June 7, 1955 J. E. HANSEN 2,710,002

ANATOMICAL SUPPORTS

Filed Jan. 14, 1953 2 Sheets-Sheet 1

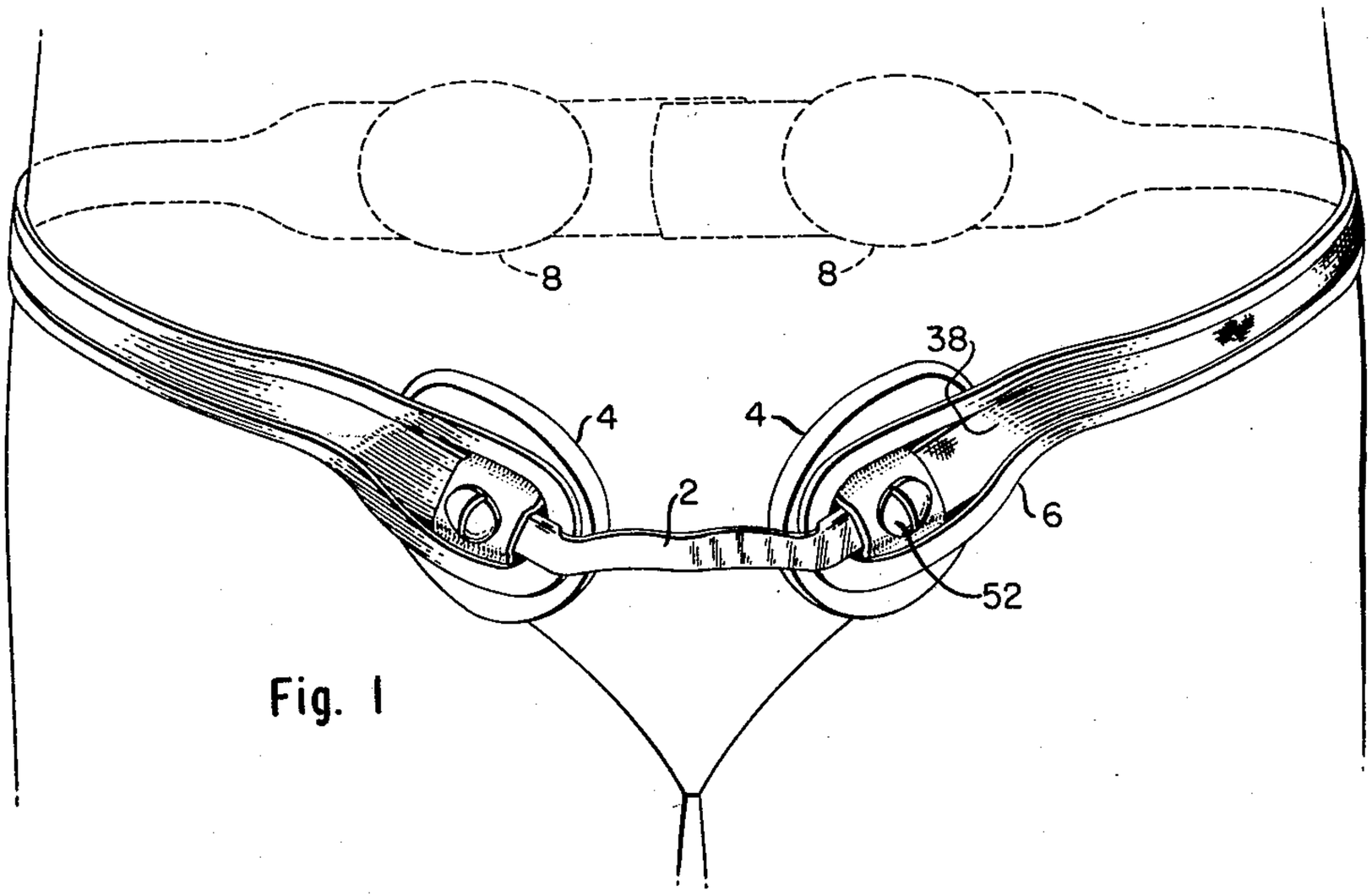

Fig. 1

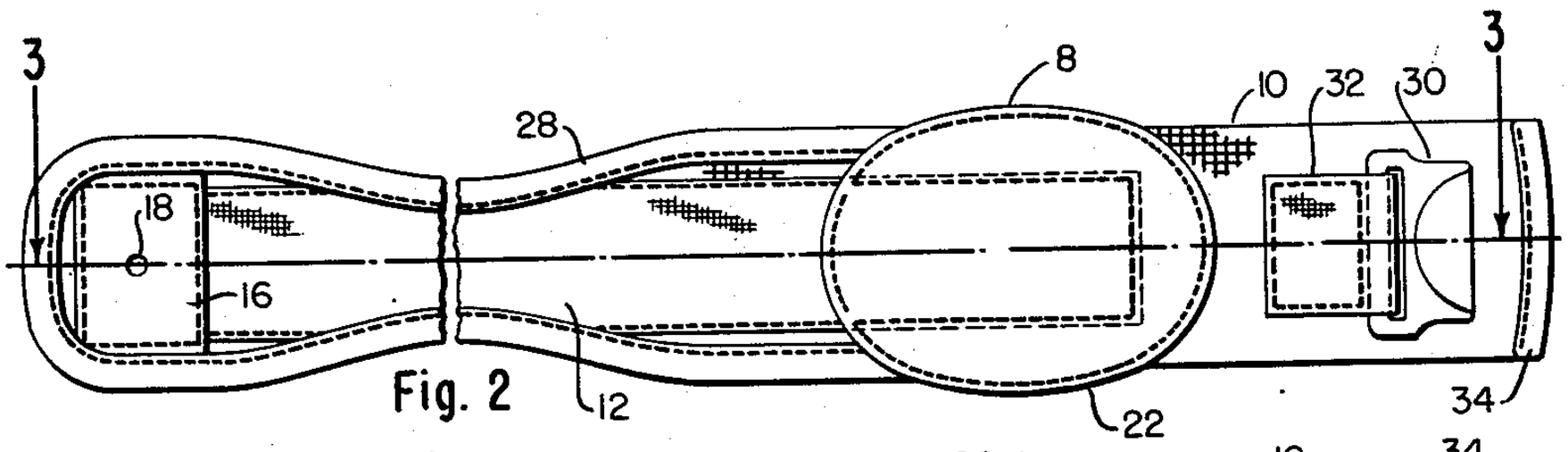

Fig. 2

