

No. 816,867.

PATENTED APR. 3, 1906.

J. LEVERONE.  
SURGICAL TRUSS.  
APPLICATION FILED DEC. 15, 1904.

Fig - 1 -

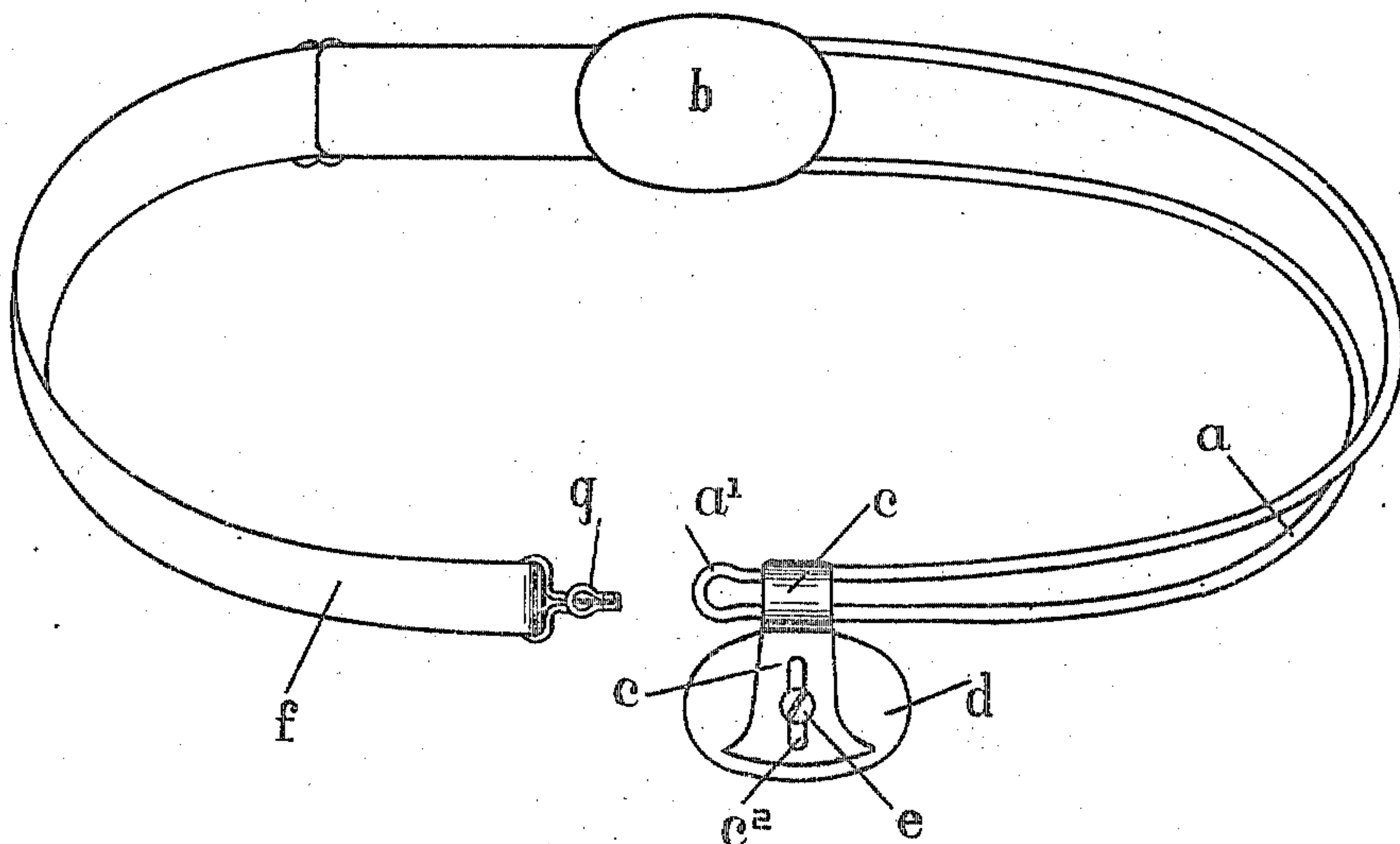


