

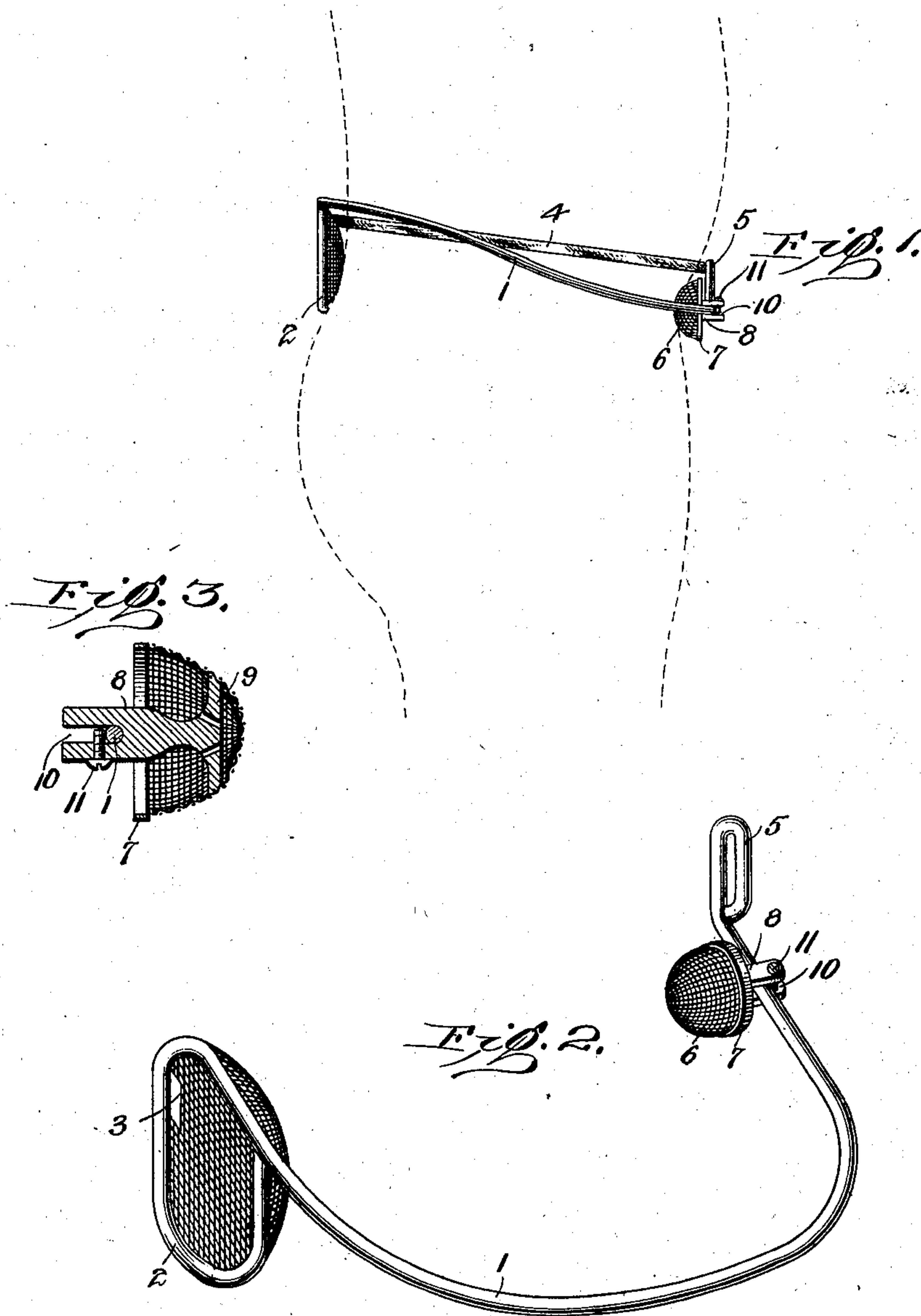
No. 701,954.

Patented June 10, 1902.

M. B. SMYTH.  
HERNIAL TRUSS.

(Application filed Nov. 25, 1901.)

(No Model.)



Witnesses  
*E. J. Stuart*  
*Jno E. Parker*

by *M. B. Smyth, Inventor.*  
*C. A. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

MILTON B. SMYTH, OF HOLTON, KANSAS.

## HERNIAL TRUSS.

SPECIFICATION forming part of Letters Patent No. 701,954, dated June 10, 1902.

Application filed November 25, 1901. Serial No. 83,641. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON B. SMYTH, a citizen of the United States, residing at Holton, in the county of Jackson and State of Kansas, have invented a new and useful Truss, of which the following is a specification.

My invention relates to certain improvements in trusses employed for the treatment of inguinal hernia of that class in which a spring brace or support extends partially around the body of the wearer from the inguinal region to the small of the back and is provided at each end with a pad for contact with the body.

The principal object of the present invention is to provide an improved form of truss-brace which will properly hold the hernia from protruding or entering the internal abdominal or inguinal ring and at the same time avoid harmful pressure on the vertebræ and median line of sacrum and prevent pressure on the aponeurosis of tissues that pass from the crest of the ilium to the great trochanter of the femur.

A further object of the invention is to provide an improved form of pad which will admit of transpiration of natural moisture from the skin which is covered thereby and, further, to provide a pad which from its structure will have a tendency to retain its position by contact with the skin.

A still further object of the invention is to provide the truss-brace with a strap or belt arranged in such manner as to prevent vertical movement of the pad, as more fully set forth hereinafter.

