

No. 646,723.

Patented Apr. 3, 1900.

A. BEDSON.  
HERNIAL TRUSS.

(Application filed Oct. 12, 1899.)

(No Model.)

Fig. 1.

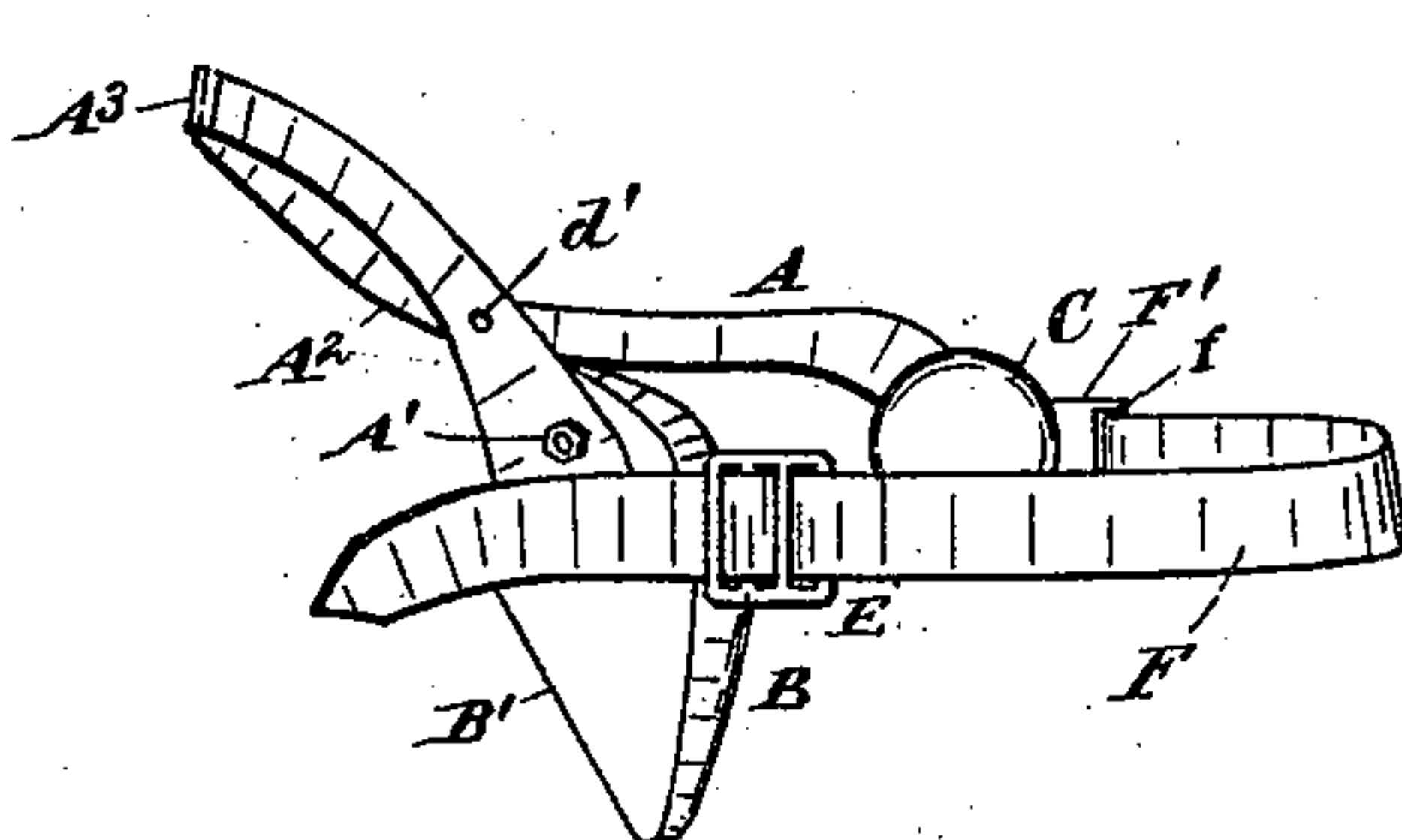


Fig. 2.