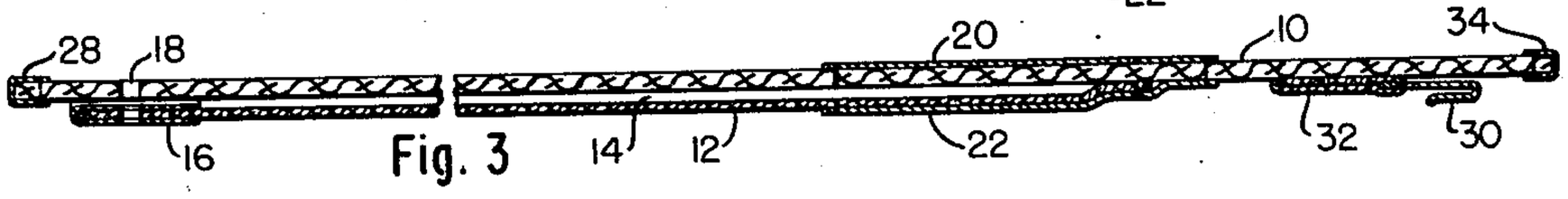

Fig. 3

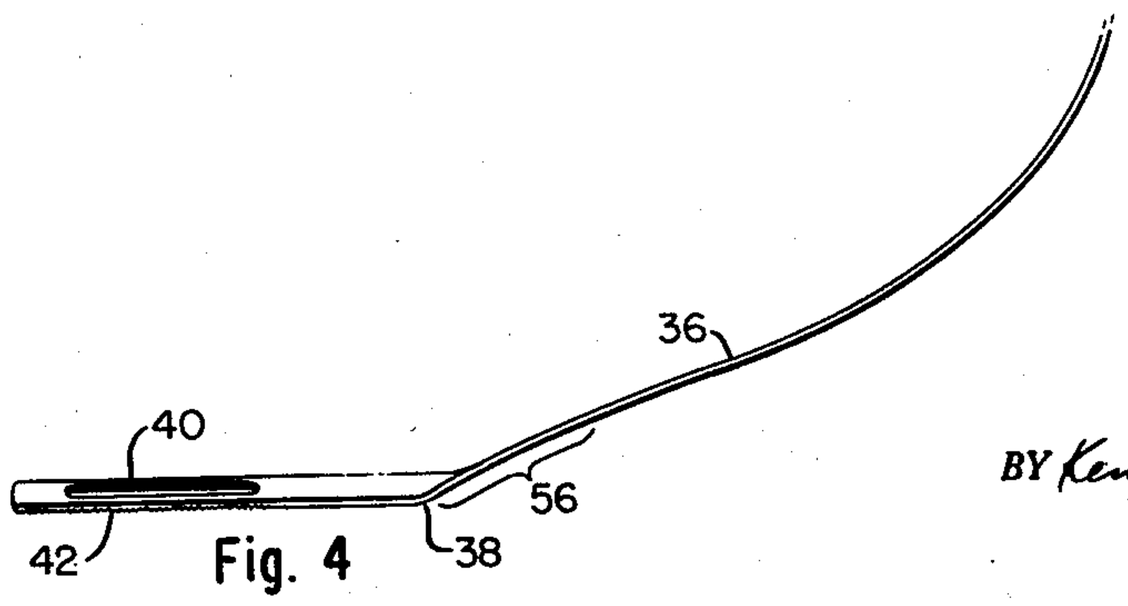

Fig. 4

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Filed Jan. 14, 1953 2 Sheets-Sheet 2

