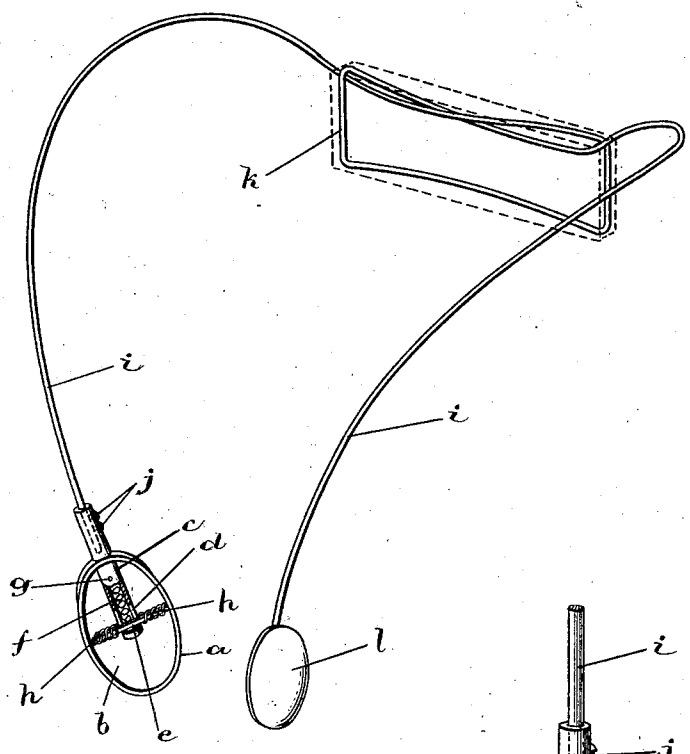
D. McKAY.

TRUSS.

APPLICATION FILED APR. 1, 1911.

1,026,758. **Patented May 21, 1912.**

Fig. 1.



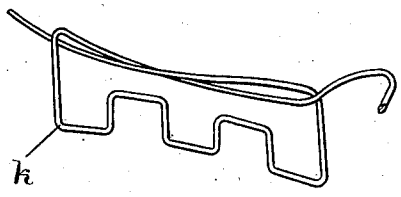


Fig. 2.

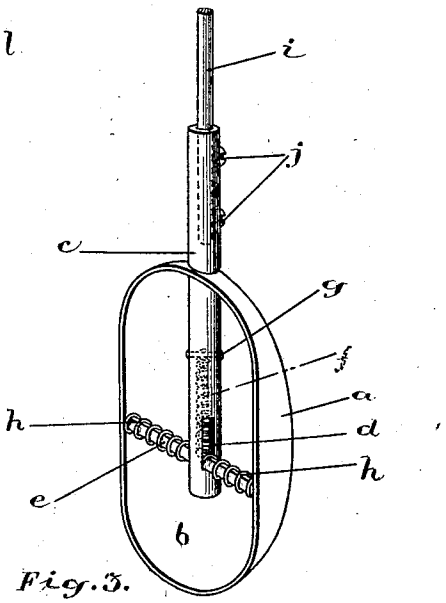


Fig. 3.

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TRUSS.

1,026,758. Specification of Letters Patent. Patented May 21, 1912.

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To all whom it may concern:

Be it known that I, DONALD McKAY, of the town of Collingwood, in the county of Simcoe and Province of Ontario, Canada, have invented certain new and useful Improvements in Trusses; and I hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to a pad which can be used for the treatment of hernia and the like, and the object of my invention is to arrange the pad so that it will maintain a uniform pressure on the inflicted part and remain substantially immovable in its set position, this being accomplished by providing the pad with a connecting member which will automatically yield laterally and longitudinally of the pad during the flexion of the body.

For an understanding of the invention reference is to be had to the following description and to the accompanying drawings in which:—

Figure 1, is a perspective view of the truss showing the construction of the pad and the body band. Fig. 2, is a perspective view of a modification of the construction shown in Fig. 1, and, Fig. 3, is a perspective view of the pad on a larger scale than in Figs. 1 and 2.

Like characters of reference refer to like parts throughout the specification and drawings.

The face *a* of the pad is of a convex shape to fit the rupture, and the back *b* of the pad is of a concave shape. Movable lengthwise into the concave back *b* is a hollow stem *c* having at its inner end a lengthwise slot *d*. Extending transversely across the concave back *b* and through the slot of the stem *c* is a spring cross bar *e* fixedly attached to the pad, and within the stem *c* is a spring *f* bearing at one end against a stop *g* within the stem and at the other end against the cross bar *e*.