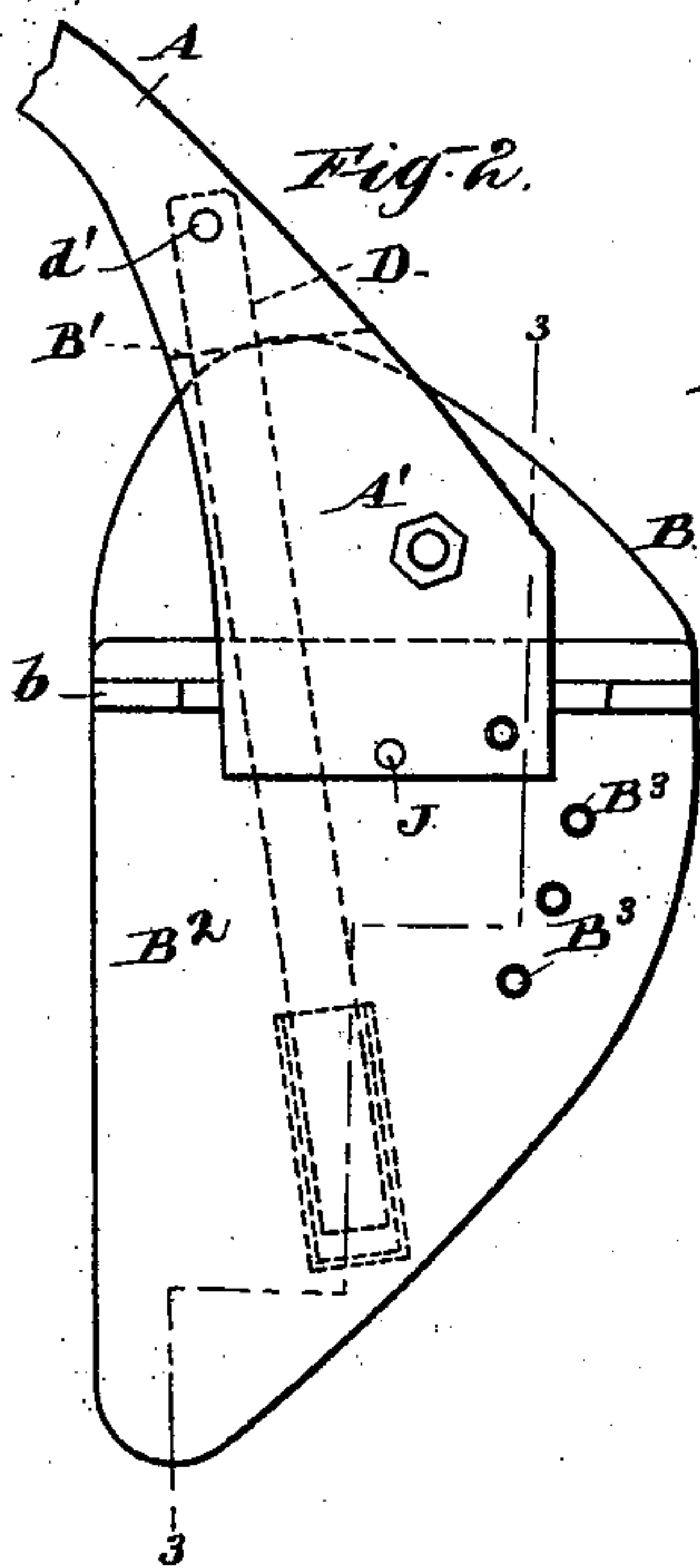


Fig. 3.