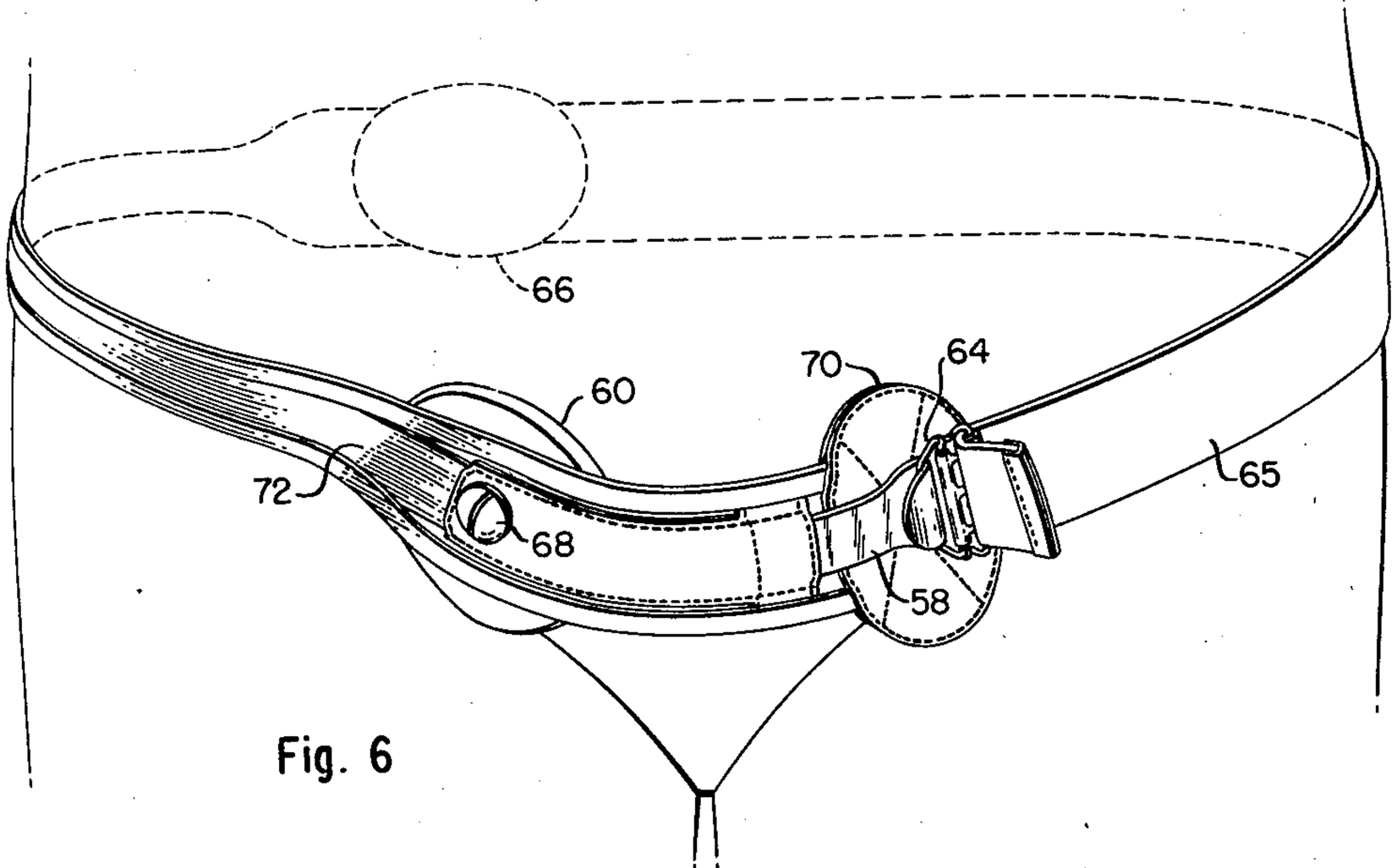

Fig. 6

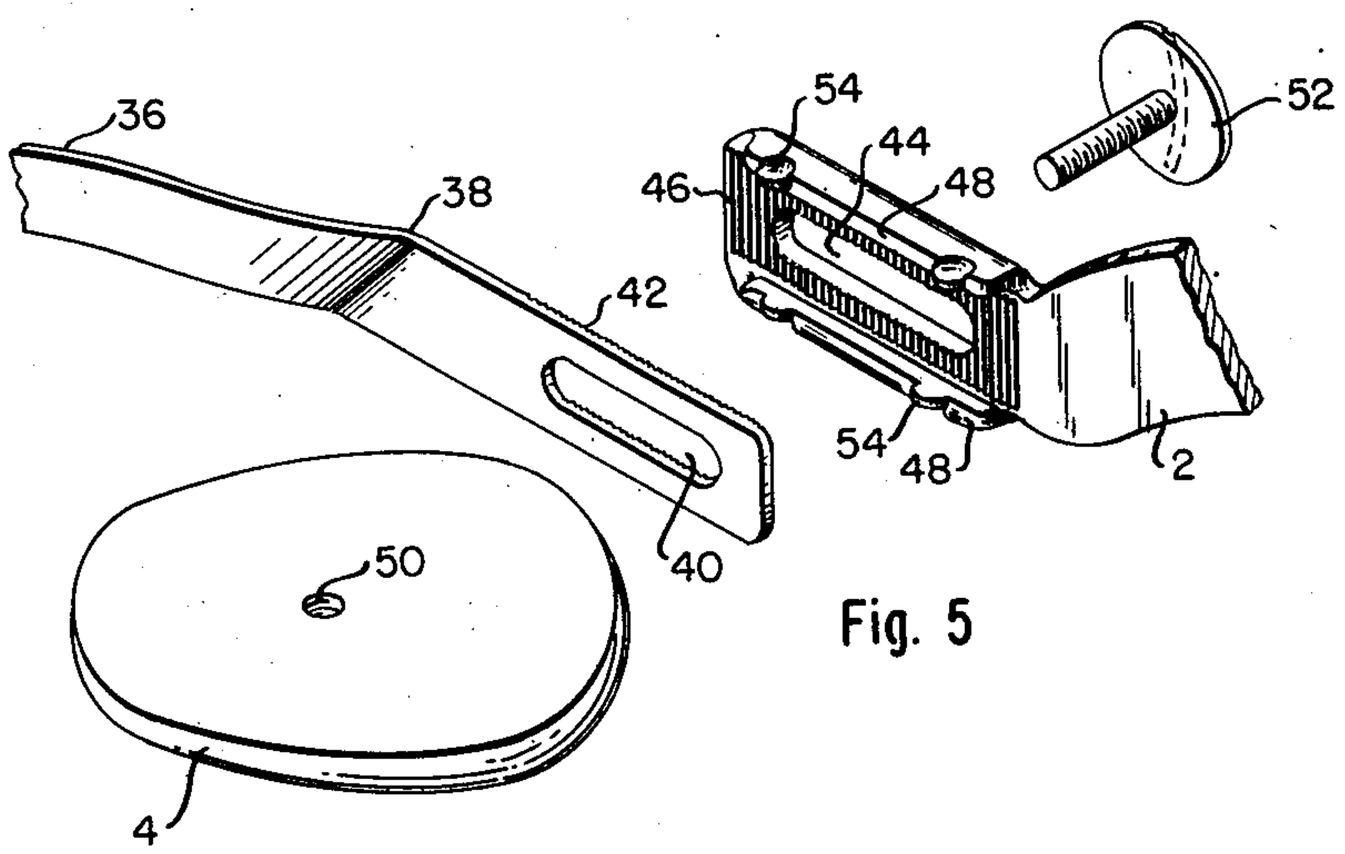

Fig. 5

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ANATOMICAL SUPPORTS

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Application January 14, 1953, Serial No. 331,165

18 Claims. (Cl. 128—102)

The present invention relates to anatomical supports, and more particularly to trusses adapted for supporting inguinal, femoral and scrotal type ruptures or hernias.

The manner in which any truss functions and the advantages and disadvantages associated therewith relate in large measure to the anatomical peculiarities of each individual rupture. In general terms, the primary purpose of the truss is to apply a pad or pads having appropriate contours with inward and upward pressure to the body, at points usually above the pubic line in the vicinity of the groins, the exact positions of the pads depending upon the nature and locations of the ruptures. The positions of the pad contours relative to the body, as well as the directions in which the pressure is applied and the magnitudes thereof vary considerably in different cases. However, once adjusted for a particular case, the pads should ideally remain in constant relationship to the body, without rocking or slippage with respect to the ruptures.

During periods of inactivity, as at night, a truss consisting of a flexible belt without rigid reinforcements, encircling the body and holding the pad or pads in place, is ordinarily satisfactory. However, considerable difficulty is encountered with this type of truss during activity, both in respect to keeping the pad or pads in their proper locations and in maintaining the requisit pressures of application.

The conventional solutions to the problems arising from the activity of the truss wearer are embodied in two principal types of trusses. In the first type, a leg strap is added to the elastic belt, the strap passing between the legs and being attached to the truss at the front and back to hold the belt down and in some cases to tilt the pad outwardly at the top to produce a slightly upward thrust upon the ruptured area, as is usually required. However, such construction is not suited to cases where strong support is needed; nor does it provide sufficient flexibility of pad adjustment. Furthermore, the leg strap gives rise to additional discomfort.

