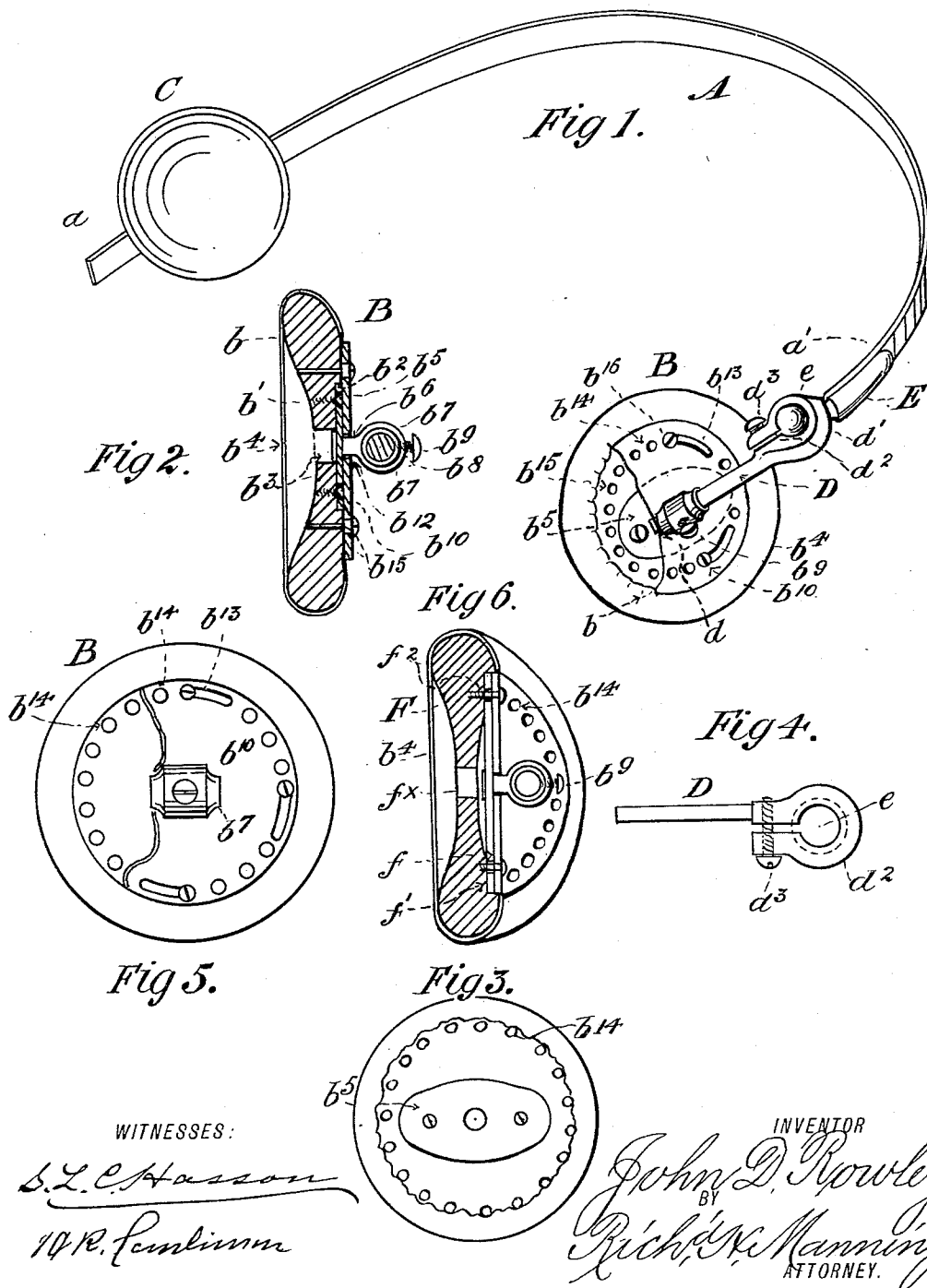


(No Model.)

J. D. ROWLEY
TRUSS.

No. 569,236.

Patented Oct. 13, 1896.



WITNESSES:

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TO EVERETT A. ROWLEY, OF SAME PLACE.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 569,236, dated October 13, 1896.

