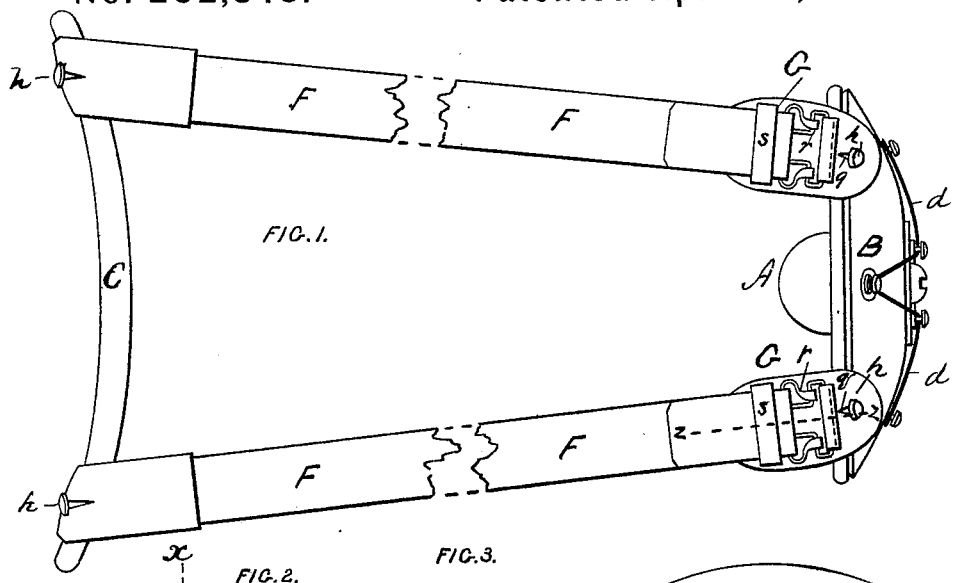
# L. T. J. LUBIN.

## Truss.

No. 202,843. Patented April 23, 1878.

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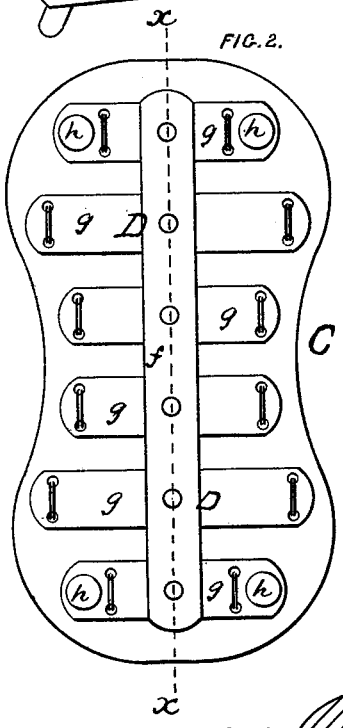


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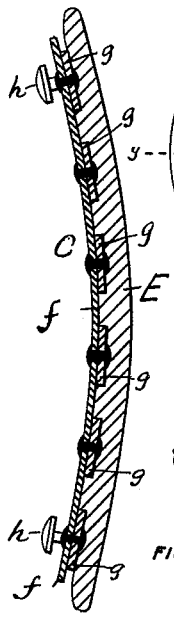


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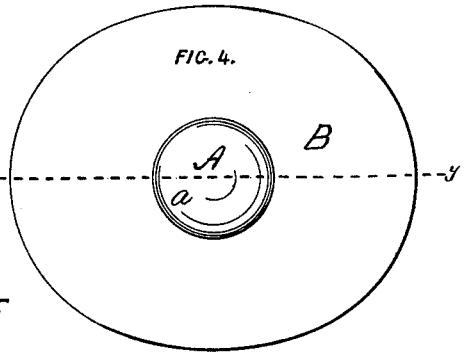


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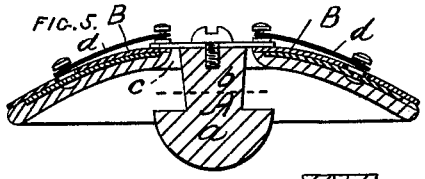


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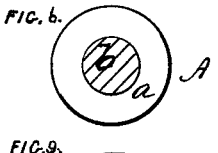


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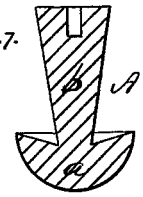


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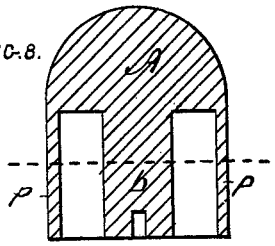


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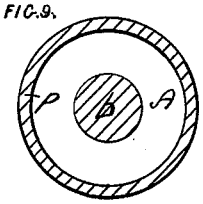


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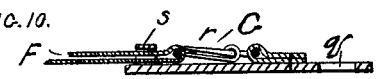


FIC. 10.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

LEON T. J. LUBIN, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **202,843**, dated April 23, 1878; application filed August 18, 1877.

