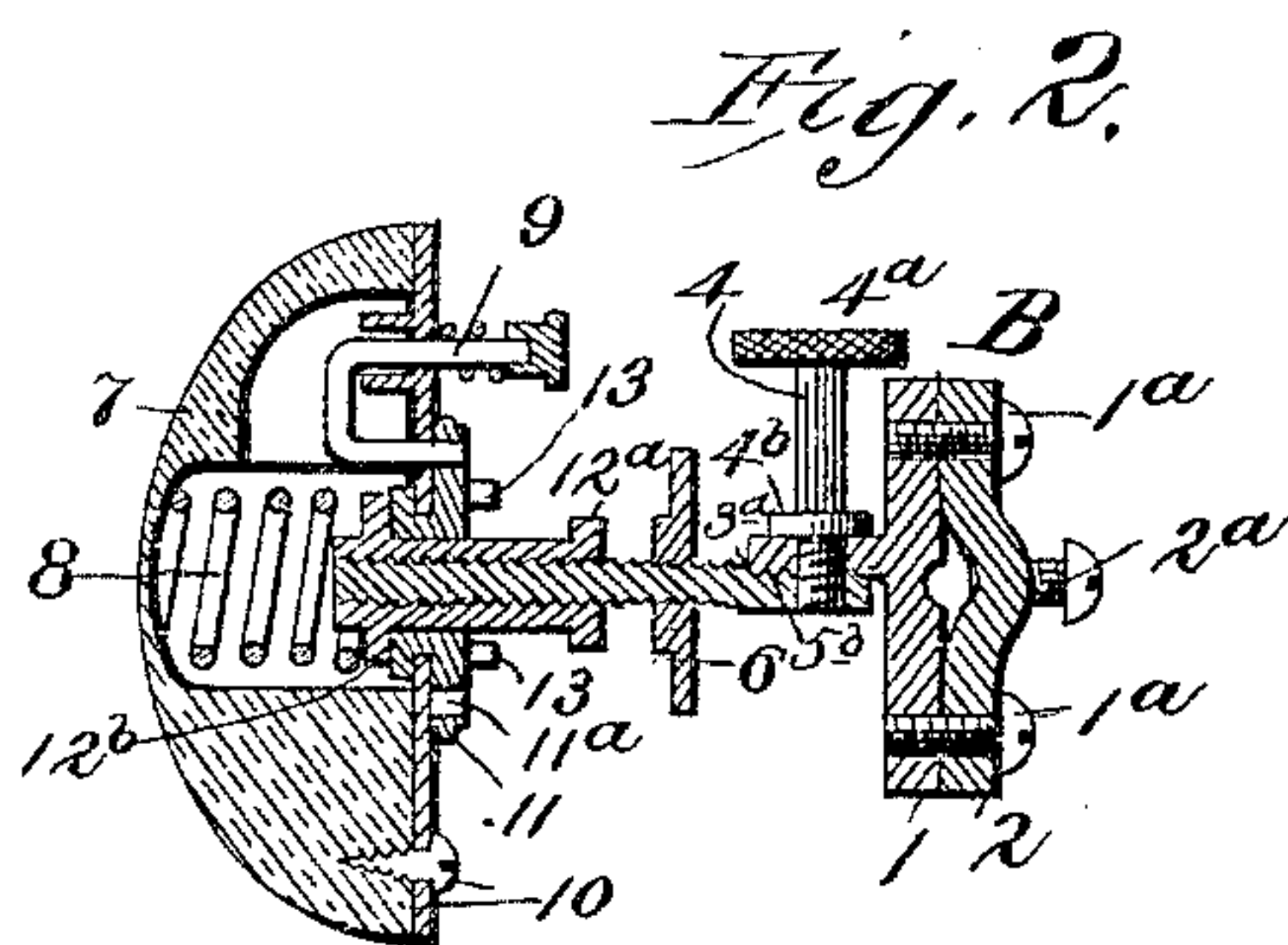
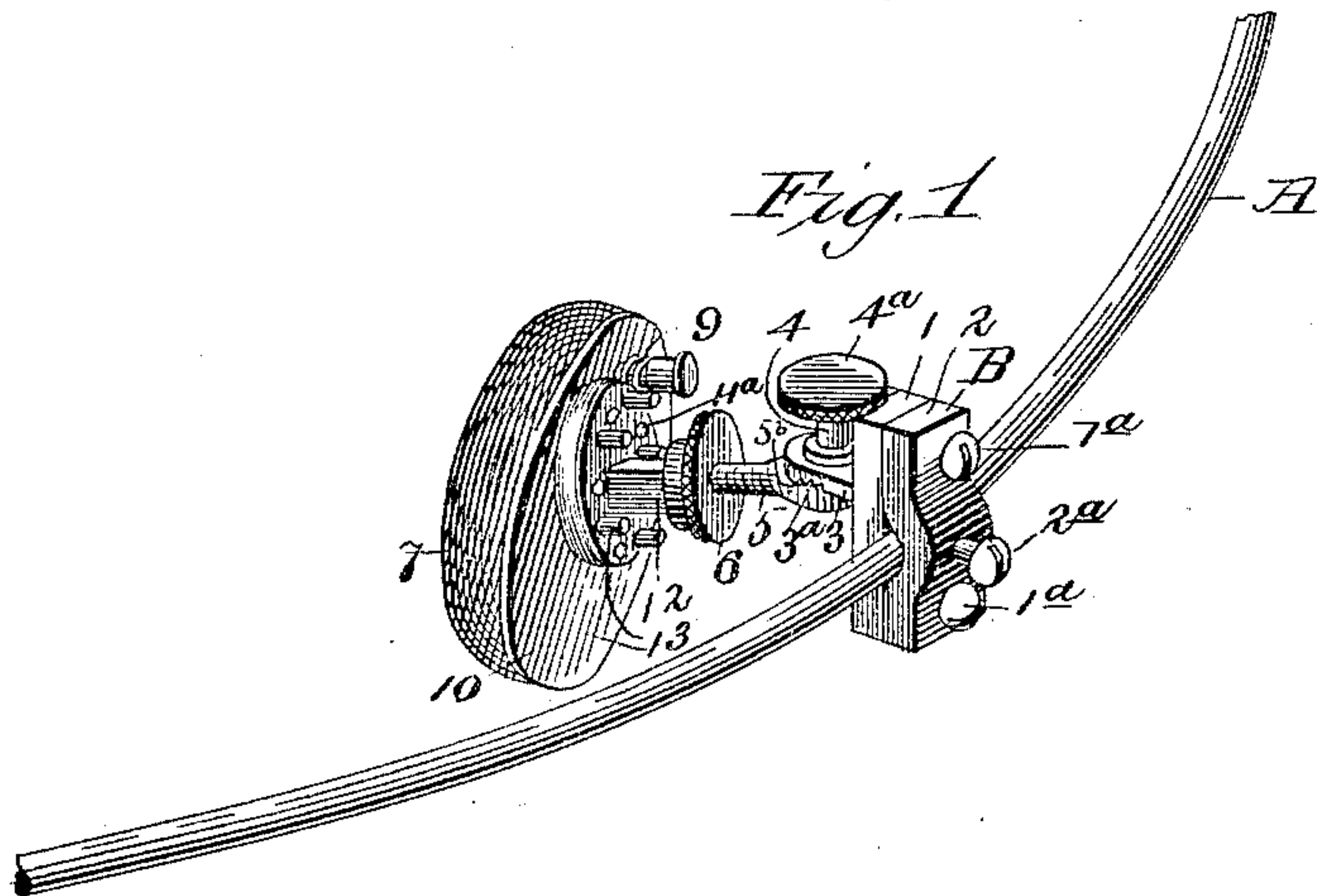


