J. L. BRENNAN.

TRUSS.

APPLICATION FILED APR. 17, 1917.

1,253,135.

Patented Jan. 8, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

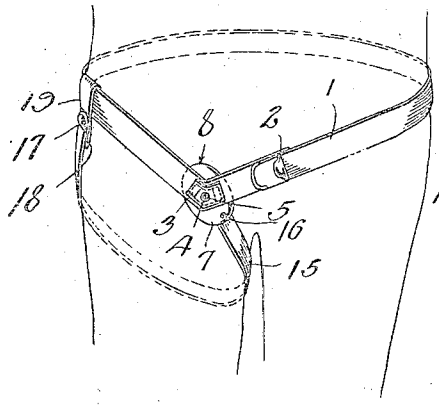


Fig. 2.

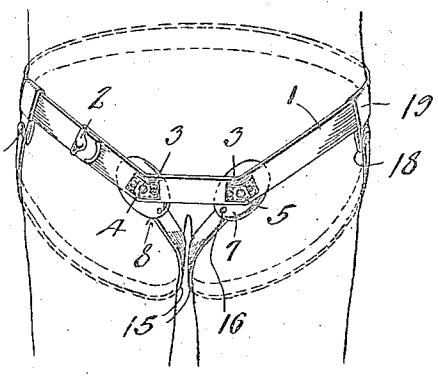


Fig. 3.

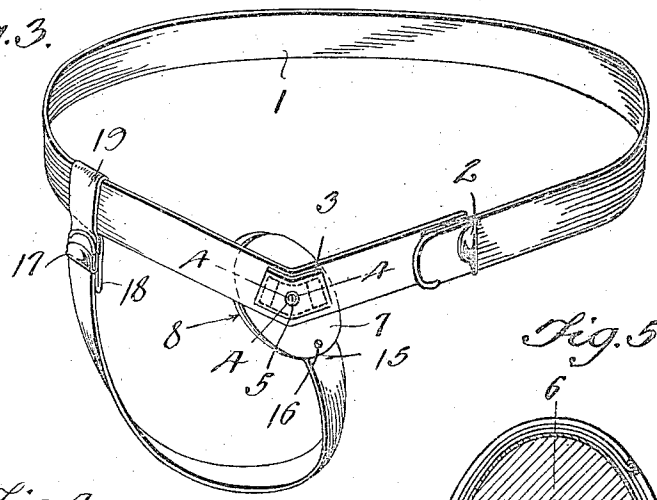


Fig. 4.

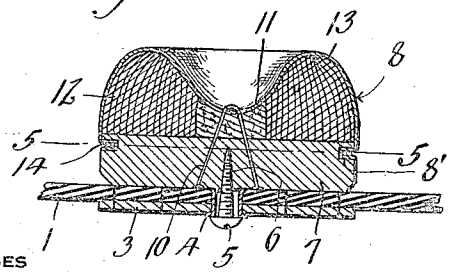
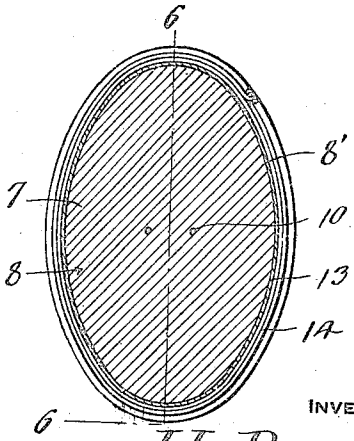


Fig. 5.



WITNESSES

E. Anderson Jr.

INVENTOR

J. L. Brennan,

BY Victor J. Evans

ATTORNEY

J. L. BRENNAN.

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2 SHEETS—SHEET 2.

Fig. 6.

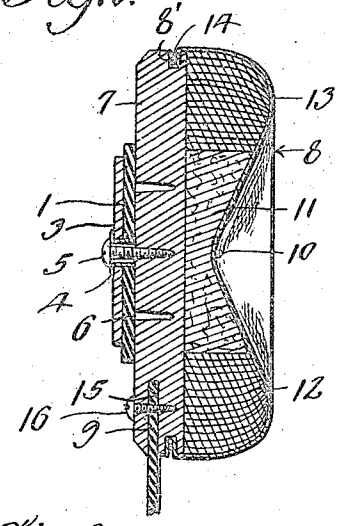


Fig. 7.

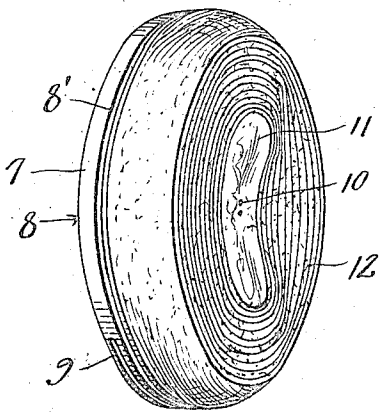


Fig. 8.