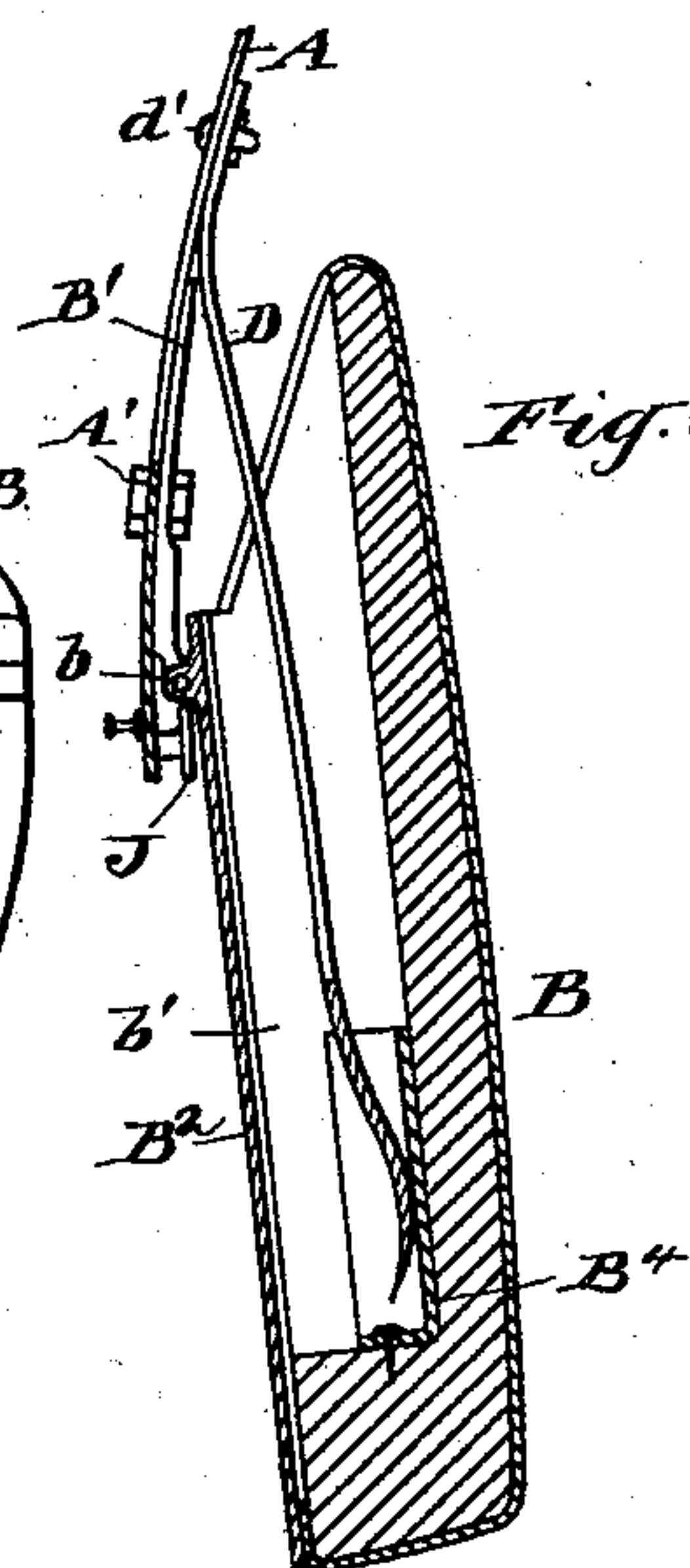


Fig. 4.

