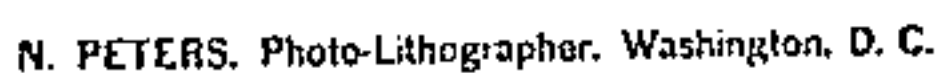


(No Model.)

J. T. BARTLETT & E. E. BUTMAN.

TRUSS.

Patented Oct. 3, 1882.



UNITED STATES PATENT OFFICE.

JASON T. BARTLETT AND EDWARD E. BUTMAN, OF BOSTON, MASS.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 265,235, dated October 3, 1882.

Application filed July 7, 1882. (No model.)

To all whom it may concern:

Be it known that we, JASON T. BARTLETT and EDWARD E. BUTMAN, citizens of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Trusses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front elevation of a truss constructed in accordance with our invention. Fig. 2 is a plan of the pad and its supporting-arm. Fig. 3 is a longitudinal vertical section through the same. Fig. 4 is a side elevation of the same. Fig. 5 is an enlarged sectional detail, showing the adjusting-screw and end of the pad-supporting arm. Fig. 6 is a horizontal section through a portion of the pad-plate and the tubular stud.

Our invention relates to an improvement in trusses for use in cases of hernia; and it consists in a novel combination and arrangement of parts, and in certain details of construction, whereby the pad can be easily and quickly adjusted in different relative positions with respect to its supporting-arm to suit the requirements of the particular case to be treated, as will be hereinafter more fully set forth.

In the said drawings, A represents an ordinary truss-spring, and B the supporting-arm, which carries the pad D, which is of the usual form. This arm B is hinged at *a* to the upturned lip *b* of a plate, E, which is pivoted upon the outer surface of the pad-plate G by means of a tubular stud, *c*, having a head or flange, 8, at its outer end, and secured in place by means of a screw-nut, *d*, adapted to fit the threaded portion beneath the plate G.

One side of the shank of the stud *c* is flattened, as seen at 9 in Figs. 3 and 6, and the aperture in the plate G through which it passes is of corresponding form, by which construction the stud is prevented from turning around within the nut and becoming loose, as might otherwise occur. Any other suitable form may, however, be given to the exterior surface of the stud and the hole in the plate G, through which it passes, that will prevent the stud from turning around independently of the plate.

The plate E is provided with a slot, *e*, curved in the arc of a circle having the pivot *c* as a center, and through this slot passes a set-screw, *f*, which enters a screw-hole, *g*, in the plate G, and serves to secure the plate E in position thereon, after being adjusted, by turning it on its pivot *c* to vary the relative position of the pad D with respect to the arm B.

Should it be desired to reverse the pad in order to bring its thick portion *h* uppermost, as seen dotted in Fig. 2, it is merely necessary to remove the set-screw *f* from the hole *g*, when the pad can be turned around to bring the slot *e* over another screw-hole, *i*, in the plate G, when the screw *f* is inserted therein, and serves to clamp the plate E and hold the pad as desired, a ready and convenient means being thus afforded for adjusting the pad around the pivot *c* as a center at any desired angle to the direction of the length of the supporting-arm B.

The pad D is adjusted in a manner to enable it to press inward and upward, which is often desirable in many cases of hernia, by moving it upon the hinged joint *a*, which is effected by means of the adjusting-screw H, which passes through a slot or aperture, *k*, in the end of the supporting-arm B, and is screwed into the tubular stud *c*, the interior of which is provided with a screw-thread to receive it, as seen in Fig. 3.

The arm B is held up against the head 10 of the screw H by means of a nut or collar, *m*, fitting tightly on the shank of the screw and moving therewith, and thus by turning the screw H in or out of the stud *c* the position of the pad D may be varied to cause it to be presented to the rupture at the exact angle required to produce the best results.

The surface of the metal entirely around the slot *k*, on each side of the supporting-arm B, is grooved or cut away, as seen in Figs. 3 and 5, in such manner as to form two convex surfaces, 12 13, and the adjacent surfaces of the head 10 of the screw H and the nut *m* are also each rounded off or made convex, which construction admits of the free movement of the screw in the slot without causing the arm to bind against the head 10 or nut *m* when the adjustment of the pad varies the angle between the shank of the screw and the arm,

thus allowing the nut *m* to be screwed up so close to the arm as to avoid play or loose motion of the arm between the head 10 and nut *m* in any position of the pad, whereas if it were not for this device a considerable amount of loose motion would be necessary at this point to permit of extreme adjustments in either direction, which would be exceedingly objectionable. In the present instance the end of the arm B is at all times kept close to and at a uniform distance from the head 10 as the screw H is turned in or out of the stud *c*, instead of projecting out more or less from the outer surface of the arm, according to the adjustment, as is the case with many constructions heretofore used, and which it is desirable to avoid on account of the liability of the projecting head of the screw tearing or catching in the clothing of the wearer of the truss.

Another advantage resulting from our improved construction is that the pad is held by the single adjusting-screw H firmly and immovably in any desired position within its range of motion, and the entire mechanism is simple, compact, durable, easily adjusted, and not liable to get out of order.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a truss, the combination, with the pad D and pad-plate G, of the plate E, pivoted thereto upon a tubular stud or pivot, *c*, the supporting-arm B, hinged at *a* to the plate E, and the adjusting-screw H, passing through the arm B, and provided with a nut or collar, *m*, on the inner side of the arm, and adapted to turn within the threaded interior of the tubular stud or pivot *c*, substantially as and for the purpose set forth.

2. In a truss, the combination, with the pad

D and pad-plate G, with its two screw holes, *g i*, of the reversible slotted plate E, pivoted upon the plate G and connected with the supporting-arm B, and the set-screw *f*, adapted to be inserted in either of the holes *g i* of the plate G, all constructed to operate substantially as described, for the purpose set forth.

3. In a truss, the hinged or pivoted pad-supporting arm B, having its upper and lower surfaces, 12 13, immediately surrounding the slot or aperture *k*, of convex form, in combination with the adjusting-screw H and nut or collar *m*, having convex surfaces contiguous to the convex surfaces 12 13 of the arm B, all constructed to operate substantially in the manner and for the purpose described.

4. In a truss, the combination, with the pad D and pad-plate G, having the two screw-holes *g i*, of the reversible plate E, pivoted thereto at *c*, and provided with a curved slot, *e*, and set-screw *f*, the supporting-arm B, hinged at *a* to the outwardly-projecting lip *b* of the plate E, and the adjusting-screw H, passing through a slot or aperture, *k*, in the arm B, and provided with a nut or collar, *m*, on the inner side of the arm, whereby the latter is confined between the nut or collar and the head of the screw, and the pad thus held immovably when adjusted at the desired angle with respect to the arm B, all constructed to operate substantially in the manner and for the purpose set forth.

Witness our hands this 3d day of July, A. D. 1882.

JASON T. BARTLETT.
EDWARD E. BUTMAN.

In presence of—

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.