A. H. PARKER.
Truss.

No. 205,896. Patented July 9, 1878.

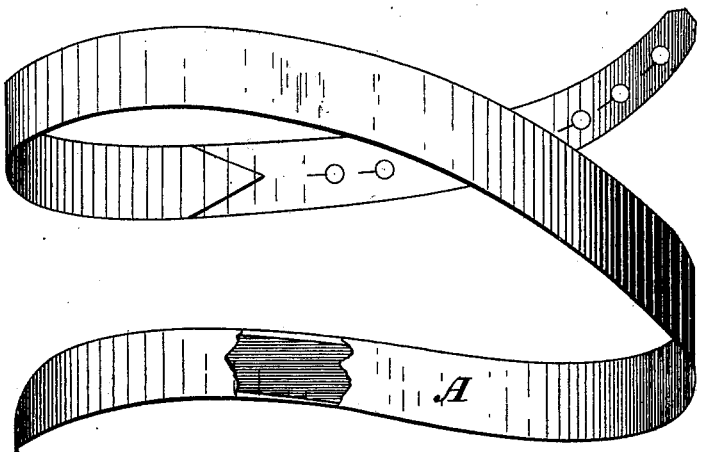

Fig 1

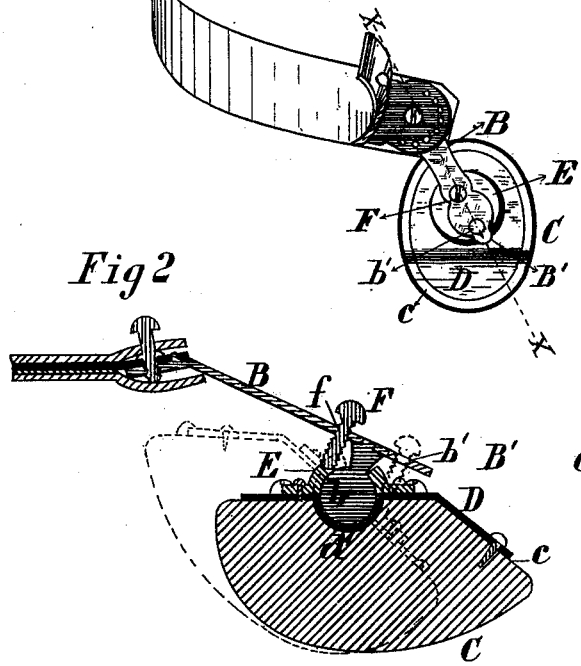

Fig 2

Fig 4

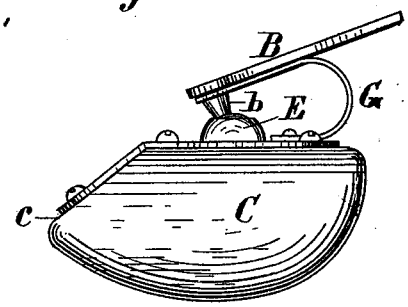

Fig 3

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UNITED STATES PATENT OFFICE.

ANDREW H. PARKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **205,896**, dated July 9, 1878; application filed April 17, 1878.

To all whom it may concern:

Be it known that I, ANDREW H. PARKER, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Trusses, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of a truss containing my improvement; Fig. 2, a longitudinal section taken through the pad and supporting-arm, on the line *x x*, Fig. 1; Fig. 3, a side elevation of the same, showing a modification in the attachment; and Fig. 4, a perspective view of the depressing-spring used in said modification.

My invention relates to an improvement in trusses for use in bad cases of hernia.

It consists in special devices and combinations, all of which will be hereinafter more fully set forth.

In the drawings, A represents the ordinary spring, and B the supporting-arm which carries the pad. The pad C is attached to the supporting-arm B by a ball-and-socket joint, which in the drawings is represented as constructed like the joint shown in Letters Patent No. 37,381, granted to Bartlett and Butman, January 13, 1863, there being a depression, *d*, in the pad-plate D, which receives a portion of the ball *b* on the supporting-arm, above which is a perforated cap, E, which incloses a portion of the ball outside of the pad-plate.

My invention is not limited, however, to this particular construction of the ball-and-socket joint, as I can use, and propose to use, any known devices by means of which a ball-and-socket connection is obtained between the pad and supporting-arm.