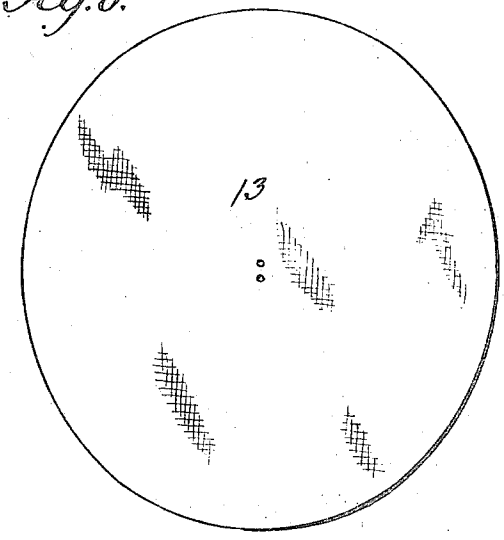


Fig. 9.

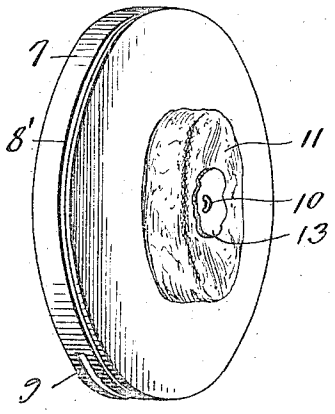
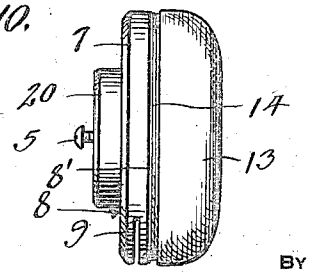


Fig. 10.



WITNESSES

Edelsen Jr.

INVENTOR

J. L. Brennan,

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES L. BRENNAN, OF MARSHALL, MICHIGAN.

TRUSS.

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Application filed April 17, 1917. Serial No. 162,722.

To all whom it may concern:

Be it known that I, JAMES L. BRENNAN, a citizen of the United States, residing at Marshall, in the county of Calhoun and State of Michigan, have invented new and useful Improvements in Trusses, of which the following is a specification.

This invention relates to certain new and useful improvements in surgical appliances and relates particularly to an improved construction of a truss adapted for the treatment of rupture or hernia, and the improvement resides in the construction, combination and operative arrangement of parts set forth in the following specification and falling within the scope of the appended claims.

In the drawings:

Figure 1 is a view of the device as applied to a single rupture,

Fig. 2 is a similar view illustrating the device applied to a double rupture,

Fig. 3 is a perspective view of the complete device,

Fig. 4 is a greatly enlarged sectional view taken approximately on the line 4—4 of Fig. 3,

Fig. 5 is a similar view approximately on the line 5—5 of Fig. 4.

Fig. 6 is a sectional view approximately the line 5—5 of Fig. 4,

Fig. 7 is a perspective view of the pad with the cover removed therefrom,

Fig. 8 is a plan view of the cover,

Fig. 9 is a perspective view of the back plate of the pad, and

Fig. 10 is a side elevation of a pad illustrating the manner in which a washer may be attached to the back plate as when the pressure of the pad is to be increased.

Referring now to the drawings in detail, the numeral 1 designates the belt upon which the shields are removably and adjustably arranged. The belt is constructed preferably of elastic webbing which is of a porous nature and which is soft lined to allow for the free circulation of the air so that the same will not irritate the person of the wearer. One of the ends of the belt is provided with a protected buckle 2 which receives the opposite end of the said belt, whereby to provide for the adjustability of the belt. The belt 1 in the construction illustrated in Fig. 4 of the drawings, and when employed for a single rupture has secured thereto, upon its outer face, a flat substantially V-shaped non-elastic reinforcing element which is indicated by the numeral 3, the said reinforcing member being preferably constructed of leather, and in Fig. 2, two of such reinforcing members are illustrated. The reinforcing in Fig. 1 is provided with a central opening reinforced by an eyelet 4, while the reinforcements in Fig. 2 are provided with three openings, one being centrally arranged and the others being disposed approximately equi-distantly from the said central opening, all of the openings being protected by suitable eyelets. Through these eyelets are adapted to be passed the threaded shanks of headed members 5, the heads of the said members being kerfed whereby to receive a suitable instrument, such as a screw driver, to facilitate in the application of the threaded member or screw 5. The screw is adapted to enter one of a plurality of spaced threaded orifices 6 respectively provided centrally in the rear of the back or plate 7 for the shields 8. Each of the plates 6 comprises a flat member having an oval periphery, and the said periphery adjacent the inner face of each of the plates is formed with a continuous groove or channel 8, while each of the said plates at one of the ends thereof and outward of the groove 8 is formed with a transverse slot 9. The inner face of each of the plates 7 is centrally connected preferably through the medium of a single thread 10, with a strip or hank of compressible and absorbent material 11, and around this element 11 is wound the strip 12 that comprises the moisture absorbent cushion. The member or element 11 may be cut to an elliptical shape, and the strip comprising the cushion member 12 is of some suitable loosely woven material, preferably in the nature of a wick, the inner end of the same being narrower than the outer end, the said inner and reduced end being arranged in contacting relation with the element 11, the strip comprising the cushion member being wound around the said member 11 and around itself to an elliptical formation, corresponding to the shape of the back plate 7. This arrangement, it will be noted, provides for the inner dished or hollow shape of the cushion 12, as is clearly illustrated by the drawings.