The other conventional type is the so-called rigid truss. In one characteristic form, this truss is constructed with a rigid abdominal yoke having one or two attached abdominal pads, the yoke being extended well beyond the pads on either side and permanently affixed to side springs inserted in a belt encircling the body. Alternatively, the yoke and side springs may be formed of a single piece of wire having a flattened cross-section and of an appropriate strength and flexibility to serve an equivalent function. The side springs encircle the body, and each spring is terminated at a back pad in the belt resting against the body closely adjacent to the spinal column. In discussing this truss, it is convenient to consider the unit consisting of the abdominal yoke and the attached pad or pads as a single entity, which may be referred to for convenience as the "support proper."

The rigid truss has been in use for many years, but has certain inherent disadvantages which may be seen by reference to the underlying principle or mode of operation thereof, and the character of the support afforded. The

reinforcing springs of the truss are relatively strong both in bending and torsional flexure. They are prebent over a radius of curvature smaller than that of the body, the object being to hold the support proper in place by a pinching or vise-like action between the abdominal pads and back pads. The back exerts pressure upon the ends of the springs through the back pads, and this pressure is transmitted through the springs to the abdominal pads. Normally, the springs are held slightly away from the body at the sides to prevent interference with this bending or vise-like action and to permit movement of the hips independently inside the springs. In many cases, this clearance is great enough to permit a finger to be inserted freely between the belt and body at any place around the hips.

By reason of the above-described action of the rigid truss, it is necessary for the springs to have considerable strength in bending flexure, that is, flexure in the plane of encirclement of the body, so that the truss will hold the abdominal pads in place when the position of the body is changed. Also, it is highly desirable that the pressure upon the rupture should not vary too much in the normal range through which the springs are flexed. To satisfy these requirements, each spring is preferably extended from the abdominal yoke, to which it is rigidly affixed, to a pad placed close to the spinal column, and is sufficiently strong to give the required pad pressure for the given length of spring. The result is a structure which possesses considerable rigidity except in the plane of bending. It is too stiff to conform with the body contours during movement and must be suspended clear of the body to permit movement thereof inside the springs. This is particularly disadvantageous for persons in climbing occupations, such as plumbers, since to lean or lie against the side is to force the spring on that side against the body, and to cause slippage or dislodging of the abdominal pads and ensuing aggravation and pain. Also, by reason of the rigidity, the hernia tends to slip away from the pad unless the truss is drawn so tightly around the body that the springs cut into the body at some points while large gaps occur in other places.

In addition to the above, the nature of the construction of a rigid truss requires considerable time and skill on the part of the fitter in making needed adjustments. Special fixtures and fittings for the truss or the pads for attaching and adjusting the pads to the truss proper are required, which are often cumbersome and unsightly and tend to catch and wear the clothing and to require frequent readjustments.

It will also be noted that a characteristic of the rigid truss is that it is suspended upon the body at four principal points, two of which are closely adjacent to the spinal column on either side thereof, and two of which are at the locations of the abdominal pads, the intermediate points around the body circumference being of no appreciable significance in locating the truss in relation thereto.

According to the present invention, an improved and radically different type of truss construction is employed. It has the disadvantages of neither of the above-described conventional trusses, and may be worn during activity without a leg strap while continuing to provide great strength and comfort and to afford positive holding power and positive insurance against slippage or rolling of the abdominal pads.

An important object of the invention is to provide a truss having holding strength commensurate with that of the familiar rigid trusses.

Another important object is to provide a truss having the above feature, yet being adapted to fit the body closely except between the abdominal pads, and to follow the movements of the body to permit the wearer to lean

or lie on a side without changing the positions of the abdominal pads in relation to the body and to improve the general appearance of the truss.

Another object is to provide an improved truss in which rapid and proper fitting and adjustment of the pads is facilitated, and maintenance of the proper support thereafter is insured.

Another object is to provide a truss in which the above objects are attained while yet permitting the truss proper to be correctly positioned with respect to the body at all times and in all normal positions thereof.

With a view to the above objects and others hereinafter appearing, an important feature of the present invention is a semiflexible, split frame construction consisting of a short, rigid abdominal yoke to one or both of the ends of which the abdominal pads are adjustably secured, and a belt with reinforcing springs adjustably secured to the yoke and pads, in which each of the parts is adapted to fit a certain section of the body at all times, and in all normal positions thereof, so that the truss is snugly fitted to the body at every point around the circumference, except between the abdominal pads. The abdominal yoke is preferably no longer than necessary to secure the pads and is specifically designed to fit the groin area.

According to another feature, the belt is reinforced by a new type of body contour spring fastened directly to the pad, the spring having negligible strength in bending to reduce to a minimum the pinching or vise-like action employed in the rigid truss, and to permit conformity with bodily movements, but having sufficient resistance to torsional bending to prevent rolling of the abdominal pads.

According to another feature, a unique method of joining the abdominal yoke and side springs permits great flexibility, ease and speed of adjustment and fitting to the needs of each case.

According to still another feature, the points of suspension of the truss by means of back pads near the spinal column are completely eliminated. This introduces a radically different mode of positioning than that of the rigid type trusses heretofore described; yet the degree of support afforded is commensurate therewith.

