(No Model.)

F. R. BELL.

TRUSS.

No. 565,592. Patented Aug. 11, 1896.

FIG. 1.

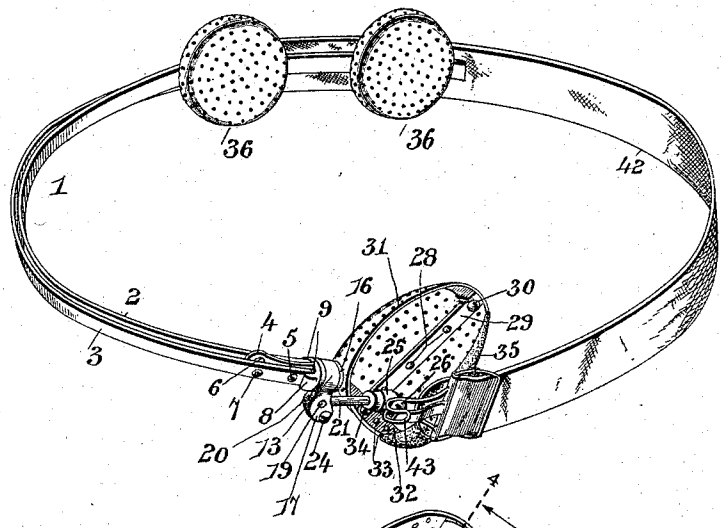


FIG. 2.

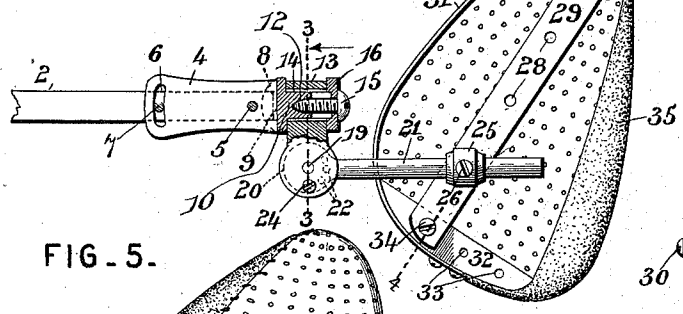


FIG. 3.

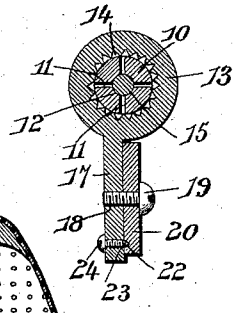


FIG. 5.

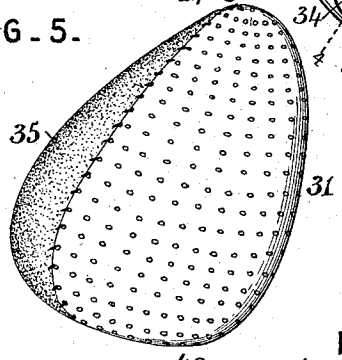


FIG. 4.

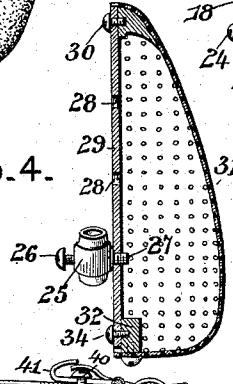
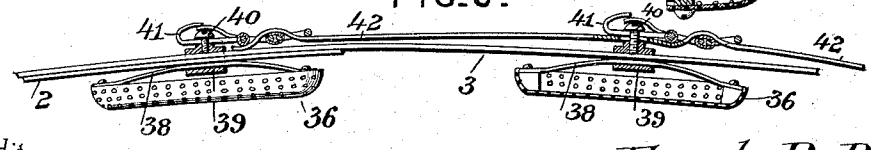


FIG. 6.



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UNITED STATES PATENT OFFICE.

FRANK RUPERT BELL, OF KANSAS CITY, MISSOURI.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 565,592, dated August 11, 1896.

Application filed August 27, 1895. Serial No. 560,673. (No model.)

To all whom it may concern:

Be it known that I, FRANK RUPERT BELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Truss, of which the following is a specification.

