(No Model.)

J. McCUTCHEN.

TRUSS.

No. 457,747. Patented Aug. 11, 1891.

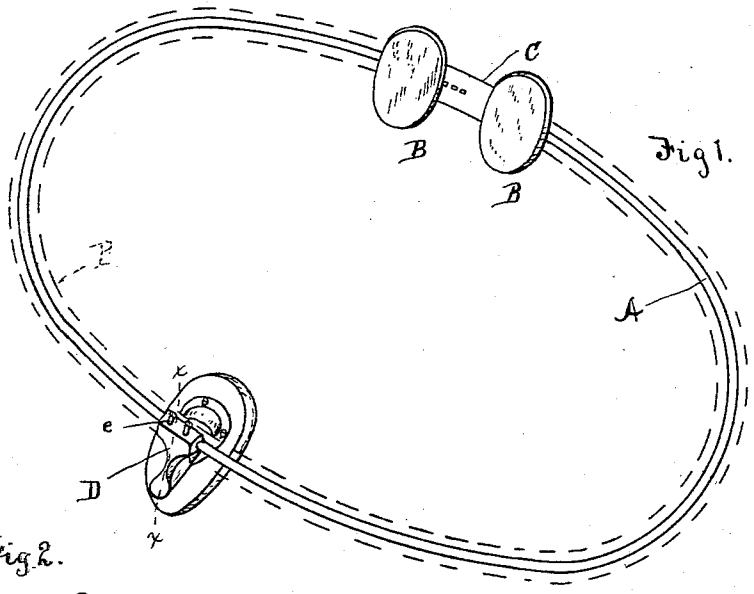


Fig. 1.

Fig. 2.

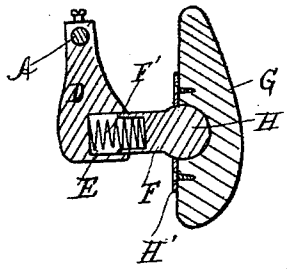


Fig. 3

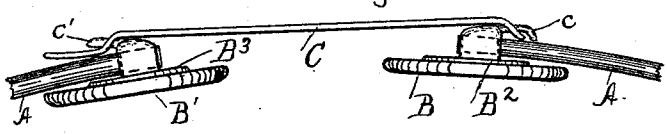
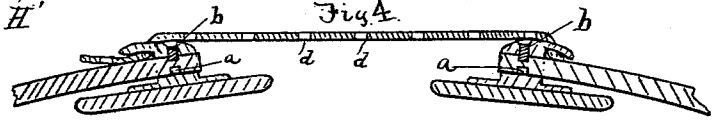


Fig. 4.



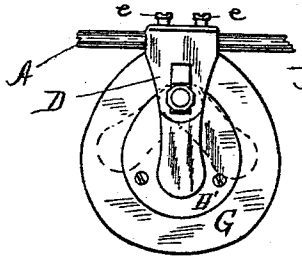


Fig. 5.

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TRUSS.

SPECIFICATION forming part of Letters Patent No. 457,747, dated August 11, 1891.

Application filed September 27, 1890. Serial No. 366,316. (No model.)

To all whom it may concern:

Be it known that I, JOHN McCUTCHEN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Trusses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My present invention has for its objects to provide a truss that will not only hold the parts in a better and more secure manner than heretofore, but also one that can be worn without discomfort and will permit the usual or extraordinary motions and exertions on the part of the wearer without displacement, but will be simple and cheap in construction and operation; and to these ends it consists in certain novelties of construction and combinations of parts, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a perspective view of a truss constructed in accordance with my invention; Fig. 2, a sectional view on the line *x x* of Fig. 1; Fig. 3, a plan view of the rear pads and adjusting device; Fig. 4, a sectional view of the same; Fig. 5, a view of a modification.

Similar letters of reference in the several figures denote similar parts.

The main supporting-body of the truss is preferably constructed of a single ring or loop of wire A, open at the rear ends, which are adjustably connected, so as to vary the size of the loop, as will be described, and for convenience I cover said wire with a loose covering of leather P, as shown in dotted lines, which will slide and allow the movements of the wearer without chafing.

