

(No Model.)

H. V. APPLEY.
TRUSS.

No. 578,184.

Patented Mar. 2, 1897.

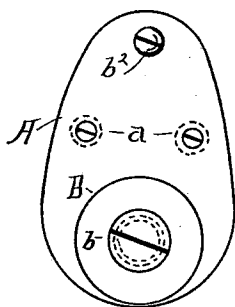


Fig. 2.

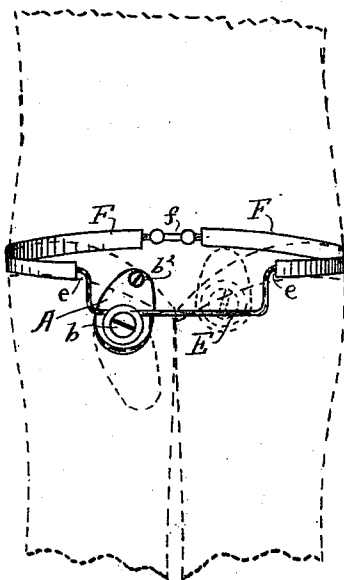


Fig. 1.

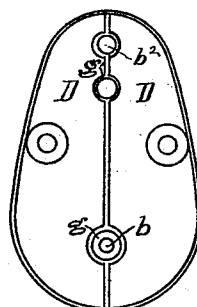


Fig. 3.

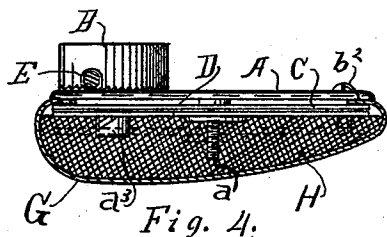


Fig. 4.

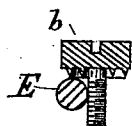


Fig. 5.

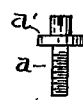


Fig. 6.

Witnesses.

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UNITED STATES PATENT OFFICE.

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TRUSS.

SPECIFICATION forming part of Letters Patent No. 578,184, dated March 2, 1897.

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To all whom it may concern:

Be it known that I, HARRISON V. APPLEY, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Surgical Trusses, of which the following is a specification.

My invention relates to improvements in trusses for the reduction of inguinal or femoral hernia; and its objects are, first, to provide a truss with which the belt may be applied around the hips and follow the inguinal creases, and the pads will naturally stand in position to reduce an inguinal or femoral hernia on a line just above the pubic bone; second, to provide a truss with which the pads may be adjusted laterally upon the supporting-bar and by turning upon its supporting-axes; third, to provide for adjusting the compactness of the pad to correspond with the nature of the hernia, and, fourth, to provide a truss that may be readily converted from a single to a double padded truss, and vice versa. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of the truss with a portion of the body shown in outline. Fig. 2 is a plan of the pad-supporting plate. Fig. 3 is a reverse plan of the same, showing the plates by means of which the density of the pad is adjusted. Fig. 4 is a side view of the same, showing the pad in sections. Fig. 5 is an elevation of the set-screw with the head in section to show the V-ribs on its lower surface by means of which the supporting-bar is firmly clasped and the pad held to place, and Fig. 6 is an elevation of the pad-adjusting screw.

Similar letters refer to similar parts throughout the several views.

In constructing my truss I make use of a belt of substantially the form shown in Fig. 1 at F F, providing therefor any convenient fastening, as *f*, at the back and securing in the front of said belt a supporting-bar E, which is bent down, as at *e e*, to throw the supporting pivot-bearing B of the pad down sufficiently to bring the pad G H to bear upon an inguinal hernia that is well down upon the groins without inconvenience to the wearer. The pads are secured to the supporting-bar