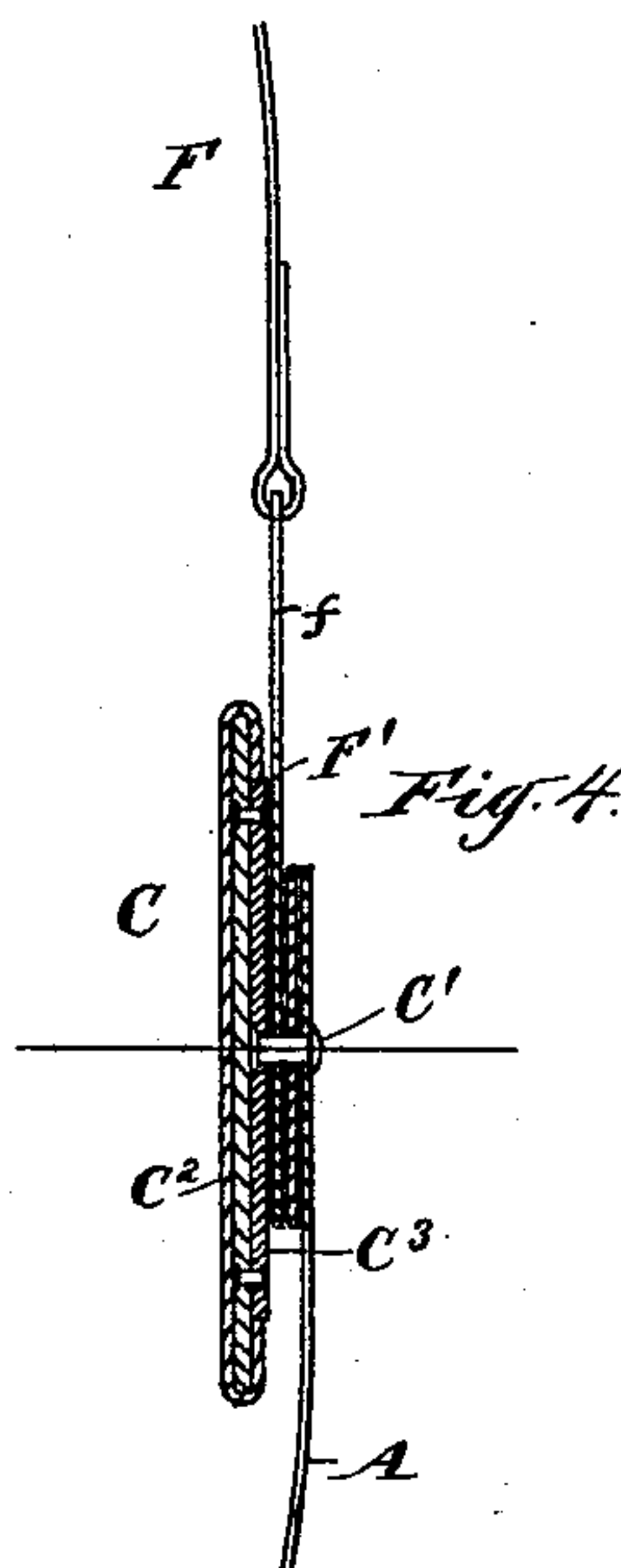


Fig. 5.