*To all whom it may concern:*

Be it known that I, LEON T. J. LUBIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented Improvements in Trusses, of which the following is a specification:

This invention relates to certain improvements in trusses; and consists in a back bearing-pad composed of a series of longitudinal and transverse spring-bands, cushioned on the inner side, and connected to the front pad by adjustable straps diverging from and attached to said front pad by separate junction-pieces, as will be more fully hereinafter described.

In the accompanying plate of drawings, the present invention is illustrated in connection with an umbilical truss, such as described and shown in the Letters Patent issued to me, dated September 28, 1875, No. 168,264.

Figure 1 is an edge view of same, and the combination of back bearing pad or piece and diverging connecting-straps therewith; Fig. 2, a face view of the back to the back bearing pad or piece, and Fig. 3 a section thereof on line *x x;* Fig. 4, a face view of the umbilical pad and its holder; Fig. 5, a cross-section on line *y y*, Fig. 4, and Figs. 6 and 7 sectional views of the umbilical pad detached; Figs. 8 and 9, similar sectional views to Figs. 6 and 7 of the umbilical pad, showing a modified construction thereof, and Fig. 10 a longitudinal section of a portion of one of the connecting-straps on line *z z*, Fig. 1.

In the drawings, A represents an umbilical pad, which is made of any suitable material or materials, or of any suitable form, having a head, *a*, and terminates at its inner end with a stem or shank, *b*. This pad-stem *b* is of considerable smaller circumference than that of the pad-head *a*, and it passes through the aperture *c* of the plate B, which is the holder for the umbilical pad, and to which the pad A is connected by an elastic cord, *d*, substantially as described in said Letters Patent.

C is a pad, constituting the bearing pad or plate at the back of the wearer. This pad C is made of a skeleton-frame, D, which is composed of a longitudinal spring-band, *f*, and of a series of cross spring-bands, *g*, which cross-bands intersect the band *f*, and project from its sides at various points of its length, and are riveted or otherwise secured thereto, with the whole cushioned on one side, as at E, (see Fig. 3,) in any suitable manner.

F are elastic straps. These elastic straps F connect the pad-holder B and the back bearing pad or plate C, and they are four in number, two upon each side of the pad-holder and back-pad C. The straps F have a button-hole at each end, by which to button and secure them to stud or button heads *h* of the two parts B and C, and the studs *h* of each part B and C for each pair of straps are so situated relatively to the studs of the other part that the straps in their length will diverge from the pad-holder B to the back bearing-pad C, and have such a divergence that, while they will hold the pad A to its position for work, the encircling of the abdomen will be such as to leave the abdomen practically free and unrestrained under the breathing action of the person.

The construction of the pad A with a stem, *b*, as before described, considerably lightens the pad without detracting from its bearing and acting surface and effectiveness in use, and again enables a smaller pad-holder, B, to be used, all as is obvious without further description.

A hernia-pad of the construction above described is shown in Figs. 5, 6, and 7, and by Figs. 8 and 9, with the addition of a casing, *p*, which surrounds its stem or shank *b*.

G are junction-pieces for the elastic straps F to connect with the pad-plate B. This junction-piece is preferably made of leather, and combines in itself a button-hole, *q*, a buckle, *r*, and a loop, *s*, for receiving the loose end of the strap, which is secured to the buckle, the strap passing to the buckle through said loop *s*. A junction-piece such as described for the straps enables a strap to be attached and detached from the pads or pad-holders without alteration of its adjusted tension—an important advantage.

A back bearing-pad, C, such as herein described, is self-adjustable in its length and width, and can readily be bent or bend itself

to conform to the spinal column, the part of the person's back against which it is to bear when in use, and it is applicable to shoulder-brace straps and other straps, as is obvious without further description.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The back bearing-plate C, constructed of a skeleton-frame, D, composed of longitudinal and transverse spring-bands *f g*, cushioned on one side, in combination with the two diverging elastic straps F, connected at one end to the top and bottom parts of the back bearing-plate, and attached at their other end to a pad-holder, B, substantially as shown and described.

2. A junction-piece, G, having a button-hole, *q*, buckle *r*, and loop *s*, substantially as described, for the purpose specified.

3. The skeleton-frame D, composed of a longitudinal spring-band, *f*, and transverse spring-bands *g*, substantially as and for the purpose described.

LEON T. J. LUBIN.

Witnesses:
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