(No Model.)

A. NAIDL.
TRUSS.

No. 461,038.

Patented Oct. 13, 1891.



Witnesses;

F. P. Cornwall,
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Inventor,
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UNITED STATES PATENT OFFICE.

ANTON NAIDL, OF OMAHA, NEBRASKA.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 461,038, dated October 13, 1891.

Application filed January 31, 1891. Serial No. 379,794. (No model.)

To all whom it may concern:

Be it known that I, ANTON NAIDL, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Trusses for the Treatment of Hernia; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a truss embodying my invention, and Fig. 2 is a central section of the same.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of adjustable spring-ball or spring-pad trusses for the treatment of hernia, either abdominal or scrotal, and has for its object to reduce, simplify, and render effective the mechanism whereby the universal adjustability of the ball or pad is secured.

To this end, one feature of the invention embraces the combination, with a truss-pad or ball, of a sectional extensible post, one section thereof adapted to slide into the ball, a spring arranged within the ball to support said sliding section, and means for locking the post-sections together, so that no movements of the belt or body of the wearer or of the truss-ball in accommodating itself to the movement of the wearer shall disturb the relation established between the sections of the extensible post.

A second feature of the invention embraces the combination, with a truss pad or ball, of a post on which the truss-pad is journaled and rotates, and a locking-plate and catch for securing the pad or ball to the post.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates a portion of the waistband or belt which supports the truss-pad, and in the present instance is shown as of wire, preferably annealed, so as to render it capable of being bent to vary the posi-

tion of the truss-pad. The free ends of band A (not shown) may be flattened and leather-covered in the well-known way of forming wire waistbands for trusses.

B indicates a clamp for adjustably securing the ball to the waistband A. This clamp may be composed of a plate 1, a yoke 2, secured to said plate 1 by screws 1^a 1^a or in any other suitable manner and provided with a set-screw or clamp-screw 2^a for binding on the wire A. Projecting from the plate 1 is a flange or flat post 3, having a hole for the passage of a screw-post 4, said hole surrounded by a ratchet-surface, as at 3^a.

