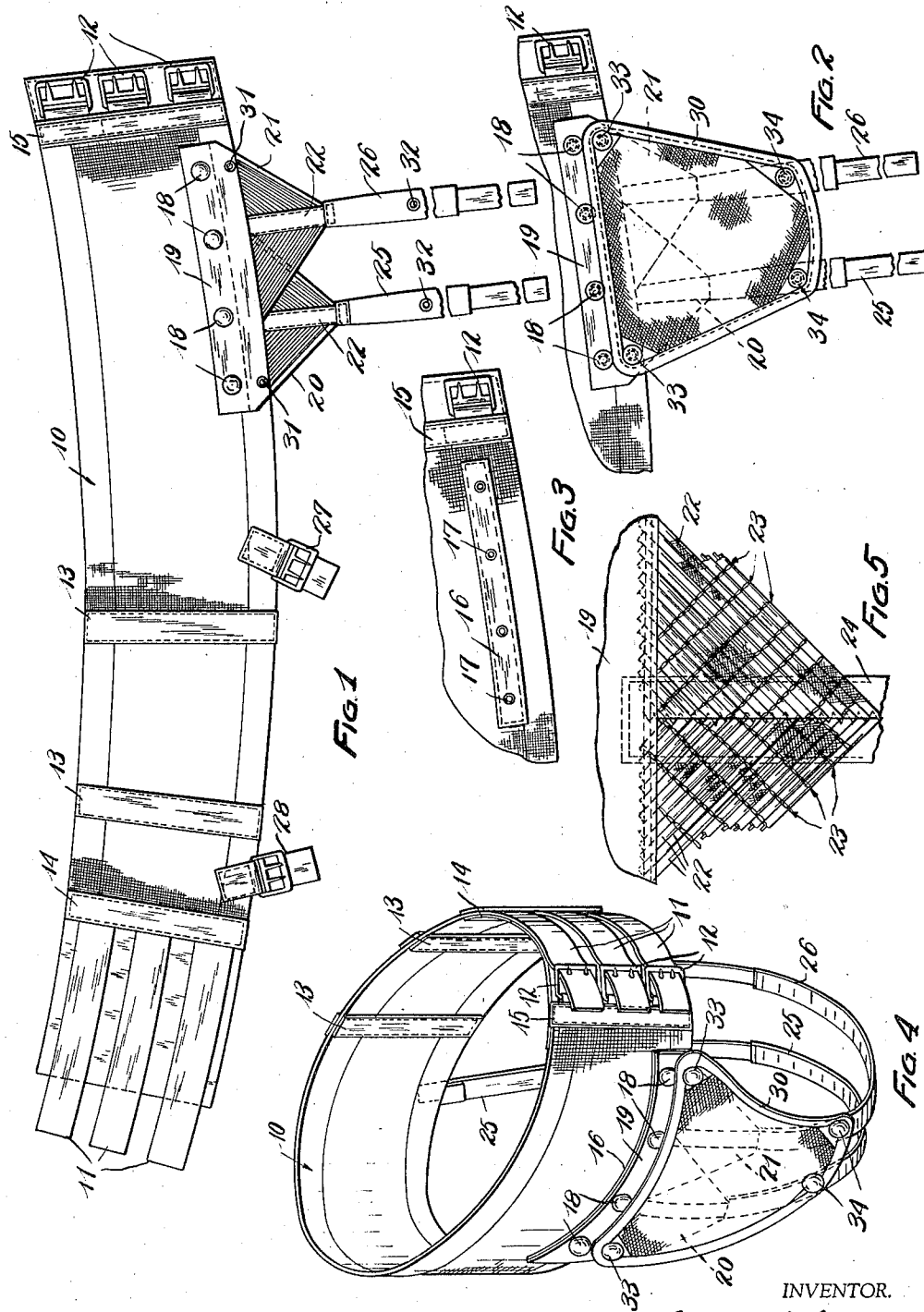
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ABDOMINAL AND RUPTURE SUPPORT

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ABDOMINAL AND RUPTURE SUPPORT

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5 Claims. (Cl. 128—96)

This invention relates to improvements in abdominal and rupture supports and is intended primarily for the treatment of ruptures, although it has other supplementary supporting functions as will presently appear.

One of the objects of the invention is the provision of a support of this character which shall be more effective for the treatment of ruptures than similar devices heretofore used.

Another object of the invention is the provision of a support which shall remain substantially fixed with respect to the body of the wearer in spite of any bending, turning or twisting of the wearer's body, while at the same time causing no inconvenience or discomfort and no interference with free body movements.

A more specific object is the attainment of the preceding object by constructing the apron which carries the rupture pad to have no elasticity along its median line but to have considerable elasticity along downwardly converging lines on either side of the median line, so that when there is bending of the body of the wearer the angle between the said median line of the apron and the belt may change without disturbing the rupture pad.

Other objects and features of novelty will appear as I proceed with the description of that embodiment of the invention which, for the purposes of the present application, I have illustrated in the accompanying drawing, in which

Fig. 1 is a general view of a support embodying the invention.

Fig. 2 is a fragmental detail view showing an auxiliary pouch piece attached to the support.

Fig. 3 is a fragmental view of the belt with the supporting elements removed showing the inelastic reinforcement from which the supporting elements are removably hung.

Fig. 4 is a perspective view of a complete device in operative position, and

Fig. 5 is a fragmental view on a larger scale showing the detail construction of one of the aprons.

The support herein disclosed is intended for the treatment of rupture or hernia in both male and female patients, although some slight modifications are desirable in the two cases, and in order to render it a simple and easy matter to effect these changes the supporting elements proper are connected to the belt by readily separable fastenings.

