E. A. NELSON.

ABDOMINAL TRUSS.

APPLICATION FILED MAY 3, 1918.

1,293,878.

Patented Feb. 11, 1919.

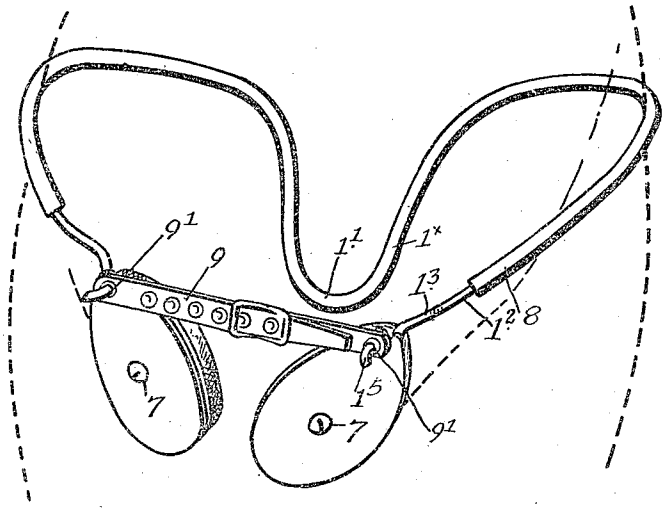


FIG. 1.

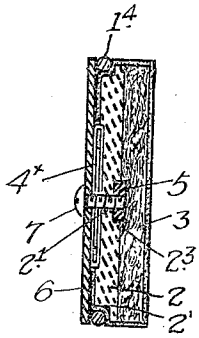


FIG. 8.

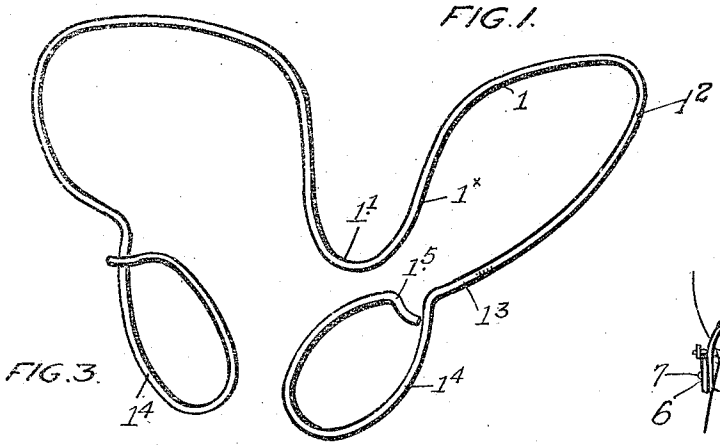


FIG. 3.

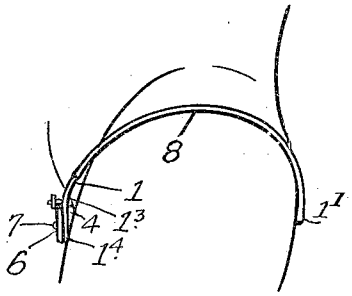


FIG. 2.

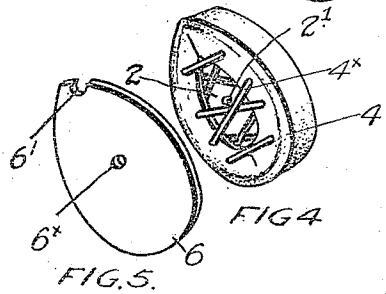


FIG 4

FIG. 5.

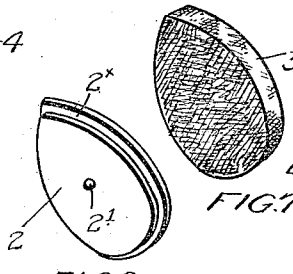


FIG. 7.

FIG 6.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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UNITED STATES PATENT OFFICE.

EDWARD ALEXANDER NELSON, OF TORONTO, ONTARIO, CANADA.

ABDOMINAL TRUSS.

1,293,878. Specification of Letters Patent. Patented Feb. 11, 1919.

Application filed May 3, 1918. Serial No. 232,354.