The pad C is made of peculiar form. The upper end is thickened like the lower end of the ordinary pad, except that the enlargement is greater in degree than usual. It is tapered toward the lower end, but instead of being elongated in the usual manner, the lower end is cut off upon an incline, *c*, as shown in Fig. 2 of the drawings, so as to produce a short thick pad with an inclined or sloping lower end. This pad is arranged with the sloping end downward, as shown in Fig. 1 of the drawings, and a screw, F, is inserted in a hole, *f*, above the ball in the supporting-arm B. By turning this screw down the upper end of the pad is thrown inward, as shown in Fig. 2 of the drawings.

I have found, by long experience in treating hernia, that with the ordinary pad adjusted in the usual way to press directly inward it is almost impossible in bad cases to hold the rupture.

With my improved form of pad, adjusted as above described, I have been able to overcome this difficulty and to treat successfully the most difficult cases. I found that it was necessary in such cases to have an upward as well as inward pressure, and this is effected by the improvement above described, in which the pad is presented to the rupture at such an angle as to effectually prevent it from passing from underneath the pad.

The truss should be applied with the pad above the bone, when, under the adjustment shown in Fig. 2 of the drawings, it is evident that the pressure will be inward and upward.

The incline of the sloping lower end in this position of the pad is nearly in the same plane as that of the supporting-arm, as shown in the drawings, so that the lower end of the pad will not project outward from the body, as it would if the pad was of the ordinary form.

The adjusting device above described holds the pad firmly in a fixed position. In some cases, however, it is desirable that the adjustment should be yielding; and to effect this a bent spring, G, may be substituted for the adjusting-screw, one end being fastened to the upper end of the pad, and the other forked and embracing the shank of the ball on the supporting-arm, as shown in Fig. 3 of the drawings.

This device holds the pad in the same position as the screw shown in Fig. 2, but permits it to yield slightly, thereby making the adjustment elastic to accommodate changes in the position of the body.

The truss may also be constructed so that the pad can be reversed and used in the ordinary position. To accomplish this the lower end of the supporting-arm is provided with a projection, B′, extending slightly below the ball *b*, and a hole, *b′*, is made through this extension for the reception of the adjusting-

screw F, which is changed from its position above the joint to the extension-piece when the pad is reversed, in which new position an adjustment is made somewhat similar to that shown in Letters Patent above mentioned; or the lower end of the pad may be set so far inward that when the truss is applied as above described the pressure will also be upward as well as inward in this instance.

The sloping end of the pad permits the thick end of the pad to be set inward for this purpose, and in some instances this arrangement of the pad will be found desirable. When the pad is reversed with the depressing-spring shown in Fig. 3, it will also be adjusted to the position above described, but the adjustment will be yielding.

In carrying out my invention I do not limit myself to the precise construction and arrangement of adjusting device above described.

If a screw is used to make a fixed adjustment, it is not absolutely necessary to pass it through the supporting-arm, as described; but it may be inserted in the cap or in any other piece by means of which it can be brought to act upon the ball to fix it in its socket; or a clamping device of different construction may be used for fastening the ball in place.

In making the adjustment yielding the depressing-spring may be of different form from the bent spring G (shown in the drawings) and differently arranged, as it is only necessary to provide a spring which shall hold the pad in the desired position, and at the same time permit it to yield slightly. In some instances a simple hinge will also answer in place of the universal joint shown in the drawings.

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

1. In a truss, the supporting-arm B, in combination with a pad connected thereto by a universal joint and arranged with its thick end uppermost, and an adjusting device arranged above the joint and acting positively and directly upon the upper end of the pad, whereby it is depressed inward and downward, substantially as and for the purpose set forth.

2. A short tapering truss-pad, C, provided with an inclined or sloping face, *c*, at its thin end, in combination with the arm B and the depressing device, whereby, when the upper end of the pad is depressed, the lower end is prevented from projecting beyond the plane of the arm, substantially as and for the purpose set forth.

3. The supporting-arm B, provided with the screw-hole *f*, in combination with the pad C, attached to the arm by a universal joint, and an adjusting-screw, F, all arranged substantially as described.

4. The pad C, constructed as specified, in combination with the supporting-arm B, provided with the screw-holes *f* and *b'*, arranged one above the other below the joint, and the adjusting-screw F, substantially as and for the purpose set forth.

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