

No. 616,319.

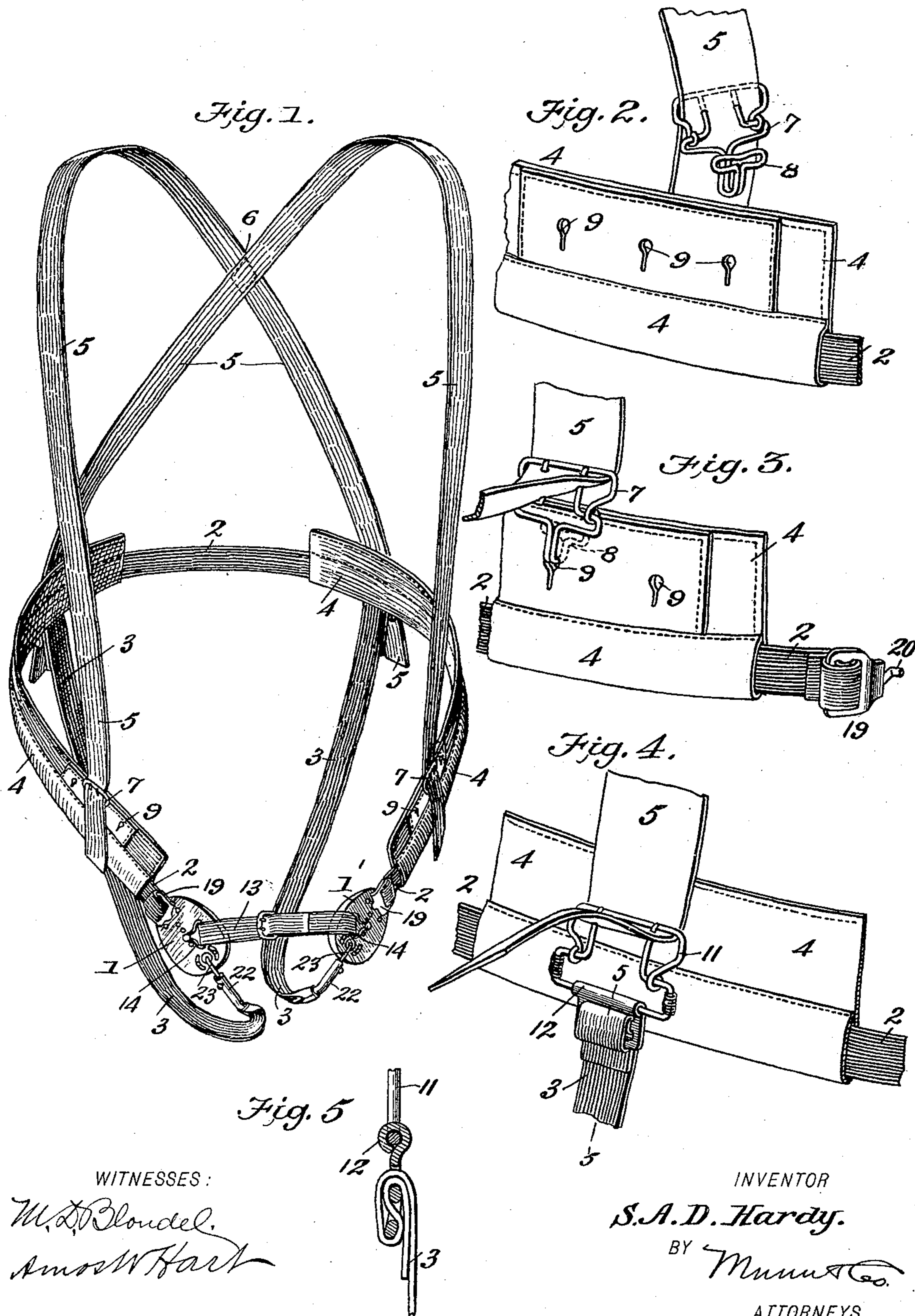
Patented Dec. 20, 1898.