According to the improved construction, the abdominal yoke, the reinforcing springs, and the abdominal pads are secured together by a single control screw in a manner permitting great rigidity, yet affording adjustability not only of the pads, but also of the effective lengths of the springs and the abdominal yoke. This reduces fitting time, and permits rapid custom fitting and selection of the component parts even though the sizes of the trusses are widely separated, as by eliminating all of the even or odd sizes in manufacture.

According to still another feature, the side springs are fastened to the abdominal yoke directly over the pads, rather than at points closer to the hips as is commonly done in the rigid type trusses.

The resulting truss is a combination of parts so designed that the truss becomes a full fashioned, contour fitting appliance that hugs the body evenly, distributing the pressure in such a manner that holding power is achieved through the truss and body working in unison, individual body characteristics notwithstanding.

Other features of the invention relate to certain features of construction and modes of operation as hereinafter described and particularly defined in the claims.

In the drawings,

Fig. 1 is a pictorial view of a preferred form of the invention as embodied in a double truss for inguinal hernias.

Fig. 2 is a fragmentary view of the truss belt with the reinforcing spring removed;

Fig. 3 is a sectional view of the belt taken on line 3—3 of Fig. 2;

Fig. 4 is a fragmentary view of the spring illustrating the offset therein;

Fig. 5 is an exploded view of a portion of the truss shown in Fig. 1 with belt removed to illustrate certain features of the construction; and

Fig. 6 is a pictorial view of a preferred form of the invention as embodied in a single truss for an inguinal hernia.

Referring to Fig. 1, the truss proper consists of a rigid metallic abdominal yoke 2, and a pair of abdominal pads 4 secured to its ends in a manner hereinafter more fully described. The yoke is shaped to have a substantially horizontal central portion and end portions extending obliquely upward from the central portion when fitted to the groin area of the wearer. A flexible belt 6 in two pieces is also secured to the ends of the yoke and passes around the body, fastening at the back in any suitable manner, as by a hook and slotted fixture in the respective pieces. The belt is formed as hereinafter described to permit a reinforcing spring to be inserted in each side, the spring being adjustably and firmly secured at the front end of the abdominal yoke and pad, and extending to a point behind one of the back covers 8.

The construction of the belt is described with reference to Figs. 2 and 3, in which the reinforcing spring has been removed. On the side facing the body, a piece of elasticized fabric or webbing 10 extends the entire length of the belt, being cut relatively narrow on the sides and full width at the back. However, by reason of the other pieces of fabric to which it is secured, the only section of the belt in which the elastic can be stretched appreciably is in the portion intermediate of the back covers, or to the right of the cover 8 as seen in Fig. 2. An outer piece of non-elastic fabric or webbing 12 is sewed to the piece 10 to form a space 14 for insertion of the reinforcing spring. The piece 12 extends from the forward end of the belt to and under the back cover 8. The front end of the piece 12 is reinforced by a tear-proof cover 16, preferably made of leather, which provides support for the edges of a hole 18 passing through the belt. At the other end the pieces 10 and 12 are covered by leather pieces 20 and 22 forming the back cover 8, which strengthens the belt against the action of the end of the reinforcing spring and provides a smooth surface against the body.

The top and bottom edges of the belt are preferably protected from unravelling or fraying and are prevented from cutting the skin by a binding 28 of leather or similar cushioning material extending from the front end to and beneath the back cover 8. The binding is preferably thick enough to cause the belt to be raised slightly at the edges thereby preventing slipping or chafing of the skin, and creating an air pocket for ventilation. Means for securing the belt in the back, such as a metal hook 30 to engage with a corresponding slotted fixture in the other end of the belt, are secured to the elastic portion of the piece 10 in any convenient manner, as by sewing it into a short loop of fabric 32. The end of the piece 10 is protected by a strip 34 made of leather or other suitable material stitched thereto.

The reinforcing piece 16 is open at the left end as viewed in Fig. 2 to permit insertion of the reinforcing spring which preferably extends as far as the stitching in the back cover 8 will permit.

The shape of the reinforcing spring 36 may be seen by reference to Fig. 4, which is a fragmentary view of the forward end of the spring. In the preferred embodiment as described, the spring presents the plan shown in the figure when placed upon a flat surface. At the forward end an offset is produced at a diagonal bend 38; the spring having the same contours as the body around the back and sides up to the bend 38, and being flat and at an angle with the vertical from the bend 38 to the forward end. The purpose of the offset is to localize pressure directly above the pubic bone and to

prevent rocking of the pad. In the offset portion of the spring there is an elongated slot **40**. One side of the spring adjacent to the slot has serrations **42** formed therein.

Another view of the spring **36** is provided in Fig. 5 which is an exploded view showing the manner in which the abdominal yoke **2** is connected therewith. The yoke **2** is provided at its ends with horizontal slots **44**, and serrations **46** on one surface to engage with the serrations **42** of the spring. End walls **48** are preferably formed in the yoke, with a separation equal to the width of the spring to prevent the spring from rotating with respect thereto.