This invention relates to trusses; and it has for its object to provide certain improvements in trusses employed for the retention and cure of hernia, whereby the same shall be provided with all the necessary adjustments, in order that the same may be readily applied to different persons and may be regulated in pressure and position to suit all cases.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a truss constructed in accordance with this invention. Fig. 2 is an enlarged detail longitudinal sectional view at the spindle end of the double body-band. Fig. 3 is an enlarged detail sectional view on the line 3 3 of Fig. 2. Fig. 4 is a similar view on the line 4 4 of Fig. 2. Fig. 5 is a detail in perspective of the front pad. Fig. 6 is a detail sectional view of the rear portion of the double body-band, including both back pads and illustrating the separate sections of the body-band clamped together.

Referring to the accompanying drawings, 1 designates a double body-band consisting of the separate body-band sections 2 and 3, which may be either flat or round, covered or uncovered, as desired. The separate body-band sections 2 and 3 are of different lengths, the section 3 being shorter than the outer section 2, and both of said body-band sections 2 and 3 have fitted between their front ends the spindle-plate 4. The spindle-plate 4 is flat on both sides, so that the body-band sections will rest flat thereagainst. The front extremities of the body-band sections 2 and 3 receive a pivot-screw 5, which, when loosened sufficiently, acts as a pivot for the front extremities of said body-band sections, said pivot-screw also passing through the spindle-plate 4 and serving to hold the latter in position between the separate body-band sections.

The spindle-plate 4 is provided near its rear end with the transversely-disposed slot 6, which receives the set-screw 7, engaging in perforations in the separate body-band sections, and, by reason of providing the plate 4 with the slot 6, it will be noted that by loosening the screws 5 and 7 the body-band can be raised or lowered on the hip without changing the fixed position of the spindle-plate 4 and consequently the position of the pad, which is connected with the said spindle-plate in the manner to be described.

The spindle-plate 4 is provided adjacent to the front tip extremities of the sections 2 and 3 with a flange 8, provided at one side with the grooves 9, which loosely receive the said front tip extremities of the body-band sections in order to properly hold the same in position when the screw 5 is loosened and the body-band being adjusted to suit the wearer. Beyond the flange 8 the spindle-plate 4 is provided with a cylindrical spindle 10, having a series of slits 11 and a screw-socket 12 in its outer end.

The cylindrical spindle 10 of the spindle-plate 4 loosely receives thereon an axially-adjustable collar 13. The axially-adjustable collar 13 is interiorly serrated or corrugated, as at 14, and is held tight in its adjusted position on the spindle by means of the clamping-screw 15. The clamping-screw 15 engages in the screw-socket 12 of the spindle 10 and works against the washer 16, interposed between the head of the screw 15 and the outer end of the collar 13, so as to exert a clamping pressure against the collar when the screw 15 is tightened up. By tightening the said screw 15 the slitted portion of the spindle 10 will be expanded or wedged within the interiorly-serrated collar 13, and, in connection with the washer 16, will serve to tightly hold the collar in any position in which it may be found necessary to adjust the same.

The axially-adjustable collar 13 is provided at its lower side with a plate extension 17, having a threaded opening 18 to receive one end of the clamp-screw 19, passed through the flattened end 20 of an adjustable pad-arm 21. The pad-arm 21 has a swinging adjustment,

by reason of its screw connection 19, with the plate extension 17, and the said screw connection also serves to assist in holding the pad-arm rigid in its adjusted position. The side of the flattened end 20 of the pad-arm 21, which bears against one side of the plate extension 17, is provided with a circular series of notches 22, which are adapted to receive the pointed end 23 of a retaining-screw 24, mounted in the lower end of the plate extension 17 to assist in retaining the pad-arm 21 rigid in its adjusted position.

The pivotally-adjustable pad-arm 21 loosely receives thereon for longitudinal and axial adjustment the pad-collar 25, which is held tight on the pad-arm 21 by means of a set-screw 26, mounted in the collar and impinging against the arm 21. The collar 25 is provided at one side with a threaded stud 27, that is adapted to engage any of a series of threaded perforations 28, arranged longitudinally in the pad-bar 29. The laterally-adjustable pad-bar 29 is pivoted at its upper end, as at 30, within the upper end of the pad 31, and the lower end of said pad-bar is arranged to work over a transversely-arranged fastening-plate 32. The transversely-arranged fastening-plate 32 is fitted within the lower end of the pad 31 and is provided with a longitudinal series of threaded openings 33, which are adapted to receive the fastening-screw 34, mounted in the unpivoted end of the bar 29 and serving to fasten the same in its adjusted position. The laterally-adjustable pad-bar 29 secures a lateral adjustment of the pad 31 with respect to its applied position, and this adjustment of the pad is very important to provide for arranging the pad in the best possible position to retain the hernia.

