L. B. STUART.

Truss.

No. 214,469. Patented April 15, 1879.

Fig. 1.

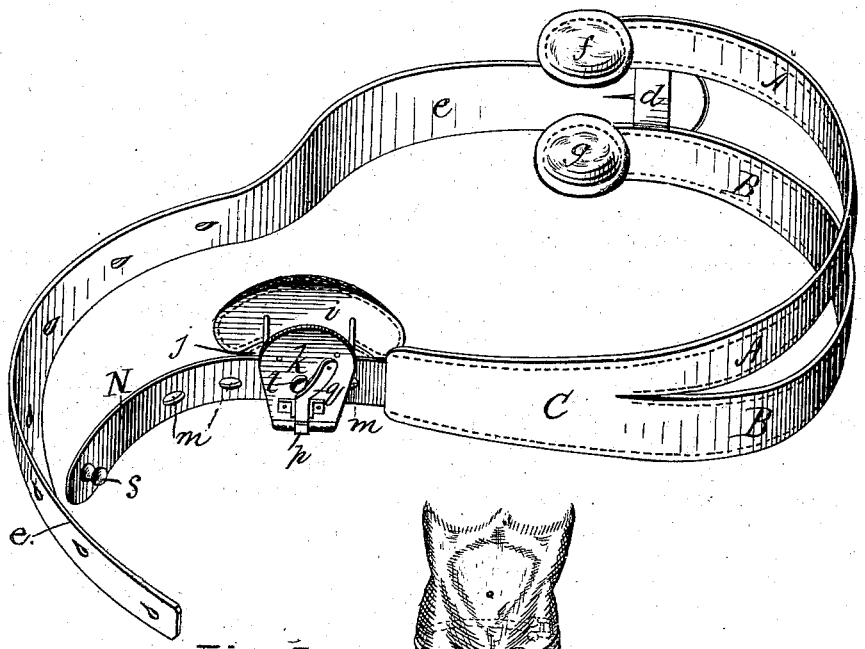
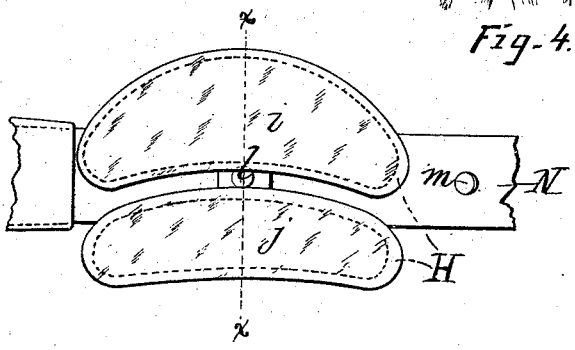
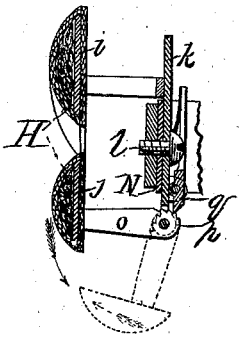


Fig. 2.

Fig. 3.

Fig. 4.





WITNESSES:

Jas. E. Hutchinson

Pennington & Halsted

INVENTOR.

Levi B. Stuart

by John J. Halsted

His Atty.

UNITED STATES PATENT OFFICE.

LEVI B. STUART, OF SEYMOUR, ASSIGNOR OF ONE-HALF HIS RIGHT TO FREDERIC DURAND, OF DERBY, CONNECTICUT.

IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **214,469**, dated April 15, 1879; application filed October 16, 1878.

To all whom it may concern:

Be it known that I, LEVI B. STUART, of Seymour, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Trusses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a truss which shall at its rear rest on the side of the hip instead of at or near the spine, which, by reason of its construction, shall be light in weight, and short in its length, and yet hold its place without having undue rigidity, and which, by reason of a novel construction of the pad which is applied to the ruptured part, permits a portion of such pad to be movable to and from the other portion, so as to lift upward or crowd and close up as far as practicable the aperture of the rupture.

My improvement consists, mainly, in making the hernial pad in two parts, each of which is mounted on a leg or support, and one of which is hinged so as to be movable vertically to and from the other, and in attaching such a pad reversibly to the body of the truss to permit the same truss to be applied to either side of the person, and in other particulars hereinafter more particularly described.

In the drawings, Figure 1 is a perspective view of my improved truss; Fig. 2, a detail, showing a plan of the compound pad; Fig. 3, a cross-section; and Fig. 4 shows, on a reduced scale, the truss applied to the person.

