

F. J. FOLLANSBEE.
SELF CONFORMING ANATOMICAL TRUSS.
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1,044,159.

Patented Nov. 12, 1912.

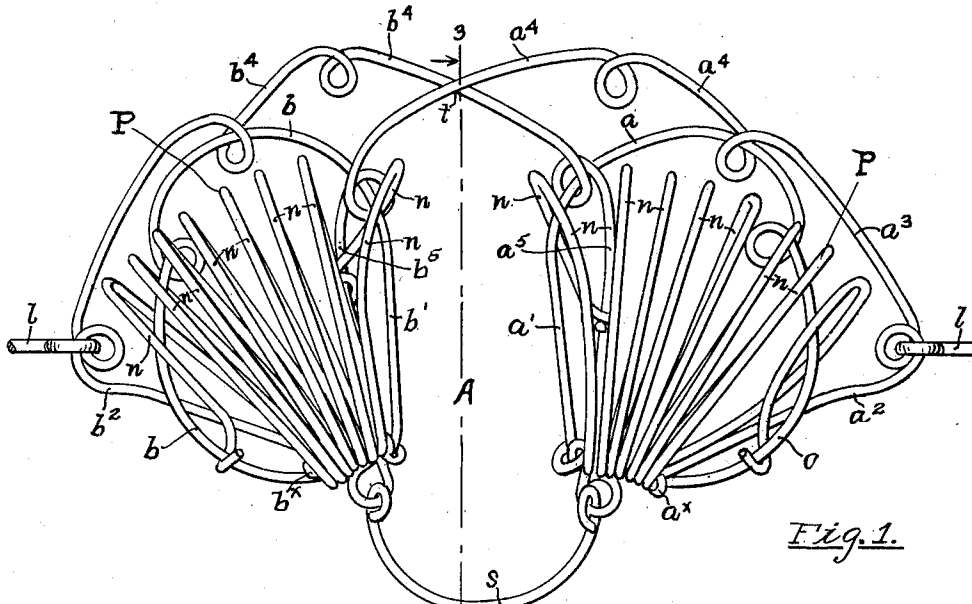


Fig. 1.

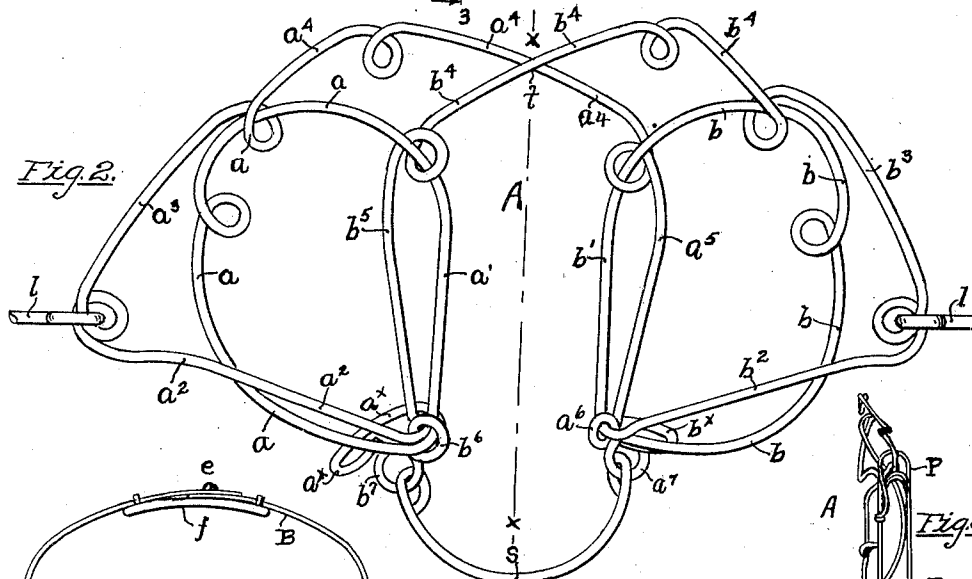


Fig. 2.

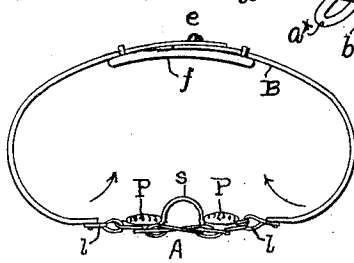


Fig. 3.