**S. A. D. HARDY.
TRUSS.**

(Application filed Jan. 21, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES :

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INVENTOR

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BY *Munn & Co.*

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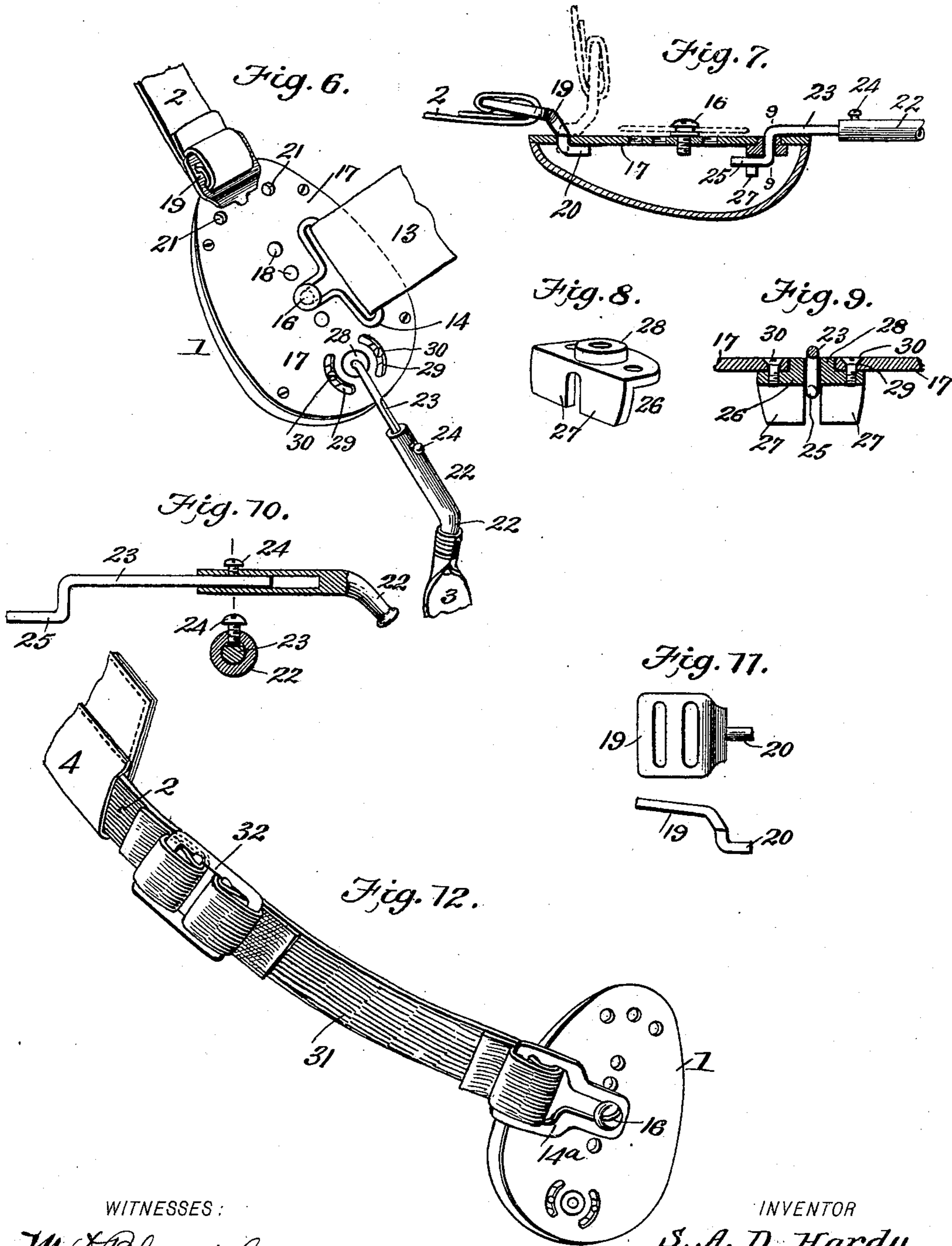
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WITNESSES:
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UNITED STATES PATENT OFFICE.

STEPHEN A. D. HARDY, OF AIX, MISSOURI.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 616,319, dated December 20, 1898.

Application filed January 21, 1898. Serial No. 667,422. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. D. HARDY, of Aix, in the county of Barry and State of Missouri, have invented a new and useful Improvement in Hernia-Trusses, of which the following is a specification.

It is the object of my invention to provide an improved truss which shall be capable of varied adjustments, whose parts may be readily attached, detached, and adjusted as desired to accommodate different wearers, and whose pressure may be varied quickly and conveniently as conditions require, and which may also be changed from a double to a single truss.