A and B are two short steel springs, similar in size and shape, and merging into the part C, the whole being preferably a single piece of metal, the parts A and B gradually diverging from each other, as shown; and at their extremities I prefer to connect them by a cross-piece, *d*, upon which is a button (or hook) for the usual leather or other flexible strap *e*. At the extremity of these parts A and B is a pad, *f* or *g*, which, when the truss is upon the person, rest both upon the side of the hip, but each in a different location, one above the other. The object of having them rest on the hip is to make the truss shorter and lighter in weight, and also to make it much easier for the wearer, and to relieve the spine entirely from any liability to injury by avoiding any pressure from the truss either upon or near the spine.

The leading object in having the two springs A and B, instead of a single one, as usual, is to get the same power that could be had from a single spring, and at the same time avoid the stiffness, clumsiness, and too great rigidity of only one and stout spring. By placing these two short springs a little distance apart on the hip, each tends to retain the other in its place, and both tend to keep the pad more firmly in its true position. There is consequently less liability of the truss to rock or turn up than in any truss of ordinary construction having a single spring at the back.

The pad H, which is designed to be applied to the rupture, is also made in two parts, *i* and *j*, instead of being a single pad, as is customary. It may, however, be made in more than two parts, if desired. The upper portion, *i*, is rigidly affixed to an adjustable and reversible plate, *k*, such plate, by means of a set-screw, *l*, and holes *m* in the short steel spring N, being adjustable upon such spring N, and also capable of being taken off and reversed, so that the whole may be applied to the other hip of the wearer, or to another person whose rupture is in a different location. The portion *j*, however, of this compound pad (and which in use is the lower portion) is hinged to the plate *k* and opens outward and downward upon its hinge *o*, and it is provided with a ratchet, *p*, and spring-pawl *q*, whereby it may be held when brought up to place.

The object of having the lower part movable, as stated, is that after the upper part, *i*, shall have been placed in the desired position relatively to the rupture, this lower part, *j*, can be moved up and toward it, so as to crowd the aperture of the rupture up and close it as much as possible by an upward lift, the spring-pawl and ratchet then acting to keep it in this position. The pressure of the finger upon the spring-pawl will release the same from the

ratchet, when desired, and again permit the portion *j* to be swung away from the fixed portion *i*.

Both portions *i* and *j* constitute together a complete pad, though each is a pad in itself, and they may be made in any desirable shape, as circumstances may require, or a patient may prefer, and may be of any suitable material; but a compound pad of such character, made in two parts, it will be evident, will hold a rupture more firmly to place, and will be easier to the wearer, and afford a wider range of adaptation to the affected part than an ordinary round pan or any other form of single pad.

The short steel spring N is curved outward from the person, and the compound or divided pad is attached thereon at any desired point by the screw *l*, above named, this spring N being riveted to the spring A B and forming the front terminal part of the truss; and the object of curving it outward is to give additional power to the truss when the strap *e*, which is connected to the cross-piece *d*, is passed around the body and properly tightened by buttoning one of its holes upon the button S at the end of this spring, such tightening serving to press down and overcome the outward curvature of this spring, and hence to press directly down upon the pad and cause it to perform its duty most efficiently as regards the pressure required, and this pressure is thus variable and controllable as to its degree according to the tightness of the strap. This short spring may be made long enough to hold another similar pad, thus forming a double truss, which could then be used for either the right or left side, at option, without the necessity of taking off the plate *k* and its attachments and reversing its position, as hereinbefore named.

I claim—

1. The two pads *i* and *j*, each mounted on its own independent leg or support, such support of the lower one being hinged and adjustable upward toward the other by means of a rack and pawl, substantially as shown and described.

2. The pads *i* and *j*, mounted on legs or raised supports, as shown, the adjustable one being below the other, and both connected to a plate or base, *k*, provided with a loop or slide, whereby the plate and its pad may be removed from and reversed in position on the spring to adapt the truss for either side of the person.

3. A metallic truss adapted to be applied to either side of the person, as described, and provided with invertible hernial pads *i* and *j*, mounted on raised supports with pads *f g*, to rest and hold its place on the hip of the wearer, and with the pad-supporting steel spring N, having its free end curved outward, as described, and which is drawn inward toward the body by tightening the strap.

LEVI B. STUART.

Witnesses:

AMOS H. SCRANTON,

CHARLIE D. ROBERTS.