5 indicates a screw-rod having at one end a nut 5^a for the reception of the end of the screw-post 4 and provided with a ratchet-face 5^b, adapted to engage the ratchet-surface 3^a of the post 3.

4 indicates a screw-post provided at its upper end with a milled head 4^a and near its opposite end with a collar 4^b, the portion of the post below the collar being threaded to engage the nut on the end of the screw-rod 5. By unscrewing the post 4, so as to allow the disengagement of the ratchet-surfaces 3^a and 5^b, the screw-rod 5 may be adjusted to any desired angle with relation to the plate 1 of the clamp B and may be fixed in said position by again tightening up the parts by means of said screw-post 4.

6 indicates a jam-nut arranged on the screw-rod 5, said jam-nut preferably of disk form with milled periphery.

7 indicates the pad or ball of the truss, which is hollowed out centrally to receive a coiled or other suitable spring 8, and also at one side of the center for the reception of a spring-controlled U bolt or catch 9, and 10 indicates the truss-plate, to which the pad or ball 7 is secured by screws or in other suitable manner.

11 indicates a locking-plate, which is preferably in the form of a spool, journaled in the truss-plate 10, the outer circular flange of the spool having a series of holes 11^a for the reception of the spring locking-bolt 9, a central polygonal-shaped hole or its equivalent being provided for the passage of the tubu-

lar internally-threaded spring-post 12, so that the post and its locking-plate may move together and both rotate in the truss-plate 10.

12 indicates a tubular spring-post, preferably of polygonal shape in cross-section, adapted to slide endwise on the locking-plate 11, internally threaded for the reception of the screw-rod 5 and provided with collars 12^a 12^b, which limit its motion, and one of which 12^b may serve as a seat or bearing for the spring 8. If desired, however, the hole in the locking-plate may be round and the tubular post 12 also round, the well-known spline or feather being used to permit the post 12 to move endwise through the locking-plate while compelling the parts to rotate together.

Pins 13 or equivalent means may be provided to facilitate the rotation of the locking-plate or as a means of holding the locking-plate 11 and tubular spring-post 12 while rotating the pad or ball 7.

The truss-pad being constructed and its parts combined substantially as hereinbefore specified and having been secured to a wire or equivalent waistband A, said band or belt having been first bent or shaped to secure the desired location of the truss-ball 7, the truss ball or pad may be further adjusted, as follows, to meet any special indication: first, inwardly to increase or diminish the distance between the pad or ball 7 and belt or waistband A and the pressure applied by turning the pad and its tubular internally-threaded post 12 on the threaded rod 5, the parts being subsequently fixed by means of the jam-nut 6; second, at any lateral angle and to bring the pressure on any desired part of the pad or ball by loosening the screw-post 4 until the ratchet-teeth 3^a and 5^b disengage, moving the pad 7, its tubular post 12, and screw-rod 5 to the desired angle, and then tightening up the screw-post 4 until the ratchets 3^a 5^b again engage, and, finally, the ball or pad 7 may be adjusted with relation to the person of the wearer by first pressing in the U locking-bolt 9 until the locking-plate 11 is released, then rotating the ball or pad 7 on the locking-plate 11 and post 12 to the desired position, and permitting the locking-bolt to enter the corresponding bolt-hole 11^a of the locking-plate 11.

By the construction substantially such as hereinbefore specified I obtain a universally-

adjustable spring truss pad or ball having a wide range in its application to the treatment of the various classes of hernia.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with a truss pad or ball, a sectional extensible post, one section thereof arranged to slide in the truss-ball, a spring arranged within the truss-ball to support said sliding section, and means for locking together the post-sections, substantially as and for the purposes specified.

2. The combination, with a truss pad or ball and the body-belt, of a sectional extensible post, one section of which is pivotally connected with the belt and the other section arranged to slide in the truss pad or ball, a spring arranged within the truss-ball to support the sliding post-section, and means for locking together the post-sections, substantially as and for the purposes specified.

3. The combination, with a truss-plate, of a locking-plate journaled therein, an endwise-sliding post arranged in the locking-plate, and a locking-catch adapted to engage the locking-plate, substantially as and for the purposes specified.

4. The combination, with a truss pad or ball and its truss-plate, of a locking-plate of spool form journaled in the truss-plate and having a polygonal post-opening, a locking-catch adapted to engage the locking-plate, an extensible post whose cross-section corresponds to the hole in the locking-plate, and a spring arranged in the truss-ball and which bears on the end of the said post, substantially as and for the purposes specified.

5. The combination, with a truss pad or ball, of a movable spring-supported tubular post threaded on its interior, a threaded rod having at one end a nut with ratchet-face, a clamp having an eye and ratchet-face, and a screw-bolt or thumb-screw, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 27th day of January, 1891.

ANTON NAIDL.

Witnesses:

W. N. WILLIAMS,
C. W. DOUD.