The construction and combination of parts are as hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention as a whole. Figs. 2, 3, and 4 are perspective views illustrating the detachable connection between shoulder-straps and hip-pads. Fig. 5 is a vertical section on line 5 5 of Fig. 4. Fig. 6 is a perspective view illustrating the several attachments of a pad. Fig. 7 is a longitudinal section of such pad. Fig. 8 is a perspective view of the adjustable "yoke" attached to the pad-plate. Fig. 9 is a vertical section on line 9 9 of Fig. 7. Fig. 10 includes an enlarged longitudinal and cross-section of the hook-lever. Fig. 11 includes a plan and side view of one of the loops attached to the ends of the body-strap. Fig. 12 is a perspective view illustrating the means for converting the truss from double to single.

The pads 1 are adjustably connected, as hereinafter described, with an elastic body-strap 2 and elastic perineal straps 3. Both sets of such straps 2 3 are preferably formed of pure india-rubber. The body-strap 2 passes through longitudinal pockets formed in the lower side of elongated hip-pads 4, which are freely slidable on said strap 2. Non-elastic shoulder-straps 5 are adjustably attached to the hip-pads 4 and are connected at 6, where they cross on the back of the wearer. Their front ends adjustably engage buckles 7, having hooks 8, Fig. 2, that engage any one of a row of vertical keyhole-slits 9, which are alined horizontally and

formed in leather wear-pieces or reinforces sewed or otherwise permanently secured to the outer side of the hip-pads 4. The ends of the hooks 8 project laterally, as shown in Fig. 2, and therefore require to be placed in alinement with the slits in order to attach or detach them from the hip-pads. The rear ends of the straps 5 similarly engage buckles 11, that are permanently attached to the hip-pads 4, near the lower edges of the latter. The perineal straps 3 are adjustably connected with the aforesaid buckles 11 by a hinged attachment 12, so as to permit adjustment of the straps 3 and yet obviate any danger of their accidental slipping or detachment.

The two hollow pads 1, which are constructed of a flat top plate and conical or rounded body, are detachably connected by a transverse non-elastic strap 13, having metal loops 14, Fig. 6, attached to its ends, which loops are provided with an internal V notch or slot adapted to receive and lock with a round-head screw 16, fixed in the flat face or top plate 17 of the pads 1. Said plate 17 is constructed of metal and has a longitudinal central row of screw-threaded holes 18, in which the screw 16 is fitted. The strap 13 is made adjustable in length by means of a buckle. This construction and combination of parts obviously permits the pads 1 a wide range of adjustment nearer to or farther from each other, so that they may be easily adapted to the size and form of different wearers.

The ends of the elastic body-strap 2 are adjustably connected with the pads 1 by means of attachments in the form of curved loops 19, Figs. 3 and 11, having angular hooks 20, adapted to enter any one of a transverse row of holes 21, formed in the top plate 17 of the pads 1 near their smaller ends. The said hooks 20 are inserted in the holes 21 by canting the loops 19, as shown in Fig. 7, and the shoulders of the hooks 20 abut the plate when in due locking position. It is apparent the hooks 20 may be easily attached and detached and that their adjustment is therefore easily and quickly effected.

The perineal straps 3 are connected with the pads 1 by extensible levers, which are constructed as follows: The lower ends of said straps 3 are secured to the bent ends of

short metal tubes 22, in which short rods 23 are adapted to slide, the same being clamped by a screw 24, as shown. The outer ends of said rods 23 are bent twice to form a right-
 5 angular hook or engaging point 25, adapted to enter and lock with a device 26, Fig. 8, which I term a "yoke," the same forming an adjustable attachment of the pad-plate 17. The said yokes 26 consist of two parallel
 10 plates 27, formed in one piece with and pendent from a plate having a cylindrical shank or boss 28, that passes from the back into a hole in the pad-plate 17, Figs. 7 and 9. On opposite sides of such hole are arc slots 29,
 15 through which pass screws 30, that enter the plate or yoke and serve to clamp and hold the yoke 26 in any rotary adjustment on its axis.

The rods 23, which may be termed "hook-levers," are attached to the pads 1 by placing
 20 them at a right angle to the pad-plate 17 and then inserting their hooked or angular ends 25 through the hole in the yoke 26, at the same time bringing them down to the position parallel to the pad-plate 17 shown in Fig. 7.
 25 The points 25 of the levers 23 will thus pass and lie between the lugs or ears 27 of the yoke 26, and it is apparent the angle of said levers to the longer axis of the pads 1 will correspond to the rotary adjustment of the
 30 yokes 26 as determined by the position of the clamp-screws 30 in the arc slots 29. Thus the pads 1 may be held in any position required in a particular case.