by means of a circular cap or pivot-bearing B, which is serrated on its lower surface to mesh with like serrations on the upper corresponding surface of the supporting-plate A, as indicated in Fig. 4. It is also provided with an aperture for the reception of the supporting-bar E, as indicated in Fig. 4, which is placed to one side of the center of the cap, so that the set-screw *b* may be passed centrally through the cap immediately at the side of the bar. The set-screw *b* is provided on the lower surface of the head with a V-shaped rib, as shown in Fig. 5, in position to cut into the upper surface of the bar E when the screw is screwed down to position to hold the cap B firmly to place with the serrations on the cap and the supporting-plate firmly interlocked, so that the pad cannot be turned on its pivot-bearing or, more correctly, on the set-screw *b*, which, with the cap B, forms the pivotal support for the pads on the bar E. The aperture in the cap for the reception of the bar E being open to the lower surface of the cap and of a proper depth, so that when screwed to place the lower surface of the bar will come firmly in contact with the serrations on the plate, it will be seen that the double contact, first, of the V-shaped rib on the set-screw upon the upper surface of the bar, and, second, of the lower surface of the bar upon the serrations on the plate, as stated, the pads cannot but be held firmly to place, while to remove a pad it is simply necessary to withdraw the set-screw and cap.

For the purpose of insuring a firm contact of the cap without danger of stripping the thread from the plate with the screw *b* I form a long boss, as *g*, on the lower surface of the plate into which the screw is driven. This boss also acts as a guard to prevent the adjoining edges of the plates D from coming in contact, for which purpose I also place another boss *g'* at the other end of the plate. These bosses are formed on the intermediate plate C, so that the setting of the screws will draw the plates A and C snugly upon the edges of the pad-cover G and together, so that the whole is held firmly together, thus at the same time that the screw *b* is holding the pad firmly on the bar it is holding, in connection with the screw *b*², the cover of the pad as firmly.

The pad is constructed of an upholstering of hair or other suitable substance, as indicated at H in Fig. 4, which is held to place by the cover G, of chamois-skin or other suitable material.

For the purpose of adjusting the density of the pad I place two plates D D side by side on the back surface of the plate C and divide said plates in the center longitudinally, so that either side may be adjusted independent of the other. To adjust these plates, I provide screws *a*, having a fixed collar *a'*, that is designed to bear upon the inner surface of the plate A with the head of the screw passing through the plate, so that the turning of the screw in one direction will force the plates D out, as indicated by the dotted lines in Fig. 4, and pack the filling H solidly against the cover G and make the pad hard, as desired, or turning the screw the other way will allow the plates to recede to their normal position and soften the pad.

The pads may be adjusted to be applied to hernia in diverse positions by loosening the screw *b* and turning the pads to the desired position around the screw as a pivot, as indicated by the dotted lines in Fig. 1, and they may be adjusted laterally by simply loosening the screw and sliding them to the desired position on the bar, or, if desired, one or both of the pads may be removed, as hereinbefore described, and the truss readily converted into a single truss or a double truss, as desired.

It will be readily seen that with this construction the bar or support E may be placed below the bearing-point of the pad, as indi-

cated by the dotted lines in Fig. 1, so that the ball of the pad may be adjusted to any necessary position over the circle of the hernia and so applied that it will adjust itself to any position of the body, whether stooping down or stretching upward, without inconvenience to the wearer, the bar being so fitted that it falls immediately into the inguinal creases and does not in the least discomfort the wearer when attempting to stoop down or bend over.

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

1. A truss-belt divided front and back, the front ends connected by a wire support bent near the point of connection to follow the depressions of the inguinal regions, and thence bent to form a horizontal connecting-bar for the support of the pads, and suitable adjustable fastening at the back; in combination with pads constructed with a solid base A, a clamp-plate as C, and a divided plate as at D, and screws for adjusting the same to control the density of the pad, substantially as, and for the purpose set forth.

2. A truss-pad constructed with a solid base-plate as A, a clamp-plate as C and a divided adjusting-plate as D, and screws for adjusting the same to control the density of the pad, substantially as, and for the purpose set forth.

Signed at Grand Rapids, Michigan, March 6, 1896.

HARRISON V. APPLEY.

In presence of—

ITHIEL J. CILLEY,
MABEL W. JONES.