Application filed December 19, 1895. Serial No. 572,714. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. ROWLEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Trusses; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to trusses for hernia, &c., and has for its object the application of cooling air-currents within the rupture-supporting pad; second, to permit the gradual yielding of the pad to pressure from the ruptured parts; third, to control the flexibility of the pad attachments, and, fourth, to provide a means for reversing the pad in position and securing the same adjustably to the truss-band.

My invention consists in the novel construction and combination of parts, such as will first be fully described, and specifically pointed out in the claims.

Referring to the drawings, Figure 1 is a view in perspective of my improved truss with a portion of the outer adjustable perforate plate broken away to show the intermediate laterally-yielding attachment-plate. Fig. 2 is a vertical sectional view of the truss-pad as seen in Fig. 1. Fig. 3 is a detail view of the inner perforate plate of the pad and the laterally-yielding attachment-plate. Fig. 4 is a side view in detail of the pad-supporting bar, showing the ball in the end of the truss-band and the clamping socket-plate. Fig. 5 is a view in elevation of the truss-pad, showing an alternate construction. Fig. 6 is a view in section showing an alternate construction of the body of the pad.

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

Referring to the drawings, A represents a semicircular metallic truss-band of ordinary construction, the ends *a a'* of which may be spread apart in opposite directions, and when so flexed in position preserve its elasticity within requisite degrees of pressure.

B represents the front compression-pad, and C the back pad. The front pad B con-

sists of a body portion *b*, which is circular in form and concave, as at *b'*, upon the side presented to the rupture. The other side of the body portion *b* is flat, and in said flat portion is an oval depression *b²*, which extends longitudinally and in opposite directions from the center of the body portion *b* outwardly to a point nearly equidistant from the outer edge of said pad. In the center of the body portion *b* is a small-sized opening *b³*. The periphery of the body portion *b* of the pad describes a curved line from the back of the body portion to the front or concave portion of the pad.

To the back of the body portion *b* of the pad, and at a point nearly equidistant from the periphery and the depression *b²* in the back of said pad, is glued the edge portion of the covering *b⁴*, which is preferably chamois skin, and said covering is extended over the curved portion of the periphery of the pad, thence over the concave portion of the body of the pad to the opposite curved portion of the periphery of the pad, and over the periphery to the back of the body of said pad, and also in the circular direction of the pad, thus forming a yielding cover.

Secured to the body portion *b* of the pad in the depression *b²* is an oval plate *b⁵*, the outer surface of which is flush with the back of said body portion. To the portion of the oval plate *b⁵*, opposite the opening *b³* and at a point equidistant from both ends of said plate, is attached a stud *b⁶*, to the outer end of which is connected a collar *b⁷*. In the collar *b⁷* is a threaded opening *b⁸*, which receives the adjusting-screw *b⁹*. On the back of the body portion *b*, extending over plate *b⁵*, is an adjustable plate *b¹⁰*. Said plate *b¹⁰* is circular in form, and is provided with a central opening *b¹²*, slightly larger than the stud *b⁶*, and through which the stud passes. The plate *b¹⁰* extends from the stud *b⁶* outwardly to within a short distance of the periphery of the body portion *b* of the pad and nearly to the edge of the covering *b⁴*. In the plate *b¹⁰*, a short distance from the edge portion of said plate, is a curved slot *b¹³*, concentric with the opening *b¹²* in the plate *b¹⁰*. Other slots are also made in the plate *b¹⁰* upon the same circular line as described by the slot *b¹³* and at

suitable distances one from the other. In the plate b^{10} , between the slots b^{13} and in the same circular line described by the curved slots b^{13} , are perforations b^{14} . In the body portion b , and registering with the series of perforations b^{14} , are perforations or air-ducts b^{15} . In the slot b^{13} in plate b^{10} is an adjusting-screw b^{16} , which is inserted on the body portion of the pad and the head of the screw turned sufficiently to bring the same in contact with the outer surface of the plate b^{10} . In the sleeve or collar b^7 is inserted one end, d , of the adjustable pad-supporting swivel-bar D, which end is secured in position by the screw b^9 . The other end, d' , of bar D is flat and bent in a curved line over and nearly upon itself. In the inner surface of said bent portion d' is an annular groove d^2 . Upon the end a' of the body-band A is rigidly attached a flat plate E, one end of which extends beyond the end of the band A, and upon said end is a ball e , which fits within the socket d^2 on the end of bar D. In the extreme end of the portion d of bar D, beyond the socket d^2 , is a screw d^3 , which is fitted within a suitable threaded opening in the bar D, and which clamps the parts of the socket together upon the ball e .

