

No. 659,846.

Patented Oct. 16, 1900.

D. D. DENNIS.
TRUSS.

(Application filed Aug. 2, 1900.)

(No Model.)

Fig 1.

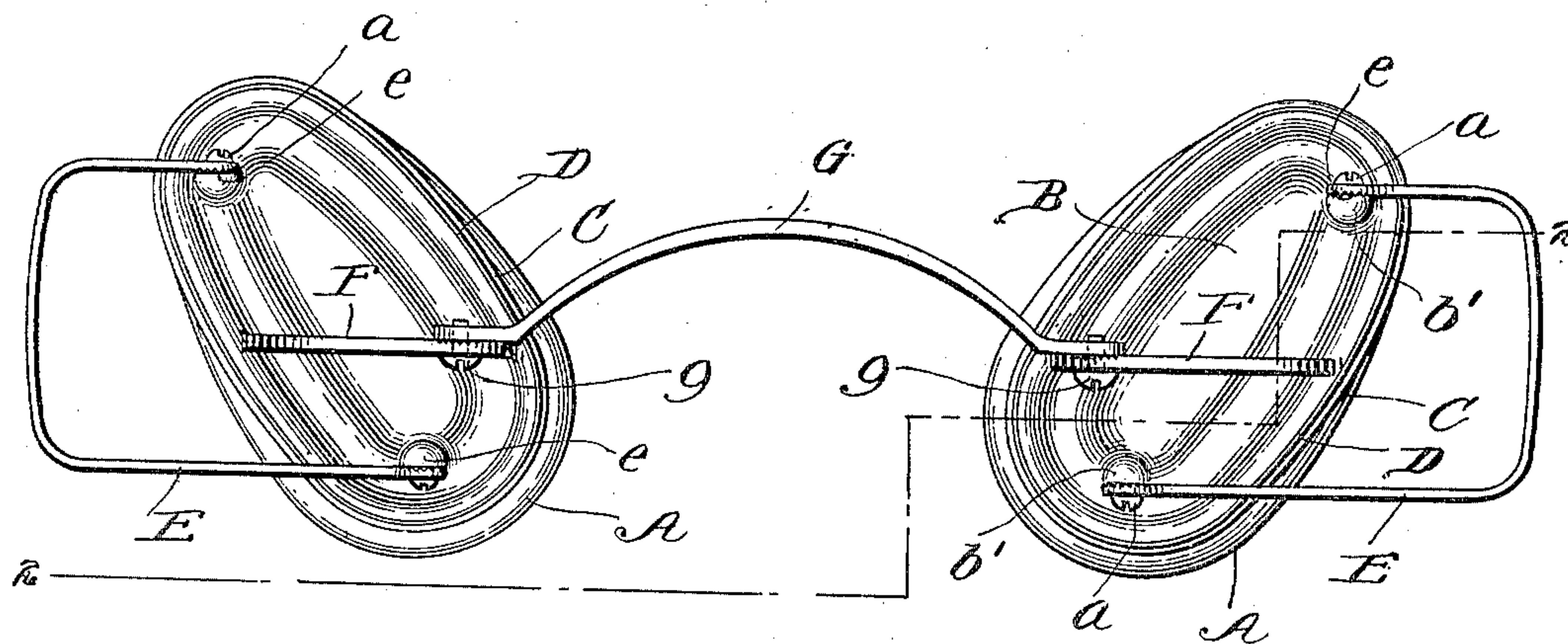


Fig 2.

