

UNITED STATES PATENT OFFICE.

FRED A. WHEELER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE KAUD
SANITARIUM, OF SAME PLACE.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 522,952, dated July 10, 1894.

Application filed May 9, 1893. Serial No. 473,522. (No model.)

To all whom it may concern:

Be it known that I, FRED A. WHEELER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, 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, forming a part of this specification.

My invention relates to appliances which are employed in the treatment of abdominal hernia, rupture, and similar diseases, and among the primary objects of my invention is included that of producing a truss the pad of which shall be so connected to the body-band as to be capable of ready adjustment both longitudinally and laterally at various angles relative to the body-band; the principal pivotal connection being located within the body of the pad, and the devices as a whole being simple and very compact.

To the above purposes, as also to such others as may appear from the ensuing description, my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

The more precise nature of my invention will be better understood when described with reference to the accompanying drawings, in which—

Figure 1 is a plan view of a truss embodying my invention. Fig. 2 is a transverse vertical section of the truss, taken on the line 2—2 of Fig. 1; the direction of view being that indicated by the arrows applied to the section-line. Fig. 3 is a front elevation of the truss-pad and also a transverse vertical section of the stem and sleeve of the truss; the plane of this section being at right angles to the plane of the section of Fig. 2.

In the said drawings, A designates the body-band of the truss, this band being either of suitable resilient wire, or of any other material which possesses sufficient resilience and strength for the purposes to which the belt is applied; such belt being intended to encircle the user's hips in the usual manner, so as to properly support the pad in its required positions.

B designates the body of the pad, this pad being of approximately ovoid form marginally and convex at its inner side, and the front of the pad being provided with a flat face-plate C shown as secured to the pad by attaching-screws *c, c*. The precise form of the body-portion of the pad is not one of the essential features of my invention and may be varied from that shown as circumstances may require, and the pad may also be made of any suitable or preferred material, according to the precise nature of the disorder under treatment in any given instance. In any event, a main pivot-arm D is located wholly within the body of the pad and extends longitudinally thereof, the lower end of this arm being provided with a number of internally screw-threaded openings *d'* into certain of which are inserted two attaching-screw *d*; these screws extending also through the face-plate C.

The described arrangement is such that by withdrawing the screws *c* from the holes in which they are and moving the pad upwardly or downwardly longitudinally upon the pivot-arm D, and then inserting the screws into the corresponding upper or lower holes, the pad may be secured higher up or lower down upon the pivot-arm and in this way be brought into more accurate relation vertically with that part of the user's person which is affected by the rupture.

The upper part of the face-plate C is formed with a vertically elongated opening *c'* through which the upper end-portion of the pivot-arm D is exposed, but not protruded; this opening *c'* also permitting of the pivotal inward and outward movement of the pad, presently to be described, without contact of the face-plate with the pivot-sleeve of the truss. To the upper end of the pivot-arm D is connected the inner end of a pivot-pin E, a pivot *e* extending transversely through the upper end of the arm D and similarly through the inner end of the stem E for this purpose. It will be thus seen that the pad is permitted to swing bodily inward and outward toward and away from the user's abdomen, so as to further facilitate the accurate adjustment of the pad relative to the part affected; this swing-

ing movement occurring about the pivot *e* as a center.

In order to facilitate the adjustment of the pad just described, an adjusting-screw *e'* is provided which extends inward longitudinally through the pin E and the inner end of which impinges against the outer side of the pivot-arm D at a point below its pivot *e*; the screw *e'* working through a threaded opening in the stem E. Thus by turning the adjusting-screw *e'* in one direction, it will be moved longitudinally inward and will tilt the arm D and the pad B with it correspondingly inward, and by turning the adjusting-screw *e'* in the opposite direction, said screw will be drawn outwardly and the pad will correspondingly move outwardly. This arrangement enables also a greater or less amount of pressure to be applied to the part affected, as may be deemed desirable.

The pin E is externally perfectly plain or smooth and is surrounded by a pivot-sleeve F within which the pin E fits sufficiently loose to permit the pad to be moved sidewise in either direction; the sleeve being also perfectly plain or smooth internally and the pin E moving axially within the sleeve F and the pad being thus further brought into more accurate relation with the part affected. A set-screw *f* passes laterally through the sleeve F and its inner end impinges against the side of the pin E, and by turning this screw so as to tighten it, all possibility of accidental shifting of the pad upon its pivot E, F, is avoided.

The purpose of making the external surface of the pivot-pin E and the internal surface of the pivot-sleeve F plain or smooth, as above described, is to enable the pin to be turned within the sleeve without altering the longitudinal position of the two; the pad being thus retained, when desired, at its original distance from the body-band, and no increase or diminution of pressure upon the rupture being produced when the pin is turned axially in its sleeve.

A flat cap-piece G is secured to the lower end or side of the sleeve F, as for example, by screws *g*, and in its inner side this cap is formed with a transverse recess *g'* through which the contiguous part of the belt A passes; such portion of said belt being desirably flattened, or provision of any suitable nature being made to prevent the sleeve from turning upon the belt.

From the above description, it will be seen that I have produced a truss the pad of which is so attached to the belt as to permit of a great range of movements in a variety of planes, and which is compact in construction and capable of ready adjustment as desired; the pad being thus adapted to be brought into

accurately proper position relative to the part affected.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A truss comprising a pad, an externally plain pivot-pin connected pivotally to said pad, and an internally plain pivot-sleeve surrounding the pivot-pin and formed for direct attachment to a body-band, substantially as set forth.

2. A truss comprising a pad, an externally plain pivot-pin pivotally connected at one end to said pad, and an internally plain pivot-sleeve surrounding the opposite end-portion of said pivot-pin and formed for direct attachment to a body-belt; the axis of the pivot-pin extending at right angles to the axis of the pivotal attachment of said pin to the pad, substantially as set forth.

3. A truss comprising a hollow pad, a pivot-arm located wholly within said pad and connected thereto, a pivot-pin connected pivotally at one end to one end of said arm, and a pivot-sleeve surrounding the opposite end-portion of said pivot-pin and formed for direct attachment to a body-belt, substantially as set forth.

4. A truss comprising a pad, a pivot-arm located wholly within said pad and adjustable therein in a direction longitudinally thereof, a pivot-pin connected pivotally at one end to one end of said arm, and a pivot-sleeve surrounding the opposite end-portion of the pivot-pin and formed for direct attachment to a body-belt, substantially as set forth.

5. A truss comprising a pad, a pivot-arm located wholly within the pad and connected thereto, a pivot-pin connected pivotally at one end to one end of the arm, a pivot-sleeve surrounding the opposite end-portion of said pivot-pin and formed for direct attachment to a body-belt, and an adjusting-screw working through the pivot-pin and impinging against the pivot-arm below the point of pivotal connection of the pin with the arm; the axis of the said latter pivotal connection being at right angles to the axis of the pivot-pin itself, substantially as set forth.

6. A truss comprising a pad, an externally plain pivot-pin pivotally connected to said pad, an internally plain pivot-sleeve surrounding said pivot-pin, and a cap-plate secured to one side of the pivot-sleeve and formed with a recess for receiving a portion of a body-belt and serving to confine such belt-portion between itself and the pivot-sleeve, substantially as set forth.

FRED A. WHEELER.

Witnesses:

TODD MASON,
W. R. OMOHUNDRO.