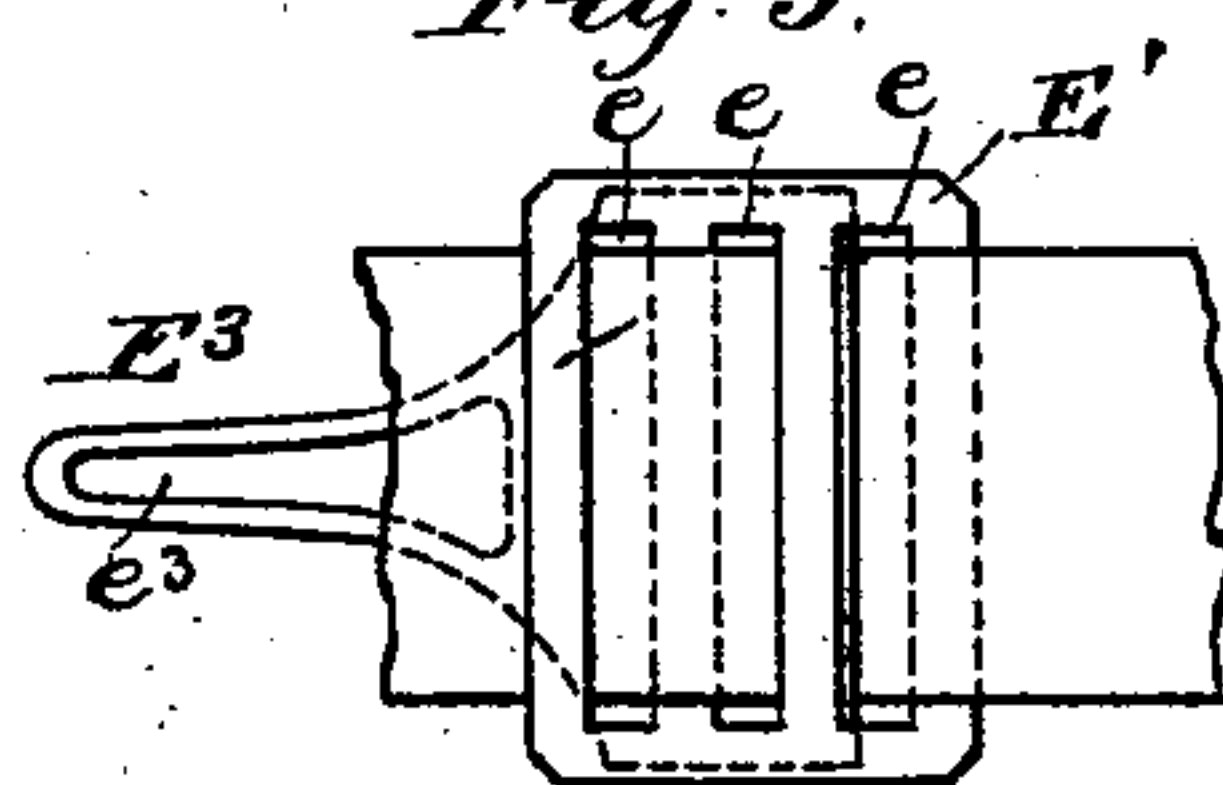


Fig. 6.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALFRED BEDSON, OF PATERSON, NEW JERSEY.

## HERNIAL TRUSS.

SPECIFICATION forming part of Letters Patent No. 646,723, dated April 3, 1900.

Application filed October 12, 1899. Serial No. 733,354. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED BEDSON, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented a certain new and useful Improvement in Trusses, of which the following is a specification.

The invention relates to that class of trusses in which the hernia is reduced by the pressure through a pad carried on the end of a spring partially surrounding the body.

The invention consists in mounting the pad upon the end of the spring with liberty to tilt and providing an auxiliary spring exerting its force to throw one end of the pad inward. By this means any movement of the wearer tending to force the pad outward and allow the hernia to escape throws the spring-actuated end of the pad inward and maintains the pressure of that end.

The body-spring is so constructed and shaped as to allow it to lie out of contact with the body and to avoid pressure on the back in the region of the kidney, and at the rear end is provided with a pad lying adjacent to the spine, diagonally opposite the front pad, and is so attached to the end of the spring as to allow the latter to turn and permit the body to move freely without changing the relative positions of the pads.

The flexible holding-strap is attached to the rear pad and secured to one of a series of studs on the front pad by means of a peculiarly-formed and easily-adjustable clamp.

The accompanying drawings form a part of this specification and show the invention as I have carried it out.

Figure 1 is a front view showing the truss in place on the body. The remaining figures are on a larger scale. Fig. 2 is a face view of the pad. Fig. 3 is a corresponding vertical section on the line 3 3 in Fig. 2. Fig. 4 is a central cross-section through the rear pad and adjacent portions. Fig. 5 is a face view of the buckle, and Fig. 6 is a corresponding longitudinal section.

Similar letters of reference indicate like parts in all the figures.

A is the body-spring, preferably cut from sheet-steel of the proper gage, widened at the front end and provided with a bolt and nut A', by which the front pad B is attached.

At the opposite end is a loose rivet C', carrying the rear pad C. The spring is curved downwardly at A<sup>2</sup>, avoiding the region of the kidneys, and is so shaped as to rise at A<sup>3</sup> above the hip-joint, and thus avoid uncomfortable friction at that point.

The front pad B is secured to the spring by a flat piece of metal B', having a hinge-joint at b, and is provided with a deep recess b', within which lies the auxiliary spring D, attached to the body-spring by a rivet d'. The portion of the pad next the body is faced with soft rubber, secured in place by the metal covering-plate B<sup>2</sup>, forming the front face of the pad and carrying its portion of the hinge b.

The auxiliary spring D reaches from a point above the pad to a point within the recess considerably below the hinge and exerts its pressure inward, tending to force the lower end of the pad into close contact with the body at all times when the truss is in position.

B<sup>3</sup> B<sup>3</sup> are a series of studs secured on the plate B<sup>2</sup> and receiving the slot e<sup>3</sup> of the clamp E, secured to the strap F, passing around the body to the rear pad C. The latter is preferably circular and consists of a plate of metal faced with rubber C<sup>2</sup>, held in position by the back plate C<sup>3</sup>, in which is set the rivet C', extending loosely through the end of the body-spring A and through a metal plate F', having a slot f, in which the end of the strap F is fastened.