It will be seen that the tubes 22 and rods 23
 35 constitute levers which are extensible in length and that the face of the pads is a fulcrum or base of leverage therefor. By shortening or lengthening the levers either the body-strap or perineal straps can be given an
 40 advantage, so as to throw the pressure from the upper or smaller end of the pads, as may be desired. Further, the levers may be so adjusted as to hold the perineal straps off or out of contact with the cords and arteries in the
 45 inner front side of the thighs, which allows free circulation of the blood in the same and avoids chafing.

To convert the truss from double to single, one of the pads 1 is removed, along with its
 50 connecting-strap 13 and one of the perineal straps 3, and a short elastic piece or strap 31 (see Fig. 12) is attached to one end of the elastic body-strap 2 by means of a loop 32, while its lower end is connected with the screw 16
 55 on the single remaining pad 1 by means of a loop 14^a.

Whether the truss be used single or double, the pads 1 have a free adjustment on their axis 16, and thus accommodate themselves to
 60 the surface on which they rest.

What I claim is—

1. The combination, with a truss-pad, of an adjustable attachment for connection with a strap, the same consisting of a plate having
 65 parallel ears on one side and a perforated boss inserted in a hole in the pad-plate, arc slots formed in the latter, and clamp-screws

adapted to pass through said slots, and enter the adjustable plate or yoke, as shown and described. 70

2. The combination with a truss-pad proper, and a device which is set in the face-plate and adapted to rotate and to be locked as specified, of a strap having a rod or lever-hook attached thereto which is adapted for insertion
 75 in detachable engagement with said device, whereby it may be held at any required angle to the pad, as shown, for the purpose specified.

3. The combination, with a truss-pad proper, 80 and the "yoke" having pendent ears and a perforated boss, and means for securing it in any rotary adjustment, of a strap and a lever-hook adapted to enter and lock with said "yoke," as and for the purpose specified. 85

4. In a truss, the combination with the truss-pads and a body-belt, of the perineal straps and extensible levers attached to the latter, said levers being composed of two parts adapted to slide on each other, and one of them
 90 adapted to engage the face of the pads, as shown and described.

5. The combination with a hollow truss-pad, of a removable cap therefor provided with a hole and elongated curved slots on opposite
 95 sides of said hole, a yoke having a bushing loosely engaging in said hole, and ears *f'* projecting from the yoke, and adjusting-screws secured to the yoke and passing through said elongated slots, substantially as and for the
 100 purpose set forth.

6. In a truss, the combination with supporting-straps and a belt of a truss-pad, connected with the belt, a perineal strap, a hollow bar on the end of the strap, a lever adjustably
 105 secured to said bar and formed with an angular hook on its outer end, adapted to engage in a perforation in the pad, substantially as described.

7. The combination with the belt, of a truss- 110 pad thereon, a yoke pivotally supported on the pad, and formed with a hollow bushing, means for adjusting the yoke, a perineal strap, and a lever on the end of the strap having a hook adapted to engage the said yoke, and a
 115 hook on the belt engaging with the pad substantially as set forth.

8. In a truss, the combination of the elastic belt, supporting-straps therefor, truss-pads, a hook on each end of the elastic belt, elastic
 120 perineal straps having each a lever at one end provided with a horn removably engaging an aperture in the pad, and a strap connecting the pads, substantially as shown and described. 125

9. In a truss, the combination with supporting-straps of an extensible elastic belt, a truss-pad adjustably secured between the ends of said belt, an elastic perineal strap secured at the rear to said supporting-straps and pro-
 130 vided with a lever having a horn thereon removably and adjustably engaging one end of the truss-pad, substantially as described.

10. In a truss, the combination with support-

ing-straps and a belt, of a truss-pad having
a removable cap formed with a central series
of holes, a post adapted to be secured in
either hole of said central series, a perineal
5 strap, a lever secured to the perineal strap
provided with a horn adapted to removably
and adjustably engage a perforation in one
end of the cap, and a hook on the belt, adapted

to removably engage in perforations in the
other end of the cap, substantially as shown 10
and described.

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Witnesses:

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LUCY E. RIGSBY.