With these and other objects in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is an elevation of a truss constructed and arranged in accordance with my invention. Fig. 2 is a perspective view of the same. Fig. 3 is a transverse sectional elevation, on an enlarged scale, of the truss-pad.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

In trusses ordinarily employed for the treat-

ment of inguinal rupture much difficulty has been experienced in retaining the pad in proper position by the use of a simple spring-wire brace, and many auxiliary fastenings have been employed, these in most cases, and especially where perineal straps are employed, proving a source of great discomfort to the wearer.

In carrying out my invention I employ a spring-brace 1, which may be formed of a single piece of spring-wire of sufficient length to extend from the front to the back of the body. The wire is bent in suitable shape to encircle the body from the inguinal region to nearly the middle of the back, the spring being bent until it has sufficient force to hold the pad over the hernia in place. If more force is required, the ends of the spring are bent nearer together before placing the device on the body, and if less pressure is required the spring may be slightly straightened.

That end of the spring at the rear of the body is bent downwardly to form a loop 2, the lower end of which extends downward along the side of the median line and avoids pressure on the vertebræ and median line of sacrum. This loop is covered by wire-gauze projecting inwardly in approximately semi-spherical form for contact with the body, a portion of the wire gauze or netting being cut away, as indicated at 3, for the passage of a belt 4. At the front of the body the wire is bent upwardly at a right angle to form a loop 5, through which the belt is also passed, serving to hold the truss in proper position on the body. It will be noted that the rear loop 2 is inclined forwardly and downwardly, and the greater the forward inclination at the lower end of the loop the greater will be the tendency to force the forward end of the brace downward. If the downward tendency of the front end of the brace be too great, the rear loop can be bent farther backward at the lower end until the strain is exerted in the proper direction.

The truss-pad 6 is arranged on a horizontal portion of the spring at a point below the loop 5, and the attachment of the front end of the belt to this loop has a tendency to hold the truss-pad from upward movement owing to the fact that the line of tensional strain is above the center of the pad. The arrangement of



the two loops and belt as herein described will, it is found, firmly hold the pad and prevent the necessity of employing a perineal strap to hold the pad from moving upward out of position.

5 In adjusting the truss care is taken to have the greater portion of tensional strain in a horizontal line between the center of the pad and the lower portion of the rear loop in a substantially horizontal line, as indicated in Fig. 1.

15 The spring may be bent outwardly at the sides of the body to avoid pressure on the aponeurosis of tissues that pass from the crest of the ilium to the great trochanter of the hip-bone or femur, and thus avoid any inconvenience from that source and also to avoid any upward strain at this point.

20 The truss-pad which I employ consists of wire-network or wire-cloth with mesh of any desired size and is so constructed as to admit of transpiration from skin through its meshes and will not cut off entirely the superficial capillary circulation of the skin, as does wood, 25 rubber, or other solid substance, such as is in common use for the purpose. The network is so molded or formed by pressure or otherwise that it forms nearly or wholly a half-sphere in outline, or it may be oblong or 30 of such other shape or dimension as the treatment may demand. The rim is formed by metallic band 7, to which the ends of the wire are soldered or otherwise secured. The pad is secured to a stem 8 of a construction more clearly shown in Fig. 3, said stem having 35 a base portion 9 fitting within the pad and soldered or otherwise secured thereto, and such base portion being perforated for purposes of ventilation. The outer portion 40 of the stem is provided with a slot 10, within which a spring may fit, the pad being adjustable on said spring to any desired position and a screw 11 being employed to lock it in place.

45 The truss-springs are made rights and lefts to fit opposite sides of the body, and when adjusted in position the line of pressure of the pad is horizontal, being approximately opposite to the point of contact of the lower 50 portion of the wire-netting 3, carried by the loop 2 at the back of the body. The construction of the pad is such that the skin will partly penetrate between the meshes, and thus tend to hold the pads in place, while at the same time free transpiration is permitted 55 and the pads are properly ventilated in order to prevent heating such as occurs where a solid pad is employed.

While the construction herein described,

and illustrated in the accompanying drawings, is the preferred form of the device, it is obvious that many changes in the form, proportions, and details of construction may be made within the scope of the claims without departing from the spirit or sacrificing any 60 of the advantages of my invention. 65

Having thus described the invention, what is claimed as new is—

1. A truss-brace comprising a spring member adapted to partly encircle the body and 70 to carry at the front an adjustable pad, said spring member having at the front end an upwardly-extending belt-engaging loop, and at the rear end a downwardly-extending portion for engagement with the rear of the body, 75 and a belt adapted to encircle the body and connected with the downwardly-extending portion and also engaging the said front loop at a point above the pad.

2. In a truss, a spring-brace adapted to 80 partially encircle the body, said brace having an upwardly-bent side portion to avoid injurious pressure on the sides of the body, a downwardly-extending portion arranged at the rear end of the brace for engagement with 85 the body, a pad secured to the forward end of said brace, and an auxiliary belt extending around the body and engaging the front and rear ends of said brace.

3. In a truss, a spring member adapted to 90 partly encircle the body and having at the front end an upwardly-bent belt-engaging loop, a pad adjustably carried by the forward end of the spring member, the rear end of said spring member being downwardly and 95 forwardly bent to form a loop, the lower end of which is in approximately the horizontal plane of the pad, and an auxiliary belt extending around the body and engaging the front and rear ends of said spring member. 100

4. In a truss, a spring member adapted to partially encircle the body and having at the forward end a vertically-disposed belt-engaging loop and at the rear end a downwardly and forwardly extending integral loop, a wire 105 gauze or netting carried by the rear loop for engagement with the body, said integral loops forming the framework and support of the gauze, and a belt adapted to encircle the body and to engage with both of said loops. 110

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MILTON B. SMYTH.

Witnesses:

MYRTLE E. PRICE,  
GRACE A. ABEL.