To all whom it may concern:

Be it known that I, EDWARD ALEXANDER NELSON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Abdominal Trusses, of which the following is the specification.

My invention relates to improvements in abdominal trusses and the object of the invention is to devise a truss which will snugly fit the body, hold firmly in place and conform to every movement of the body without the employment of straps or other means passing through the crotch of the leg or otherwise in contact with the body which would cut into the flesh and also to provide a truss which can be easily cleansed and which will, therefore, be sanitary, which will be adapted to hold various sizes and shapes of pads which may be readily interchanged and which are so formed as not to tend to press upon the rupture but which will hold it together and aid it to heal and generally to provide a truss which may be worn with comfort both by day and by night and it consists essentially of the following arrangement and construction of parts as herinafter more particularly explained.

Figure 1, is a general perspective view of my truss showing it applied, the position of the body in relation thereto being indicated by dotted lines.

Fig. 2, is a diminutive side view showing the position of the truss upon the body.

Fig. 3, is a perspective detail of the main truss member.

Fig. 4, is a perspective detail of my pad.

Fig. 5, is a perspective detail of the metal covering plate.

Fig. 6, is a perspective detail of the pad body support.

Fig. 7, is a perspective detail of the pad body.

Fig. 8, is an enlarged sectional detail through the assembled pad.

In the drawings like characters of reference indicate corresponding parts in the various figures.

1 indicates the main truss member which is formed of resilient metal, the center back portion of which is curved downwardly in looped form at 1^x, such loop being bent slightly inwardly toward the apex $1'$ of the loop so that it grips and compresses against the fleshy portion at the back of the body in the position indicated in Fig. 2. The side members 1^2 extend from each side of the loop 1^x around the fleshy portion of the hips slightly below the hip joint, the front portions of such side members inclining downwardly in a general direction substantially parallel with the groin of the patient. The extreme forward ends of the side members 1^2 are provided with slightly inturned offset portions 1^3 terminating in a loop 1^4. The ends of the loop approach each other, the free end thereof being turned outwardly at 1^5 in an arc-shaped direction with the concaved portion of the arc facing outward.

2 indicates a pad support, which is provided with a surrounding rabbet groove 2^x into which the loop 1^4 fits. $2'$ indicates an orifice formed in the center of the pad support. 3 indicates a pad which is preferably formed of felt and provided with a flat face. The back of the pad fits against the pad support 2, the whole being covered with a covering of chamois leather 4, the chamois leather being folded over the pad 3 and pad support 2 to the back of the pad support, the edges of the chamois being drawn together and secured by suitable lacing 4^x. When in this position the pad and pad support are forced into the loop 1^4 so that the loop springs into position within the rabbet groove 2^x as clearly indicated in Fig. 8. The center of the outer face of the pad support 2 is provided with a rectangular recess 2^3 into which an internally threaded nut 5 fits thereby holding the nut from turning.

6 indicates a metal covering plate which fits against the outer face of the loop 1^4, that is, against the opposite face of the loop to the pad support 2. The plate 6 is provided with a central orifice 6^x and an edge notch $6'$ through which the out-turned end 1^5 of the loop 1^4 extends. 7 indicates a screw which passes through the orifice 6^x and is threaded into the nut 5 thereby securing the parts together and the pad to the loop 1^4.

It will, of course, be understood that any form or shape of pad may be used other than that shown in the drawing. For instance, for certain patients where the rupture is large it is necessary to use a large circular pad. In this case the outer portion of the pad support 2 is formed circular and a projecting portion extends therefrom corresponding in shape to the outer portion of

the pad support indicated in Fig. 6 which fits into the loop 1^4 in a similar way.

The member 1 may be provided with a covering of rubber tubing 8 as indicated in Fig. 1, thereby rendering it more comfortable. The member 1 is sprung around the body of the wearer into the required position, the spring of the metal holding it in place. A connecting strap 9 is then provided with eyelets 9′ through which the out-turned portions 1^5 of the loop 1^4 extend, thereby holding the parts together. It will be observed, however, that the strap 9 is outside of the pad and that, therefore, it does not come in contact with the body and does not tend to injure the same. When the truss is in position the spring of the metal has a tendency to have an upward inward pull upon each of the pads, the back portion of the truss being held down in position by means of the lower slightly in-turned portion $1'$ of the loop 1^x gripping the flesh of the wearer.