Coiled on the cross bar *e* are two springs *h* bearing against the sides of the concave back *b* and against the stem *c*, each spring exerting an equal pressure upon the stem to hold it centrally on the cross bar *e*, when no lateral pressure is exerted upon the stem. Contained within the outer end of the stem *c* is the end of the body band *i*, the stem being locked on the body band by means of a set screw *j*. The body band *i* consists of a continuous wire extending around the body and formed at the back into a flat spring member *k*, which not only provides for the extension and contraction of the body band during the movement of the body, but also performs the function of a back pad, and which for the protection of the wearer may be covered with chamois or other suitable covering material.

The spring member *k* not only causes the body band to exert a pressure on the hernia pad, but permits the body band to twist slightly when the hernia pad is moving with the flexions of the body, enables the body to bend up or down without changing the position of the pad or causing it to move away from the hernia, and allows the body band to yield automatically in any direction without chafing or irritating the wearer.

A truss constructed on this principle may be used for either single or double hernia. For single hernia I use a dummy pad *l* on the opposite end of the body band to the hernia pad, and place the dummy pad over the hernial region.

The flexibility of the spring cross bar *e* permits of a limited yielding movement between the hernia pad and the stem laterally with respect to the face of the pad, the slotted connection between the stem and the cross bar permits the stem to move lengthwise independently of the pad, this being necessary during the bending of the body when the distance between the pad and the center of the body band is automatically changed by the bending movement, the shortening of the distance being compensated for by the stem passing the cross bar in one direction and the lengthening of the distance being compensated for by the receding movement of the stem in the opposite direction, the spring *f* resisting said shortening movement and accelerating said lengthening movement.

The sliding connection between the stem and the cross bar laterally toward the sides of the concaved back compensates for the twisting movement of the body band and prevents this movement being imparted to the pad, this lateral movement however being resisted by the compression of the springs *h* which, when the body band is relieved of the twisting strains, restore the stem to its normal position on the cross bar.

Having thus fully described my inven-

tion what I claim as new and desire to secure by Letters Patent is:—

1. In a truss, a pad having a convex face and a concave back, a slotted stem movable lengthwise through the pad into the concave back, a cross bar passing through the slotted stem and fixedly attached to the pad within the concave back, and springs bearing against the slotted stem and concave back to normally maintain the slotted stem centrally on the cross bar.

2. In a truss, a pad having a convex face and a concave back, a slotted stem movable lengthwise through the pad into the concave back, a cross bar passing through the slotted stem and fixedly attached to the pad within the concave back, springs bearing against the slotted stem and concave back to normally maintain the slotted stem centrally on the cross bar, and a spring contained within the slotted stem bearing against the cross bar.

3. In a truss, a pad having a convex face and a concave back, a slotted stem movable lengthwise through the pad into the concave back, a flexible cross bar passing through the slotted stem and fixedly attached to the pad within the concave back, and springs bearing against the slotted stem and concave back to normally maintain the slotted stem centrally on the cross bar.

4. In a truss, a pad having a convex face and a concave back, a slotted stem movable lengthwise through the pad into the concave back, a flexible cross bar passing through the slotted stem and fixedly attached to the pad within the concave back, springs bearing against the slotted stem and concave back to normally maintain the slotted stem centrally on the cross bar, and a spring contained within the slotted stem bearing against the cross bar.

5. In a truss, a pad, a slotted stem movable lengthwise of the pad, a cross bar passing through the slotted stem and fixedly attached to the pad, and springs bearing against the slotted stem and pad to normally maintain the slotted stem centrally on the cross bar.

6. In a truss, a pad, a slotted arm movable lengthwise of the pad, a cross bar passing through the slotted stem and fixedly attached to the pad, springs bearing against the slotted stem and pad to normally maintain the slotted stem centrally on the cross bar, and a spring contained within the slotted stem bearing against the cross bar.

7. In a truss, a pad, a slotted stem movable lengthwise of the pad, a flexible cross bar passing through the slotted stem and fixedly attached to the pad, and springs bearing against the slotted stem and pad to normally maintain the slotted stem centrally on the cross bar.

8. In a truss, a pad, a slotted stem movable lengthwise of the pad, a flexible cross bar passing through the slotted stem and fixedly attached to the pad, springs bearing against the slotted stem and the pad to normally maintain the slotted stem centrally on the cross bar, and a spring contained in the slotted stem bearing against the cross bar.

Collingwood, March 3rd, 1911.

DONALD McKAY.

Signed in the presence of—
OLIVE BATEMAN,
CHAS. H. RICHES.