The pad **4** is preferably constructed with a rigid frame, covered if desired with a suitable material, and having a single threaded hole **50**. The assembly of the foregoing parts is accomplished simply by means of a single control screw **52** which passes through the abdominal yoke and reinforcing spring into the hole **50**. When the screw is tightened the serrations **42** and **46** clutch and secure the yoke and spring to prevent slipping and the end walls **48** prevent rotation of the spring with respect to the yoke. Also, gripping projections **54**, preferably formed in the end walls of the yoke, engage with the pad **4** and prevent its rotation.

It will be apparent that by loosening the screw **52** it is possible to conveniently change the position of the pad **4** by rotation, or to move the position of the bend **38** with respect to the juncture of the abdominal yoke and pad, or to change the distance between the pads, as desired.

It will be appreciated that the drawings are merely illustrative in so far as scale is concerned, the exact dimensions of the parts, particularly as shown in Figs. 2 and 3, being determined by the usual criteria of strength, flexibility and wearing comfort.

In assembly, selected reinforcing springs of the required thickness and hardness are first inserted into the spaces **14** of each half of the belt so that the slots **40** coincide with the holes **18** in the belt. Next, the abdominal yoke **2** is inserted into the openings in the leather reinforcing pieces **16** and around the springs so that the slots **44** are also in alignment with the holes **18**. The control screws **52** are then inserted through the holes **18** and the slots in the yoke and springs, and threaded into the holes **50** in the pads. The adjustments heretofore described are readily made by the fitter according to individual requirements, and the screws **52** are then tightened sufficiently to hold the parts firmly together.

When worn as shown in Fig. 1, the belt forms a semi-flexible structure, which fits all around the body except in the space between the pads. The springs are relatively weak in bending flexure, permitting the conformity to be maintained notwithstanding the motions of the hips. Thus, the belt is flexible, but a considerable degree of resistance to torsional flexure is introduced by the springs, whereby the offset of the pads with respect to the groin introduced by the bends **38** in the springs permits the pads to exert an appropriate thrust upon the hernia. That is, the front end portion of each spring has a lower edge offset inwardly toward the body in relation to the upper edge when the truss is fitted, and this produces the offset of the pads.

From another viewpoint, it may be seen that the truss proper is held firmly in position over the ruptured area with respect to points of the body near the abdominal pads, rather than being suspended from the middle of the back, since all points between the pads and the back are continuously in contact with the body and move in unison with it.

Another convenient means of adjustment of the truss available to the truss fitter takes the form of an inward indentation in the region designated **56** in Fig. 4, which is made by bending the side spring in this region to cause the belt to fit snugly right up to the pad.

The embodiment of Fig. 6 illustrates an application of the invention to the case of a single inguinal hernia. The construction is very similar to the above on the side of the truss incorporating the operative abdominal pad. However, in place of the rigid abdominal yoke **2** a relatively flexible and malleable metal yoke **58** of approximately the same length is used. The yoke **58** is preferably secured to the operative pad **60** and reinforcing spring (not shown) in the manner shown in Fig. 5 and heretofore described.

The other end of the yoke **58** is formed into a hook engageable with a fixture **64** of any suitable form which is secured to the other end of the belt. The belt is flexible in the entire portion **65** extending from the back cover **66** around the body to the fixture **64**, and it extends on the opposite side forwardly past the screw **68** and across the abdomen in the form of an elongated cover or channel for the yoke **58**. The belt is terminated in a dummy pad **70** integral therewith. The pad **70** protects the wearer from the exposed hook and the fixture **64**, and offers such nominal support to the groin as may be deemed necessary. Adjustment of the pad **70** to any desired degree of pressure is provided due to the fact that the yoke is made of a malleable material that can be made to fit any desired abdominal curvature.

The above design provides a means for fastening the belt around the body without resorting to a fastening that hooks directly to the hernia pad, a method which has the disadvantage of tending to pull the pad away from the rupture. The action of the support involves a lever action on the pad **60**, modified somewhat by the spring action of the yoke **58**. The fulcrum of the "lever" is located approximately in the region of the bend **72** in the spring and the force on the end of the "lever" is exerted by the elastic portion **65** of the belt. Adjustments of the pad position, as well as of the effective length of the piece **58** and the reinforcing spring may be made in the same manner as described with reference to Figs. 1 to 5.

It will be apparent from the mode of operation that the described trusses may be modified by decreasing the lengths of the side springs so that they extend just over the hips, or only a sufficient distance to ensure the required torsional strength to prevent rocking and slippage of the pads.

It will be understood that the invention has been described with reference to its preferred embodiments as adapted for inguinal ruptures, and that various modifications in details of construction consistent with the principles of the invention may be made in accordance with the principles presently understood in the art, to suit the needs of any particular application, and without departing from the spirit or scope of the invention.