It will thus be seen that in a truss such as I have devised the spring of the metal will yield in any direction allowing any movement of the body and yet by reason of its grip on the front and back portions of the body there will be no tendency for the pads to work out of place or for the truss to work upward or downwardly out of place so as to be uncomfortable or in any way get out of its correct position.

The resilient loop 1^x serves to not only allow of the truss conforming to bodies of various sized persons within certain limits but also tends to hold the side portions of the truss together so that they grip the fleshy portions of the body below the hip joint further serving to hold the truss in place. Also in my construction of pad I have provided a pad with a flat face which is preferable over a pad having a rounded face as is usually employed. It will be readily understood that a pad with a rounded or convex face has a tendency to press into the rupture and spread it apart thereby increasing its size, whereas, my pad being a flat pad tends to firmly hold the rupture in place and to aid any tendency that there is for the rupture to heal.

In my construction of truss also it will be readily seen that I have dispensed with all straps or other securing means extending around the body or through the crotch of the wearer which would have a tendency to cut into the flesh and thereby render the flesh sore and the truss very uncomfortable to wear.

It will also be seen that such a truss as I have devised is very compact presenting no bulky parts and fits the body so snugly, closely and comfortably that it can be worn at any time either by night or by day and at the same time I have provided a pad which may be readily disassembled, the chamois being removed with the pad and the chamois from the pad so that both may be thoroughly cleansed thereby rendering the device absolutely sanitary.

What I claim as my invention is.

1. A truss device comprising a truss member formed of resilient material extending around the body and terminating in open ended pad supporting loops, the free ends of the loops being turned outward, pads, means for securing the pads within the loops, a cross strap connecting the out-turned ends of the loops together, and resilient means for drawing the side portions of the truss member against the body of the wearer.

2. A truss comprising a truss member formed of resilient material extending around the body of the wearer and terminating at its free ends at the front in open spring pad supporting loops having out-turned ends, a strap having eyes at the ends thereof with which the out-turned ends of the loops engage, pads, and means for securing the pads within the spring loops.

3. In a device of the class described, a truss member formed of spring looped metal adapted to extend around the body of the wearer and terminating at its free ends in open ended pad supporting loops having out-turned ends.

4. In a device of the class described, the combination with the pad supporting member having a loop, a plate adapted to fit against one face of the loop, a plate adapted to fit against the opposite face of the loop, means for connecting the plates together, a pad, and means for securing the pad to the innermost plate.

5. In a device of the class described, a pad supporting member having a loop, a plate adapted to fit against the inner face of the loop, a pad fitting against the outer face of such plate, a covering of suitable material extending over such pad and plate and laced together at its edges, a plate fitting against the outer face of the loop, and means for securing the plates together.

6. In a device of the class described, the combination with the pad supporting member having a looped end, a plate having a surrounding rabbet groove, a pad designed to fit against the outer face of the plate, a pad covering of flexible material adapted to extend over the pad and plate and having its inner edges laced together, a plate fitting against the outer face of the loop, and means for connecting the plates together.

7. In a device of the class described, the combination with the truss member having a looped end, a plate fitting against the inner face of the loop having a central orifice and a sided recess in the inner face of the plate surrounding such orifice, a nut fitting within the recess, a pad fitting against the outer face

of the plate, a covering of suitable material extending over the pad and plate and laced together over the outer face of the plate, a covering plate fitting against the outer face of the loop, and a screw extending through the covering plate, pad, supporting plate into the nut.

8. In a device of the class described, a pad supporting member provided with a pair of open spring loops at the ends thereof having out-turned ends, pads secured within such loops, and a strap having eyes at the ends thereof engaging the out-turned portions of the loops.

9. A truss device comprising a truss member having an open center front portion and formed of resilient material adapted to extend around the body and having pad carrying portions at its free ends and a depending downwardly elongated loop in the center back portion curved inward toward the base of the loop so that such base bears upon the fleshy portion of the wearer adjacent the base of the spine and extends upward in close proximity to the spine and over the hip bones at each side whereby an upward and inward draw upon the pad supporting portions is exerted.

EDWARD ALEXANDER NELSON.

Witnesses:—
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F. GANE.

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