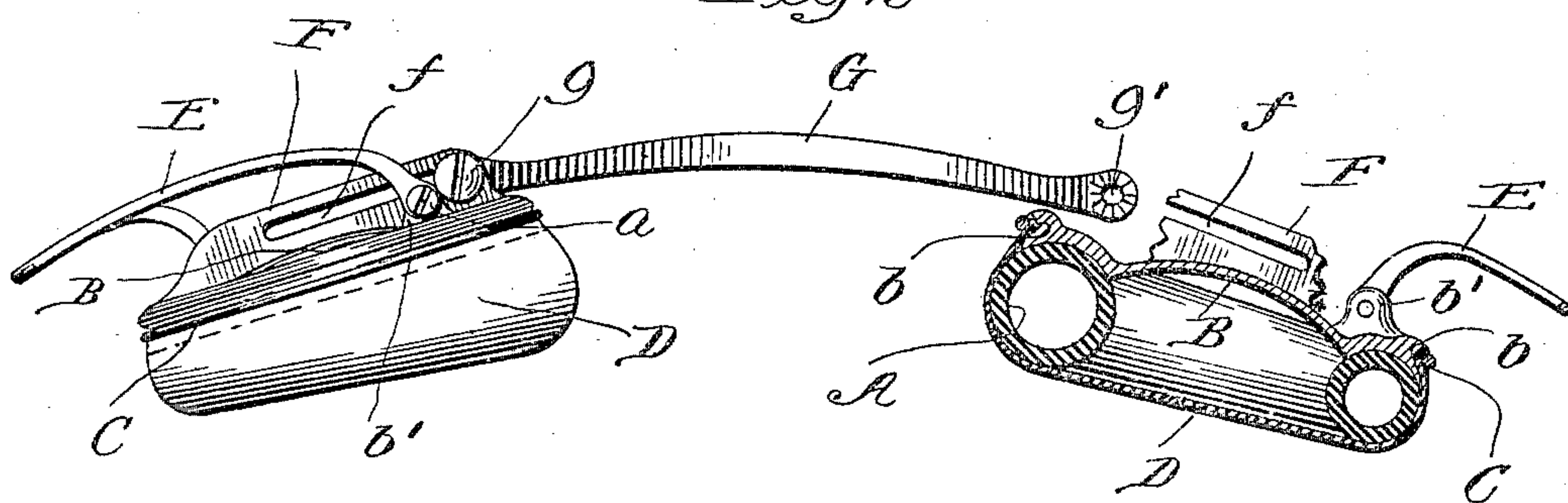
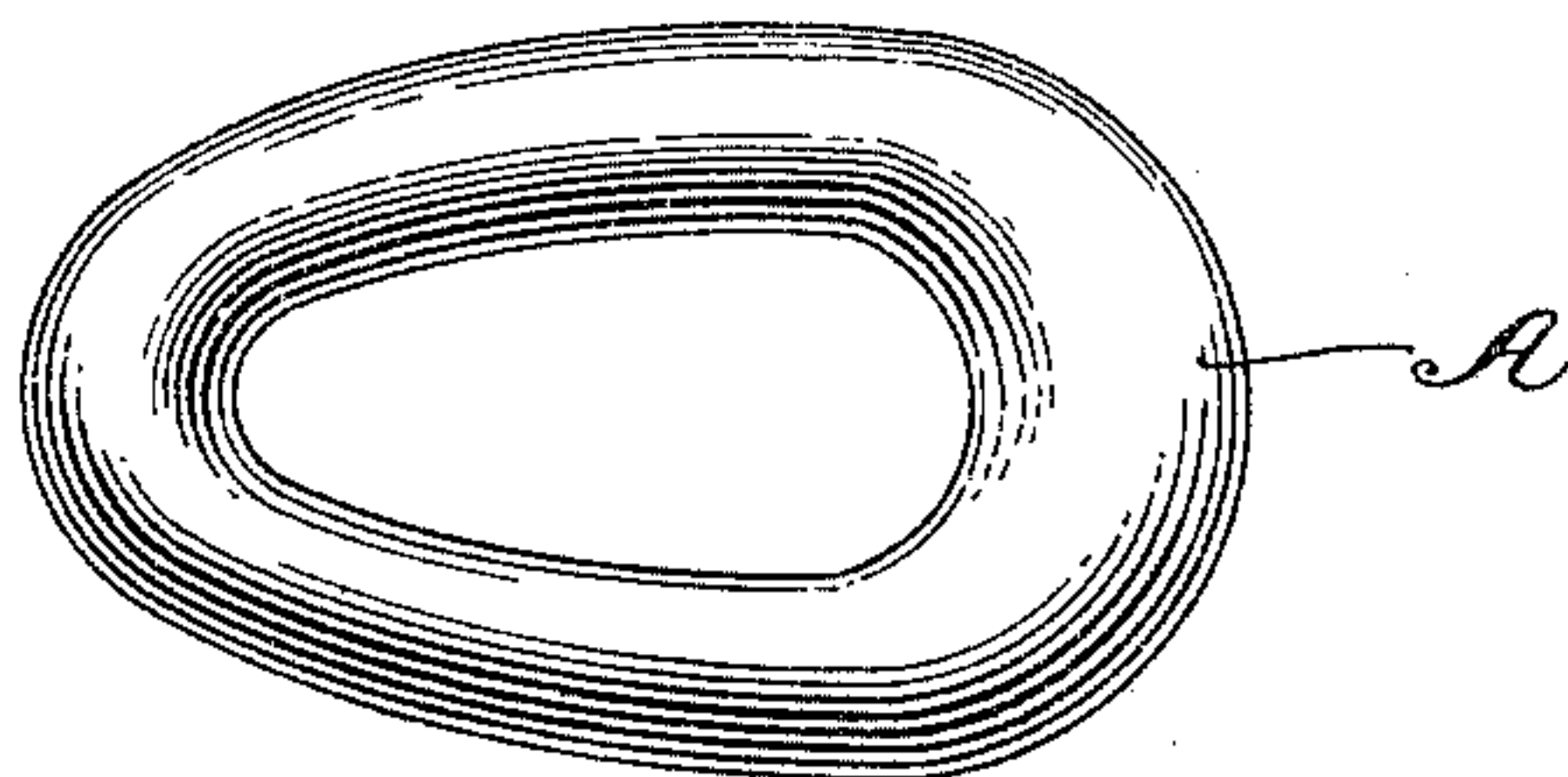