The pad 31 consists, essentially, of a pear-shaped hollow perforate metallic body and is provided at one lower side edge with an exterior offset rounded imperforate absorbent medicated cushion-roll 35. The medicated cushion-roll 35 is stitched or otherwise secured detachably to one lower side edge of the pad 31, and, extending the entire length of the pad, is so arranged as to lap directly over the rupture close down on the bone directly adjacent to the pad in its applied position, and said medicated cushion being saturated with a suitable preparation assists not only to retain the hernia in place, but also to cure the same.

Each of the body-band sections 2 and 3 have adjustably fitted on their rear ends separate back pads 36. The back pads 36 consist of perforate cup-shaped disks, which have detachably fitted within their outer hollow sides the transversely-arranged bowed leaf-springs 38. The bowed leaf-springs 38 bear against the inner sides of the body-band sections, to which the pads are fitted and are embraced by adjustable clamps 39, which also embrace the body-band sections to secure the back pads in any adjusted position on the body-band sections. The adjustable clamps 39, which adjustably and detachably secure the back pads to the body-band sections, are provided with the screws 40, which are detachably engaged by separate clasps 41, fitted on the rear end of the elastic strap 42, which passes around the body opposite the double body-band, and is provided at its front end with a clasp 43, which detachably engages the set-screw 26 at the front side of the front pad 31. By adjusting the position of the back pads on the body-band sections in connection with the elastic strap it will be obvious that the pressure of the front pad may be regulated to suit all cases, and when it is desired to secure the two sections of the body-band together and thereby maintain the two back pads always in positive alinement the outer longer body-band section 2 is passed through the adjustable clamp 39 for the back pad on the rear end of the short section 3, as is clearly illustrated in Fig. 6 of the drawings.

While I have described only a single truss, it will be obvious that a double truss can be made by simply duplicating the construction described and having the body-band extend entirely around the body instead of only at one side of the same, as will be readily understood by those skilled in the art, and it will also be understood that any changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a truss, a body-band carrying at its front end a spindle-plate provided with a cylindrical spindle having a series of slits and a screw-socket in its outer end, an interiorly-serrated collar loosely fitted on said spindle and provided at its lower side with a plate extension, a clamping-screw engaging the screw-socket of the spindle, and the pad-arm carrying the pad and having an adjustable connection with the plate extension of said collar, substantially as set forth.

2. In a truss, a double body-band consisting of separate inner and outer sections, a plate arranged between the front ends of the body-band sections and provided near its rear end with a transversely-disposed slot and at its front end with a flange having grooves in one side loosely receiving the front tip ends of the body-band sections, a pivot-screw passed through the front extremities of the body-band sections and said plate to pivotally connect the former with the latter, a set-screw passed through the body-band sections and said slot, and the front pad suitably connected with said plate, substantially as set forth.

3. In a truss, a body-band carrying at its front end a spindle-plate provided with a cylindrical spindle having a series of slits and a screw-socket in its outer end, an axially-ad-

justable collar loosely fitted on said spindle and provided at its lower side with a plate extension having a threaded opening, a clamping-screw engaging the screw-socket of the spindle, a washer interposed between the clamping-screw and the axially-adjustable collar, the pad-arm carrying an adjustable pad and provided at one end with a flattened portion, and a clamp-screw passed through the flattened end of the pad-arms and engaging the threaded opening in said plate extensions, substantially as set forth.

4. In a truss, the body-band, a pad-arm having an adjustable connection with the front end of the body-band, the pad provided at its lower end with a fixed transversely-arranged fastening-plate having a longitudinal series of threaded openings, a movable pad-bar pivoted at one end to the upper end of the pad and provided with a longitudinal series of threaded perforations, a fastening-screw passed through the unpivoted end of the said bar and adapted to engage in any one of the series of the openings of the fastening-plate, and the pad-collar mounted on the pad-arm and provided at one side with an off-standing threaded stud adapted to engage any of the threaded perforations of said bar whereby the pad-collar may be adjusted longitudinally of the pad, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK RUPERT BELL.

Witnesses:
CHARLES T. SNOW,
CHAS. E. TIDD.