The thread 10 preferably has its end passed through apertures in the plate 7, the said ends being secured in the said apertures, by wedge members or the ends of the said thread may be knotted upon the outer face of the plate, and the thread 10 cen-

trally passes through the open woven washable cover 13 whereby to secure the said cover to the plate and to arrange the same over the cushion. The central portion of the cover is thus forced to contact with the central depressed portion of the cushion. The cover is of an elliptical shape in plan and the edge thereof is adapted to be brought over the face as well as the sides of the cushion and to be arranged over the groove or channel 8 of the plate 7. A cord or string 14 is brought over the edge of the cover 13 forcing the said edge to within the groove 8, and by tying or otherwise connecting the end of the cord or string the cover is effectively retained over the cushion and upon the back plate 7.

The numerals 15 designate the understraps for the device, one of the ends of each of said understraps being arranged within the slot 9 of the plate 7 and removably connected thereto, as at 16, the opposite end of each of said straps being received by a buckle member 17 arranged upon and protected by a depending portion 18 of a yoke 19. Each of the yokes 19 is arranged upon the belt 1 and can be adjusted to any desired position with respect to the said belt.

The swivel connection of the pad with the reinforcement of the belt permits of the said belt being brought to proper position on the person of the user wearing the said pad to work upon the pivot or swivel with the movement of the body and the plurality of eyelets in the said reinforcements allow adjustment for distances, while the washer 20 upon the outer face of the plate as illustrated in Fig. 1 of the drawings permits of the increasing of the pressure of the pad upon the person of the user.

The hollow concaved or saucer shape of the shell with the open, woven, washable cover allows for the free circulation of air next to the skin, and such circulation will prevent irritation to the skin. The moisture absorbing cushion is of a very light and soft material, and wound in the manner described not only provides for the central concavity in the face of the shield but the material of the same permits of it being washed by simply dipping the same in water and squeezing the cushion in the manner in which water is squeezed from a sponge. The construction of the back with the plurality of threaded orifices to receive the pivot or swivel member permits of a vertical adjustment of the pad and the advantage of removably connecting the edge of the cover to the back will, it is thought, be apparent. The pad when applied to the user will automatically adjust itself and when the same is properly embedded in place the understraps 15 may be removed, so that the patient will be relieved from any annoyance which the same may occasion.

From the foregoing the simplicity and advantages of the construction will, it is thought, be apparent to those skilled in the art to which such invention appertains without further detailed description, it being understood, of course, that if desired the compressible member or core 11 may be dispensed with and that the cover 13 may be attached to the inner and reduced end of the strip comprising the cushion member 12.

Having thus described the invention, what I claim is:

1. In a rupture appliance, a pad including an oval back having a peripheral groove, a compressible core centrally secured to the back, an absorbent cushion comprising a strip which gradually decreases in width from its inner to its outer end and wound around the core, an open woven cover secured to the core and designed to have its edges lap the edges of the back, and a tying element for the cushion whereby to force the edge of the same to within the groove of the back to secure the edge of the said cushion to the back.

2. A rupture appliance including a non-yieldable back which is oval in plan, said back having a peripheral groove and having one of its edges provided with a transverse slot, a cushion member comprising a strip of absorbent material gradually decreasing in width from its inner to its outer end and being wound upon itself and centrally connected with the back, a belt, means for adjustably and pivotally connecting the back to the belt, a back strap adjustably secured to the belt and having one of its ends received in the slot of the back, removable means for retaining the said end in the said slot, an open woven cover centrally connected to the cushion, said cover designed to overlie the end of the said cushion and the periphery of the back, and means comprising a flexible element wound around the edge of the cushion to compress the same in the groove of the back.

3. In a rupture appliance, a pad including an oval back having a peripheral groove, an absorbent cushion upon the back comprising a woven strip which is wound upon itself whereby to conform to the peripheral formation of the back, an open woven cover arranged over the cushion and over the edge of the back, a tying element designed to engage with the said cover to force the same in the peripheral groove of the back and sustain the same upon the back and in contacting relation with the cushion.

In testimony whereof I affix my signature.

JAMES L. BRENNAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."