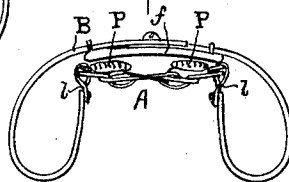


Fig. 4.

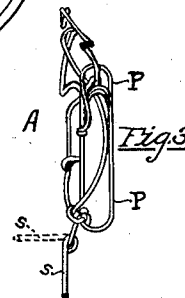


Fig. 5.

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SELF-CONFORMING ANATOMICAL TRUSS.

1,044,159.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK J. FOLLANSBEE, a citizen of the United States, residing at Hope, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Self-Conforming Anatomical Trusses, of which the following is a specification.

My invention relates to trusses of the type or class more especially devised to be employed in cases of hernia or rupture of the abdominal viscera, and it consists essentially in the novel construction and arrangement of elements constituting the truss proper and capable of being detachably connected to a resilient strap or body band, all as hereinafter set forth and claimed.

The object sought to be attained is to provide an automatic or self-conforming truss in which the pad or pads proper thereof, when once fitted or adjusted to the wearer, will remain in position with respect to the rupture, while at the same time permitting the truss-frame to accommodate itself to the varying movements or flexures of the body. In other words, the device forming the subject of the present invention may be termed an adjustable anatomical truss, in that it is constructed to fit over the pelvic bone surrounding the scrotum, thereby readily allowing the body movements without causing corresponding movement of the pads; the latter remaining in place, practically stationary, without slipping or changing position.

In the accompanying sheet of drawings, Figure 1 represents a side elevation of a truss-frame, including a pair of pads, embodying my improvement, viewed from the back or pad side. Fig. 2 is a front or reverse side elevation of the same, the pads being omitted. Fig. 3 is a transverse sectional view, in reduced scale, taken on line 3—3 of Fig. 1. Fig. 4 is a reduced top plan view showing the truss proper attached to a spring-like band or abdominal belt; and Fig. 5 is a similar plan view, showing the belt distended, substantially as in normal use.

The following is a more detailed description of my improved truss, including the manner of its adjustment and use:—

The truss-frame A, omitting, for the present, a description of the attached pads P, consists of a plurality of bent, interconnected resilient main members *a* and *b*, of

wire, as stated. Said members are arranged or disposed with respect to the vertical median line *x—x* (Fig. 2) and form what may be termed a duplex frame or oppositely disposed sections; that is to say, the right hand section of the main member *b* of the frame may commence at the lower end in an elongated eye form (see *b^x*) and extend therefrom in an outward and upward direction (see *b*), then inwardly downward (see *b¹*), laterally outward (see *b²*), then upwardly inclined (see *b³*) and across the center of the frame at the top (see *b⁴*), and finally downwardly and inwardly (see *b⁵*) into the left-hand portion or section of the frame, and terminates therein at its lower end in eyes *b⁶*, *b⁷*. The other or left-hand main member *a* of the frame may commence at the lower end in an elongated eye form (*a^x*) and extend therefrom in the form of integral arms or bends *a*, *a¹*, *a²*, *a³*, *a⁴*, *a⁵*; the main member *a* finally terminating at the lower end of the right-hand section of the frame in eyes *a⁶*, *a⁷*; the construction being substantially as before described with respect to the member *b*, except that it is reversely arranged with relation to the other section. The said frame members are bent at suitable points or intervals to form loops or eyes, thereby not only increasing the resiliency of the wires, but at the same time adapting the sections to be interconnected and capable of being freely movable in conformity with the body movements of the wearer. The two sections of the frame cross each other centrally at the top, as at *t*, and are connected at the lower or opposite portion by a movable bent link *s* having its ends attached to the respective loops *a⁷*, *b⁷*, and capable of engagement with the scrotum. As thus constructed and arranged, the right and left portions of the truss-frame are practically reticulated, and also adapted to conform somewhat closely to the pelvic bone of the user; the said link *s* or scrotum support further serving, when in use, to maintain the truss pads immovably in position, while at the same time permitting the frame proper to move in unison with the body flexures.

Each of the pads P is or may be produced from a continuous length of resilient wire bent to form a series of elongated connected radially disposed cushion-like loops or coils *n*, secured to suitably arranged eyes formed

in the respective sections of the frame A. The lower end of the pad or pad-loops are supported in a horizontal eye, as a^* or b^* ; the pad is yielding or elastic to a certain extent, and having each of its loops practically capable of movement independently of its other loops.