Fig 3.



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UNITED STATES PATENT OFFICE.

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TRUSS.

SPECIFICATION forming part of Letters Patent No. 659,846, dated October 16, 1900.

Application filed August 2, 1900. Serial No. 25,607. (No model.)

To all whom it may concern:

Be it known that I, DECATUR D. DENNIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trusses, of which the following is a specification.

This invention relates to improvements in trusses used for the support or in the treatment of hernia or rupture; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

One object of my invention is to provide trusses which shall be simple and inexpensive in construction, strong, durable, efficient, and satisfactory in operation, and which can be readily secured in position and adjusted by the wearer so as to afford a yielding, equable, and continuous pressure on the hernia or ruptured part.

Another object of the invention is to so construct the parts of the instrument that they will conform to the different postures of the body, so as to give the highest degree of efficiency and comfort.

Other objects and advantages will be disclosed in the subjoined explanation and description.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is an outer face view of a truss embodying my invention. Fig. 2 is an edge view, partly in section and partly in elevation, taken on line 2 2 of Fig. 1; and Fig. 3 is a detached plan view of one of the pneumatic rings or cushion-pads.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the pneumatic rings or cushions of the truss, which are preferably made of rubber and are substantially elliptical or ovoidal in outline and cylindrical in cross-section, as is clearly shown in Figs. 2 and 3 of the drawings. The lower portion of each of the cushions or rings A is larger than the upper portion thereof, so as to equalize the pressure on the body and hernia. Located

on the outer surface of each of the cushions or rings A is a plate B, which is preferably concavo-convex and of substantially the same shape in outline as the ring on which it rests. Each of these plates is provided with a peripheral groove *b* for the reception and retention of a metallic ring C and the edge of an elastic or flexible diaphragm D, which is placed and secured on the ring A or cushion so as to cover the opening therein and form an air-chamber between said diaphragm and the plate B, which is formed or provided on its outer surface near its upper and lower portions with bosses *b'*, having their opposite surfaces flattened and bored to receive set-screws *a*, used for adjusting and securing the pieces E thereto, which pieces are bent to form substantially rectangular figures and have on their adjacent surfaces at their ends serrations *e* or teeth to engage the bosses *b'*, which bosses are preferably made of softer metal than that of which the pieces E are formed.