In the drawing I have shown a relatively wide belt 10 adapted to extend around the waist of the wearer, and to have its ends secured together

by means of straps 11 cooperating with buckles 12. The belt may be formed largely of a woven material having elastic cords or threads extending lengthwise in order to make the belt stretchable in that direction, while the weft threads, which extend up and down, are inelastic. At the back of the belt I may attach, by stitching preferably, two reenforcing strips 13 which are inelastic and serve to connect separate pieces of the belt material where the latter is cut in order to fit it to the form of the wearer. I may also provide stays 14 and 15 near the ends of the belt to which the straps and buckles are secured.

In that part of the belt which comes in front when it is being worn, there is a reenforcement 16 which consists of a strip of inelastic material that is sewn to the belt proper. In this strip are mounted the inner members 17 of a series of snap fasteners, the outer members 18 of these fasteners being carried in another inelastic strip 19, and obviously these two strips are readily connected together or separated.

In the drawing I have shown two aprons 20 and 21, partially overlapping but not interconnected, these aprons being secured to the lower edge of strip 19, as by stitching. The construction of these aprons constitutes an important feature of the present invention. Since they are identical, a description of one will serve for both. Each apron is triangular and is made up of two smaller triangles which are substantially right angle triangles. They are made from material which may be similar to that of the belt 10, that is it is a woven material with the warp threads 22 consisting of fabric-covered rubber cords, and having weft threads 23 which are inelastic. The material used in the aprons may be said to be cut on the bias, and is arranged so that the warp threads 22 of the two small triangles converge downwardly, meeting at a median line of the large triangle. The two small triangles are sewn together along this median line, as indicated in Fig. 5, and the long side of the large triangle is sewn to the inelastic strip 19. Then the seam between the two triangles is reenforced, preferably front and back, with inelastic tape 24, so that there is no elasticity or stretch along the median line of the apron and the position of each point in this line at all times remains constant with respect to the reenforcing strip 16 on the belt. Suitable pads may be secured to one or the other or both of the aprons 20 and 21, according to the location of the rupture which is to be treated, as more particularly explained

in my copending application Serial No. 110,266, filed November 11, 1936. Thus, while a pad attached to an apron along or near its median line is maintained accurately in the selected position so long as the belt is properly adjusted, nevertheless when the patient moves his body by bending, twisting or turning so as to tend to increase the angle between this median line and the belt, the elastic cords 22 on that side will yield and permit such action without discomfort to the patient and without dislocation of the rupture pad.

At the lower corners of the aprons 20 and 21 I attach straps 25 and 26 respectively, so that in effect they constitute continuations of the tapes 22. These straps are adapted to extend downwardly between the legs of the wearer and upwardly behind his body, and are adapted to be connected by buckles 27 and 28 with the belt. These straps serve of course to draw the aprons 20 and 21 against the body of the wearer and keep the inelastic tapes marking the median lines of the aprons in the positions which they are intended to maintain.

Cloth pouch pieces 30, of such shape and size as may be best suited to the particular purpose for which they are designed, are provided for quick and easy attachment or detachment in order that they may be worn when desired as an auxiliary support and may be laundered with facility. For this purpose I preferably provide inner snap fastener members 31 and 32 on the strip 19 and on the straps 25 and 26, and corresponding outer snap fastener members 33 and 34 on the pouch piece 30.

While in the drawing I have illustrated two aprons 20 and 21, and two straps 25 and 26, I desire to point out that it is quite within the broader aspects of the invention to employ a single apron and a single strap, and in some cases where it is desired to treat a patient who has a single rupture on one side of the body, and where it is not desired to employ the device for other supplementary purposes, I have found it best to use a single apron and a single strap.

Variations from the described structure may be employed. Accordingly I desire it to be understood that the scope of the invention is to be regarded as defined exclusively by the appended claims rather than by the foregoing description or the accompanying illustration.

Having thus described my invention, I claim:

1. An abdominal and rupture support, comprising a belt adapted to be placed around the

body of the wearer, a substantially triangular apron attached to said belt and extending downwardly therefrom, said apron comprising two sets of parallel elastic cords, the cords of each set extending downwardly and inwardly toward an intermediate line substantially bisecting the triangle, means extending along the said line for preventing stretching action in the direction of said line, and means for drawing the lower end of said apron toward the body of the wearer.

2. An abdominal and rupture support, comprising a belt adapted to be placed around the body of the wearer, a substantially triangular apron attached to said belt and extending downwardly therefrom, said apron being formed of two pieces of fabric the warp of which consists of elastic cords and extends diagonally downward and inward, the warp cords of one piece meeting the warp cords of the other piece at a median line, and means for uniting said two pieces together along said median line, said last named means being inelastic along the direction of said line.

3. In a support of the character described, a belt, a pair of partially overlapping aprons of triangular form attached to the belt, each of said aprons having downwardly converging elastic cords meeting at a median line, said median lines being spaced apart, means for preventing stretching along said median lines, a pair of straps attached to the aprons at the lower ends of said non-stretching median lines, and an auxiliary pouch piece connected to said aprons and to said straps below the lower ends of said aprons by readily separable fastenings.

4. In a support of the character described, an elastic belt, an inelastic strip attached to said belt, a pair of straps connected with said strip at spaced points adapted to pass between the legs of the wearer and up behind his body to the belt, and a pouch piece connected to said strip and to said straps by readily separable fastenings.

5. An abdominal and rupture support comprising a belt adapted to be placed about the body of the wearer, a substantially triangular apron fastened throughout its upper edge to the belt and extending downwardly from the belt, and a strap attached to the lower end of the apron at the point of the triangle, the apron being substantially inelastic in the direction of the strap and being elastic throughout its extent on opposite sides of a central portion in line with the strap.

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