The clamp E consists of a plate E', having three slots e e e, through which is rove the free end of the strap, and a loose plate E<sup>2</sup>, lying on the inner face thereof, having an extension E<sup>3</sup>, provided with a slot e<sup>3</sup>, adapted to engage one of the studs B<sup>3</sup> of the plate E', and is provided with a transverse slot e<sup>2</sup>, matching one of those in the plate E' and receiving the first bight of the strap.

When the strap is slackened and the plate E<sup>2</sup> allowed to slip rearwardly, the free end of the strap may be drawn through the several slots in making the required adjustment and when again subjected to strain, by attaching to one of the studs, securely clamps the strap by the change in the relative positions of the slots in the two plates and holds it firmly between their edges.

B<sup>4</sup> is a metal shoe or protecting-piece with-



in the recess, serving to take the wear at the free end of the auxiliary spring D.

By widening the front end of the body-spring this portion is stiffened, thereby increasing the effective length of the spring and insuring greater uniformity of pressure.

The bolt and nut A' allow the pad to be adjusted. By slackening the nut the plate B' may be turned thereon, thus providing for the slight changes necessary in fitting the truss to the wearer. The loose attachment of the front pad B allows the latter to remain stationary upon the body, while the body-spring and strap are free to move in conforming to changes in position.

I prefer to place the rear pad at a point to one side of the spine and diagonally opposite the front pad and avoid pressure on the spinal column and lessen any tendency of either pad to change its position upon the body without requiring the use of a strap passing from one pad to the other between the legs.

When the truss is in place, any motion of the abdominal muscles, as in coughing, tends to lift the pad and in the ordinary constructions allows the hernia to escape downward; but by the use of my invention any tendency to force outward the upper portion of the pad correspondingly throws the lower end inward, aided by the auxiliary spring D, and prevents such escape.

By providing the body-spring with the downward curve or droop A<sup>2</sup> in the vicinity of the kidney pressure against the latter is avoided, with the additional advantage of increasing the length of the spring, and thus rendering the pressure exerted by the latter more uniform, as before set forth.

J is a stop on the inner face of the plate B', serving to limit the outward movement of the lower end of the front pad B relatively to the body-spring. Motion in the opposite direction is restricted by the upper end of the pad striking the inner face of the spring near the point of attachment of the auxiliary spring.

Modifications may be made in the forms and proportions without departing from the principle of the invention or sacrificing its advantages. Parts of the invention may be used without the whole. Other forms of rear pad

may be substituted and the attaching means varied. Although I have shown the front pad as lying nearly vertically against the body it will be understood that the shape of the pad and the direction of motion in the hinge-joint may be adapted to suit the conditions and location of the rupture. For small changes it is only necessary to slacken the bolt and nut A' and turn the pad to the required position and again secure it. Springs of varying stiffness may be substituted for the auxiliary spring shown, as may be required in adapting the truss to the needs of the wearer.

I claim—

1. In a truss of the character set forth, a body-spring and a pad hinged to one end thereof on a line in the mid-length of the pad, in combination with an auxiliary spring secured to said body-spring and extending across the line of the hinge, the free end lying within said pad and tending to force the lower end thereof inward, all substantially as herein specified.

2. The body-spring A widened at one end, the pad B hinged thereto at *b* and having the cavity *b'*, the auxiliary spring D secured to said body-spring and extending into said cavity, and the stop J limiting the tilting movement of said pad in one direction, all combined and arranged to serve substantially as herein specified.

3. The truss described, consisting of the body-spring A, having the curve A<sup>2</sup> and widened at the front end, the plate B' adjustably attached to the latter, the front pad B hinged to said plate, the auxiliary spring D secured to said body-spring and extending across the line of the hinge and into the cavity *b'* in said pad, the rear pad C pivotally connected to said body-spring, and the strap F, clamp E, and series of studs B<sup>3</sup> on said front pad, all combined and arranged to serve substantially as and for the purposes specified.

In testimony that I claim the invention above described I affix my signature in the presence of two witnesses.

ALFRED BEDSON.

Witnesses:

CHARLES D. MABEES,  
DANIEL CARLOUGH, Jr.