Extending diagonally across the outer surface of each of the plates B is a rib F, having a longitudinal slot *f* for the reception and operation of a screw *g*, located in each end of the connecting-bar G, which is preferably curved, as shown in Figs. 1 and 2 of the drawings, and has on each of its ends serrations *g'* to engage the surface of the ribs F, which are preferably of softer metal than that of which the bar G is formed, and thus allows the serrations on the ends of said bar to bite into or engage the same when the screws *g* are tightened.

By loosening one or both of the screws *g* it is apparent that one or both of the cushions or rings A may be moved so as to increase or lessen the distance between them and be held in the desired position by again tightening said screw. The position of the pieces E may be adjusted by loosening and then tightening the screws *a*, so as to cause the serrations on the pieces E to bite into or engage the softer metal of which the bosses *b'* are made.

In assembling the parts of my truss the diaphragm D of each of the cushions or rings A is placed thereover, so as to close the opening therein, when the plate B may be placed on the opposite side or surface of the ring or cushion and the plate and diaphragm se-

cured together by forcing the metallic ring C over the pneumatic ring or cushion, so that it will rest in the peripheral groove b of the plate, and thus firmly hold the parts together.

- 5 The truss is fitted to the body of the wearer and held thereon by means of a band or strap (not shown) passing around the body, which may be secured to the pieces E in any suitable manner, and the pieces E may be set at
10 a suitable angle to the plates B, on which they are pivotally secured, to conform to the physical condition of the wearer. For instance, if the wearer is corpulent or fleshy the pieces E should be set at obtuse angles
15 from the plates, but if lean at acute angles or nearly parallel therewith. By employing the rings or cushions A of the peculiar construction shown and above described it is apparent that the pressure on the hernia and
20 body will be equally distributed and that the support of the hernia will be maintained in a firm, yet comfortable and gentle manner. The diaphragm and plate B of each of the cushions when in position thereon will form an air-
25 chamber and air-cushion, with its center portion yielding, so as to cause the hernia to return to its normal position without inconvenience or discomfort.

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

1. In a truss, the combination of two pneumatic rings, with a diaphragm located on the surface of each adjacent to the body of the
35 wearer, a plate located on the opposite surface of each of said rings and having a peripheral groove, a slotted rib and bosses on its outer surface, a metallic ring located in each of said grooves to hold the diaphragms

in position, a connecting-bar adjustably secured at its ends in the slots of the ribs, and a belt-attaching piece adjustably secured to the bosses on each of the plates, substantially as described. 40

2. In a truss, the combination of two pneumatic rings substantially ovoidal in shape, and having their lower portions enlarged, a diaphragm located on the surface of each adjacent to the body of the wearer, a plate located on the opposite surface of each of said
50 rings, and having a peripheral groove, a slotted rib and bosses on its outer surface, a metallic ring located in each of said grooves to hold the diaphragm in position, a connecting-bar adjustably secured at its ends in the
55 slots of the ribs, and a belt-attaching piece adjustably secured to the bosses on each of the plates, substantially as described.

3. In a truss, the combination of two pneumatic rings, with a diaphragm located on the
60 surface of each adjacent to the body of the wearer, a plate located on the opposite surface of each of said rings and having a peripheral groove, a slotted rib and bosses with flattened portions, a metallic ring located in
65 each of said grooves, to hold the diaphragms in position, a connecting-bar having its ends serrated and made of material harder than the ribs on the plates, means to secure the
70 said bar to the ribs, a belt-attaching piece having its ends serrated and made of material harder than the bosses on the plates and pivotally secured to the bosses of each plate, substantially as described.

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