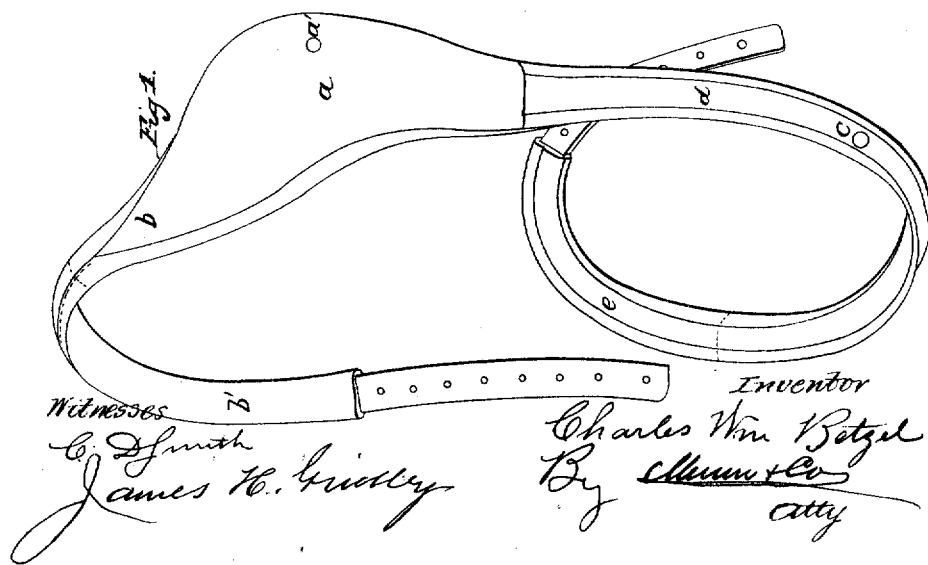
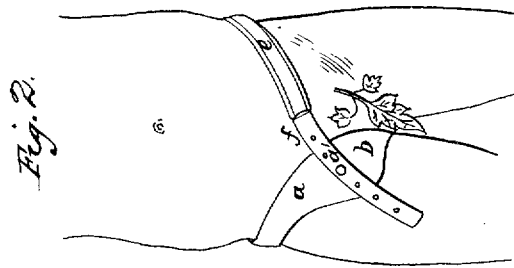
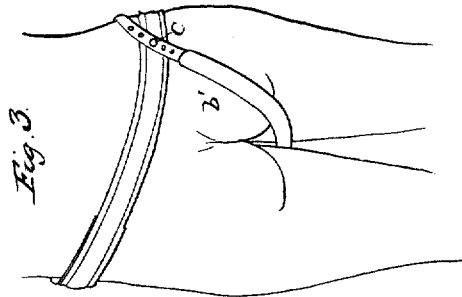


C. W. Betzel,

Truss.

N<sup>o</sup> 47,612. Patented May 9, 1865.



# UNITED STATES PATENT OFFICE.

CHARLES WM. BETZEL, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. 47,612, dated May 9, 1865.

*To all whom it may concern:*

Be it known that I, CHARLES WILLIAM BETZEL, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Trusses for Hernia; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of my improved truss. Fig. 2 illustrates the application thereof to the person, showing its position and the way in which it is fastened in front; and Fig. 3 is a similar view, illustrating its position and attachment at the back.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a truss which is especially adapted for inguinal hernia, or to prevent the falling of the intestines into the scrotum; and it consists in the use of a pad in connection with a spring applied to the body and secured by straps in the peculiar manner hereinafter described.

The following description will enable others skilled in the art to which my invention appertains to fully understand and use the same.

In the accompanying drawings, *a b* represent a pad, the shape of which adapts it to fit or conform to the inguinal region. To the material which stiffens and determines the shape of the pad is conjoined or secured a spring, *d*, which, when the truss is applied, extends from the pad *a* around the hip bone and terminates at or near the spine. The remainder of the girdle or belt, of which the spring *d* forms a part, is composed of the padded buckskin or other material which is used to cover the spring and pad. This part *e* extends around the crest of the left hip-bone (when the pad is adapted for use on the right side) and across the abdomen, as shown in Fig. 2, and to its end is attached a strap perforated with a number of holes, so as to be fastened to a button, *a'*, on the pad. The tapering prolongation *b* of the pad, which fits between the scrotum and the adjacent part of the thigh, terminates in a strap, *b'*, which, passing through the crotch, extends upward in contact with the gluteal muscle and is hitched to a button, *c*, on the spring *d*. The peculiar normal curvature of the spring *d*

adapts it, when applied to the person, to force the pad inward against the external abdominal ring, the intestine being thereby prevented from falling.

By the above-described method of construction and attachment the pad *a*, when once applied, is not liable to shift its position during any motion of the body—such as in mounting and dismounting from a horse, dancing, turning, &c. During all motions of the thigh it rolls upon the pad instead of moving it out of its proper position.

The pad cannot produce discomfort to the patient, because the sum of the pressure is not localized in or confined to the pad; but, by the two powers of traction—the girdle *e f* and thigh-strap *b'*—acting against each other, the pressure is equally distributed throughout the whole area covered by the truss, which secures the objects attained by an effectual truss without irritation or discomfort to the patient.

The pad illustrated is adapted for use on the right side, but, of course, they are to be constructed for use on the left side.

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

1. The pad *a*, formed with a prolongation, *b*, and fitting the inguinal region in such a way and having such shape that the movements of the thigh or body cannot move it from its proper position, as herein set forth.

2. The spring *d*, when employed in connection with the pad *a* in the manner and for the purpose herein described and represented.

3. The strap *b'*, extending from the prolongation of the pad, between the thighs and across the gluteal muscle, and hitched or fastened to the button *c* on the spring *d*, for the purpose of preventing any upward movement of the pad, substantially as set forth.

4. The strap or girdle *e f*, occupying a position above the crest of the hip-bone, extending across the abdomen and fastened to the button *a'* on the pad *a*, to prevent the displacement of the pad in a downward direction, and operating in connection with the strap *b* to prevent lateral displacement.

CHS. WM. BETZEL.

Witnesses:

BERNHARD SPRINGER,  
EDMUND WILCOX.