Instead of securing the stud b^6 directly to and employing an inner plate it may be secured to the outer adjustable plates, as seen in Fig. 5, if preferred.

In Fig. 6 I have shown a double concave body F. In this construction, instead of the oval plate b^5 , I employ a fixed circular plate f of the same dimensions as the adjustable plate b^5 and make a circular depression f' therefrom in the back of the body F. In said plate are perforations f^2 , which register with the perforations b^{14} in the plate b^{10} , the adjusting-screws b^{16} passing through the plate f .

In the operation of my improved truss the band A is flexed in position and arranged so as to bring the pad C, which is of the ordinary construction, against the back of the wearer and act as a brace to the band A and the pad B upon the hernia. The plate b^{10} is so adjusted as to bring the perforations b^{14} in the plate and b^{15} in the body of the pad in position to register, and as intermittent pressure is applied to the covering b^4 the air is caused to enter by suction and becomes expelled, thus causing air-currents to flow inwardly and outwardly and keeping the pad cool and thoroughly ventilated.

Whenever the resistance of the pad is required to be increased, the plate b^{10} is adjusted so as to lessen the size of the openings, these adjustments being made by loosening the screw b^{16} and turning the plate b^{10} in such a degree as to place the series of perforations in a registering position, or partially so, or, when necessary, entirely closed, thereby retaining the air within the pad. In the double concave pad-body the perforations in the body of the pad are dispensed with and the air is caused to pass through the central opening f^x , and when confined in the body of the pad

by closing the perforations in the plate the air-pressure is made uniform on both sides of the body of the pad, thus forming an air-cushion of great elasticity. The double concave body of the pad enables the application of medicated substances whenever required. The pad is adjusted in position by means of the bar D, the sleeve b^7 being also adjustable on the said bar. It will be observed that the stud b^6 , which is attached to the oval plate b^5 , sustains the strain brought direct upon the pad, and the plate b^5 being secured at each end the yielding of the pad is checked in that direction and the movement confined to a direction at right angles to the plate. In this manner the pad is controlled and brought directly to its office in sustaining lateral pressure. The plates b^5 b^{10} being close in position, no air passes between, and its escape is through the perforated plate and the body of the pad.

In the adjustment of the bar D the screw d^3 is loosened, which permits a free movement of the ball e in the socket d^2 , and as soon as the position of the pad is obtained the screw is made to clamp the parts upon the ball e , the end portion of the bar beyond the socket acting as a lever, so that the power obtained is sufficient to hold the bar at any point without danger of slipping. I am also enabled in this construction to turn the screw, thus releasing the ball e , and reverse the pad in position, either upward or downward, so as to obtain a right or left application of the pad, and in a short space of time and with but the releasing of a single screw, thus making the fastening positive and easily accomplished. After the reversal of the bar D the screw is turned so as to clamp the parts together. The ball-clamping parts of the bar D may be soft steel or a hinge employed to unite the parts, as may be preferred.

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

1. In a truss-pad, the combination with the body portion having a concavity in the front side thereof and ventilating air-ducts extending through said body portion near its periphery, an elastic cover to the front side of said body portion, a fixed oblong attachment-plate embedded in the back and secured at both ends to said pad a stud on the other side of said body portion to that having said concavity and a perforate plate having a central opening adapted to receive said stud, covering said fixed plate, and having its perforations registering with the said ducts in the body of said pad, substantially as and for the purpose described.

2. In a truss the combination with the truss-band, of a plate rigidly attached to and extending beyond one end of said band, and a ball upon the outer end portion of said plate, a pad-supporting adjustable swivel-bar having one end of its body connected with said pad and the other end turned back

nearly upon itself to form a clamp the inner surface of said bent portion of said bar having an annular groove, adapted to receive said ball upon the plate of said truss-band, and in frictional contact with the entire surface of said ball, said bent portion of said bar being extended beyond said ball in the direction of said pad, and a screw in the said extension of said bar extending within the body portion of said bar, whereby the pad may be reversed in position without removal of the pad-supporting bar from the truss-band as shown and described.

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Witnesses:

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