Having thus described my invention, I claim:

1. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and having a longitudinal slot therein, a side spring having a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

2. In a truss, the combination of a rigid yoke shaped to fit the groin area and having a longitudinal slot adjacent an end, a side spring having a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

3. In a truss, the combination of a rigid yoke shaped to fit the groin area and having adjacent an end a serrated surface and a longitudinal slot, a side spring having a longitudinal slot adjustably overlapping said slot in the yoke and a serrated surface in engagement with said surface on the yoke, a pad having a threaded hole, and

an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

4. In a truss, the combination of a rigid yoke shaped to fit the groin area and having adjacent an end a serrated surface bounded by raised parallel sides, said surface having a longitudinal slot and said sides having a number of gripping projections, a side spring adapted to fit slidably within said sides, said spring having a longitudinal slot adjustably overlapping said slot in the yoke and a serrated surface in engagement with said surface on the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke and spring together, said projections gripping the pad.

5. In a truss, the combination of a rigid yoke shaped to fit the groin area, said yoke being shaped to have a substantially horizontal central portion and an end portion having a longitudinal slot therein, said end portion extending obliquely upward from the central portion when so fitted, a side spring having a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

6. In a truss, the combination of a yoke shaped to fit the groin area and having a longitudinal slot adjacent one end, a side spring having a longitudinal slot adjacent one end adjustably overlapping said slot in the yoke, a pad having a threaded hole, an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together, and a flexible belt joining the ends of the spring and yoke opposite to said slotted ends.

7. In a truss, the combination of a rigid yoke shaped to fit the groin area and having a longitudinal slot adjacent each end, a pair of side springs each having a longitudinal slot adjacent an end adjustably overlapping a slot in the yoke, a pair of pads each having a threaded hole, and a pair of adjustment control screws each threaded into the hole in a pad through the slots in the yoke and spring and securing said yoke, pad and spring together.

8. In a truss, the combination of a yoke shaped to fit the groin area and having a longitudinal slot therein, a side spring having a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

9. In a truss, the combination of a rigid yoke shaped to fit the groin area, said yoke being shaped to have a substantially horizontal central portion and an end portion having a longitudinal slot therein, said end portion extending obliquely upward from the central portion when so fitted, a side spring having a portion at one end wherein the upper edge is offset in relation to the lower edge, said last-mentioned portion having therein a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

10. In a truss, the combination of a rigid yoke shaped to fit the groin area and having a longitudinal slot adjacent an end, a side spring having a portion at one end wherein the upper edge is offset in relation to the lower edge, said last-mentioned portion having therein a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

11. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

12. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together, and a flexible belt conected with the free end of the spring and adapted to be connected with the yoke to form an assembly passing around the body, the free end portion of the yoke having means for fastening to said belt.

13. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion being bounded by raised parallel sides and extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together.

14. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion being bounded by raised parallel sides, said sides having gripping projections, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together, said projections gripping the pad.

15. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a serrated surface, said end portion also having a longitudinal slot therein and being bounded by raised parallel sides, said sides having gripping projections, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a serrated surface to lie in engagement with said surface on the yoke and a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, and an adjustment control screw threaded into the hole through the slots in the yoke

and spring and securing said yoke, pad and spring together, said projections gripping the pad.

16. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion being bounded by raised parallel sides and extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, an adjustment control screw threaded into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together, and a flexible belt connected with the free end of the spring and adapted to be connected with the yoke to form an assembly passing around the body, the free end portion of the yoke having means for fastening to said belt.

17. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a longitudinal slot therein, said end portion being bounded by raised parallel sides, said sides having gripping projections, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a longitudinal slot therein adjustably overlapping said slot in the yoke, a pad having a threaded hole, an adjustment control screw threaded into the hole through the slots in

the yoke and spring and securing said yoke, pad and spring together, said projections gripping the pad, and a flexible belt connected with the free end of the spring and adapted to be connected with the yoke to form an assembly passing around the body, the free end portion of the yoke having means for fastening to said belt.

18. In a truss, the combination of a yoke adapted to extend across the groin area of the wearer and shaped to conform to said groin area, said yoke having an end portion with a serrated surface, said end portion also having a longitudinal slot therein and being bounded by raised parallel sides, said sides having gripping projections, said end portion extending obliquely upward toward the side when fitted, a side spring having a front end portion wherein the lower edge is offset inwardly toward the body in relation to the upper edge when the truss is fitted, said front end portion of the spring being adapted to fit slidably within said sides and having a serrated surface to lie in engagement with said surface on the yoke and a longitudinal slot adjustably overlapping said slot in the yoke, a pad having a threaded hole, an adjustment control screw thread into the hole through the slots in the yoke and spring and securing said yoke, pad and spring together, said projections gripping the pad, and a flexible belt connected with the free end of the spring and adapted to be connected with the yoke to form an assembly passing around the body, the free end portion of the yoke having means for fastening to said belt.

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