The truss-supporting strap or abdominal belt B indicated in the drawings, is or may be constructed substantially as usual; that is, a leather-covered, ribbon-like steel strip having its end portions normally intumed and pressing inwardly against the body, and provided with means, as for example links l , for detachably connecting it to the pad-carrying truss, P. A. The belt B may be provided with a back pad f , to which latter I make no claim.

Fig. 4 represents the normal position the parts assume when detached from the wearer; and Fig. 5 represents the same when in use. In the latter figure the arrows indicate the normal tendency of the belt's outer or front ends to press inward, thereby, in co-operation with the truss and its scrotum-link s , preventing the truss from becoming accidentally displaced. The belt may be readily lengthened or shortened circumferentially by simply removing the screw e from the overlapping back ends $h-h$, and after effecting the desired adjustment, resecuring the parts together by means of the said screw.

By means of my improved truss it will be apparent that the device is adapted to fit over the pelvic bone surrounding the scrotum, while at the same time being self-adjusting with respect to the corresponding portions of the anatomy; the scrotum-ring s serving as a yielding support when the wearer is sitting or standing, and also serving to prevent the pad from moving out of normal position; thus forming, when in use, a practically immovable support. In other forms of trusses the truss pads are liable to move or shift whenever the wearer changes his position; in former trusses, too, the pads as a rule are liable to press into the rupture, thereby enlarging it. My improved pad, on the contrary, acts to some extent to distribute its pressure, so as to cause the flesh adjacent the opposite edges of the opening to be drawn nearer together and giving them a possible chance to heal. Each member or loop n of the pad is capable of limited movement independently of the others.

It may be added that while the drawing represents my improved truss-frame and pad as formed from suitable resilient wire, I do not desire to limit it to wire or metal of such character. In any case, however, I prefer to polish, plate or otherwise cover the surfaces of these members, for obvious purposes. The truss-belt or strap may be made of leather-covered flat bands of steel, hard rubber, or other suitable material.

What I claim as new and desire to secure by U. S. Letters Patent is:—

1. As a new and improved article of manufacture, an anatomical self-conforming truss appliance, consisting of a frame adapted to be attached to an elastic abdominal belt or strap, said frame composed of interconnected right and left sections, formed from bent, elastic, resilient members, having its central part constructed to fit over the pelvic bone, means for maintaining the frame in normal position, and one or more elastic pads secured to the said frame sections, each pad forming a cushion-like surface, adapted, when in use, to bear against the ruptured part of the wearer, the said frame sections being capable of movement toward and from each other and also having said pad elements adapted for individual movements, within fixed limits, with respect to the frame without changing their normal preadjustment.

2. In an anatomical self-conforming truss appliance, having interconnected right and left resilient frame sections provided with a central opening arranged to fit over the pelvic bone, the combination therewith of a bent link jointed to and connecting the lower ends of said frame sections, and cushion-like pads secured to the frame sections and projecting from the inner or back face thereof, for the purpose set forth.

3. In an anatomical self-conforming truss appliance, adapted to be removably attached to an abdominal strap or belt, a main frame consisting of interconnected right and left elastic sections formed from resilient wire, a swinging, bent central link connecting the lower end portions of the sections, adapted in use to partly surround the scrotum, and members formed from a series of elongated independent loops or convolutions of resilient wire secured to the frame sections and forming therewith cushioned pads proper.

4. The combination with a truss-frame, having interconnected right and left sections or wings formed from bent, resilient wire arranged to form in each of said sections a series of openings, of cushioned pads proper secured to the sections, also formed from resilient wire, bent to produce a plurality of elongated, independent loops, and means connecting the bottom ends of the two sections together.

5. In a truss, the combination with its frame, formed from interconnected, resilient wire members, of a resilient or spring-pad member secured to said frame, consisting of a plurality of laterally separated loops, each loop capable of limited independent movement transversely of the frame.

6. In a truss, the combination of a resilient main frame having interconnected right and left sections, the space between the sections adapted to fit over the pelvic bone

of the wearer, a movable member capable of
engaging the scrotum, interposed between
and connecting the lower end portions of the
frame, resilient pad members formed from
5 wire secured to said frame sections, and an
abdominal spring band having the said pad-
carrying frame detachably connected thereto.

In testimony whereof I have affixed my
signature in presence of two witnesses.

FRANK J. FOLLANSBEE.

Witnesses:

GEO. H. REMINGTON,
CALVIN H. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."