The rear ends of the body A are provided with grooves *a*, into which project fastening-screws *b* on the back supporting-pads B B′, so that the pads can freely move around on said wire, thus accommodating themselves to the wearer, but will not come off the ends. Said pads are provided on the rear sides with plates B^2 B^3, which are perforated for the wire A and provided with hooks or prongs *c c′*, the former on the plate B^2 and arranged to project close against the wire A, while the end of the latter is a little farther removed, sufficient for the insertion and removal of the fastening-strap C, as in Figs. 3 and 4. This strap is provided at one end with a perforation, through which passes the prong *c*, securing it to the pad, from which it can only be removed by the removal of the pad, and extending toward the other end is a series of perforations *d*, any one of which can be engaged with the hook *c′*. The tendency of the ends of the wire being to spring apart, they can be drawn together and secured by this strap, any desired tension being given the front pad against the person of the wearer. The back pads B B′, also being separate and permitted to turn freely around the wire, will readily accommodate themselves, no matter what pressure is put upon them.

Any front pad for holding the hernia could be employed in connection with the body A and back pads described; but for obvious reasons I prefer the one shown, which I have found by practical use to be almost perfect for an inguinal hernia.

On the front of the loop A is a bracket or arm D, having in its upper portion an aperture through which the ring or loop passes, said bracket being secured rigidly in position by screws *e e* or other means, so that it can readily be adjusted, if desired, longitudinally or rotated on the wire, and in the lower portion is provided a socket E, in which projects the hollow end of a stud F, carrying the holding-pad G. Within the hollow end of stud F is arranged a spring F′, preferably soldered at opposite ends to the stud and bottom of socket E for preventing the separation of the parts, yet tending by its elasticity to push the stud F inward and hold the pad with spring-pressure in contact with the wearer. Of course other means could be employed to prevent the separation of the parts, if desired.

Formed upon the end of the stud F is a ball H, adapted to fit within a socket in the pad G and held in place by a plate H′, secured to the pad, which latter may be of any desired or preferred form, this connection serving to permit the pad to accommodate itself to all

positions necessary, the spring telescoping connection serving to keep it properly pressed against the body with an even pressure.

The pressure of the pad can be adjusted, when desired, by turning the arm D around on the wire A and securing it rigidly in position, and the self-adjusting pads on the back will be useful when this is done in permitting the change in the direction of the pressure without displacement or discomfort to the wearer.

Instead of making the bracket D rigid, as shown, it may be made in two sections, as shown in Fig. 5, the lower part carrying the pad and spring connection, which may be adjusted laterally and vertically, as shown by dotted lines.

As many brackets and pads could be applied to the wire A as necessary, the construction of the arm D permitting them to be laterally adjusted and the pads to be placed above or below the wire A, as will be understood.

By making the pad movable only in a right line from its supporting arm or bracket a direct pressure is brought to bear on the parts, holding them better, while the ball-and-socket joint permits the necessary play caused by movements of the wearer.

It will be understood that to place the truss in position the strap C is disengaged from the hook c', and after the supporting-loop A is placed around the wearer the strap is re-engaged and the tension adjusted as desired.

The supporting body or wire A can be shortened, if desired, by removing one of the back pads B, cutting off the end of the wire, and forming a new groove for the accommodation of the small securing-screw, and also the shape of the wire A can be changed, should it chafe across the hips, by bending it as may be necessary. While I prefer to employ metal wire for the body or main portion of the pad by reason of its cheapness and simplicity, it is not absolutely essential that this be done, as the portions on which the several pads are located may alone be made round, so as to permit the necessary adjustments.

It will be seen that the above-described truss is simple in construction and operation and will be found to admirably answer the purpose intended.

I claim as my invention—

1. In a truss, the combination, with a supporting body or loop and the arm thereon, of the holding-pad and the spring-pressed stud sliding in the arm, having the ball-and-socket connection with the pad, substantially as described.

2. In a truss, the combination, with a supporting body or loop, the arm or bracket secured thereto, having the socket, the stud having the hollow end sliding in the socket, and the spring between them, of the holding-pad connected by a ball-and-socket joint with the stud, substantially as described.

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