Fig - 2 -

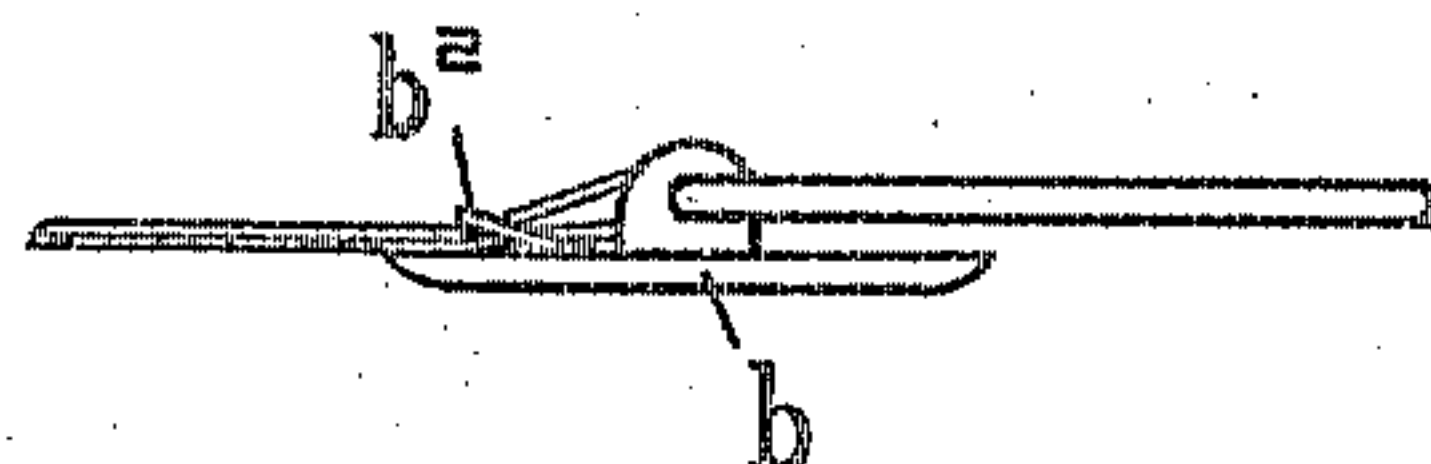


Fig - 3 -

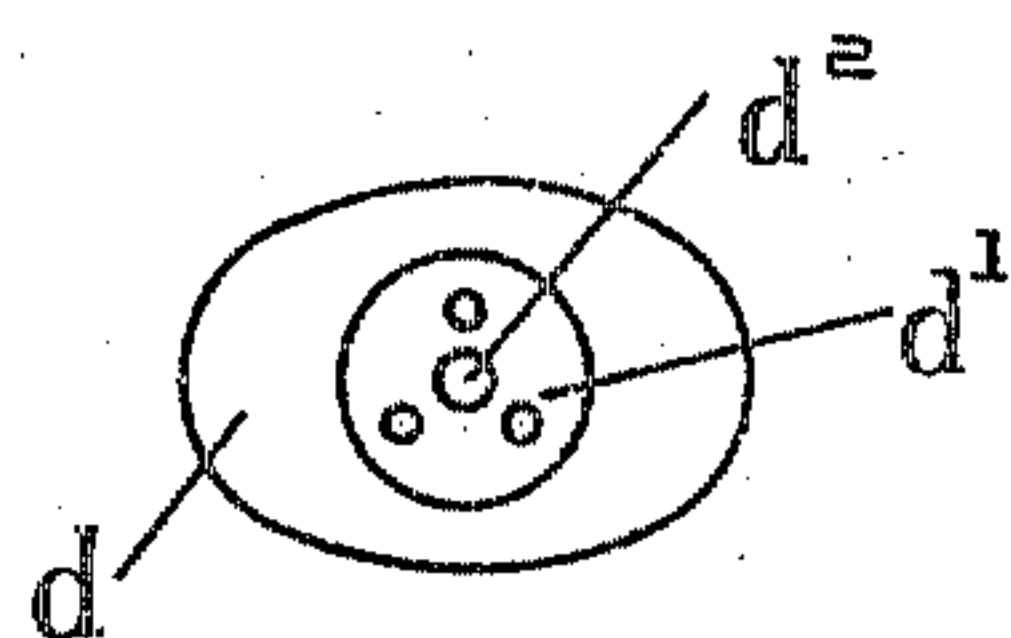


Fig - 4 -

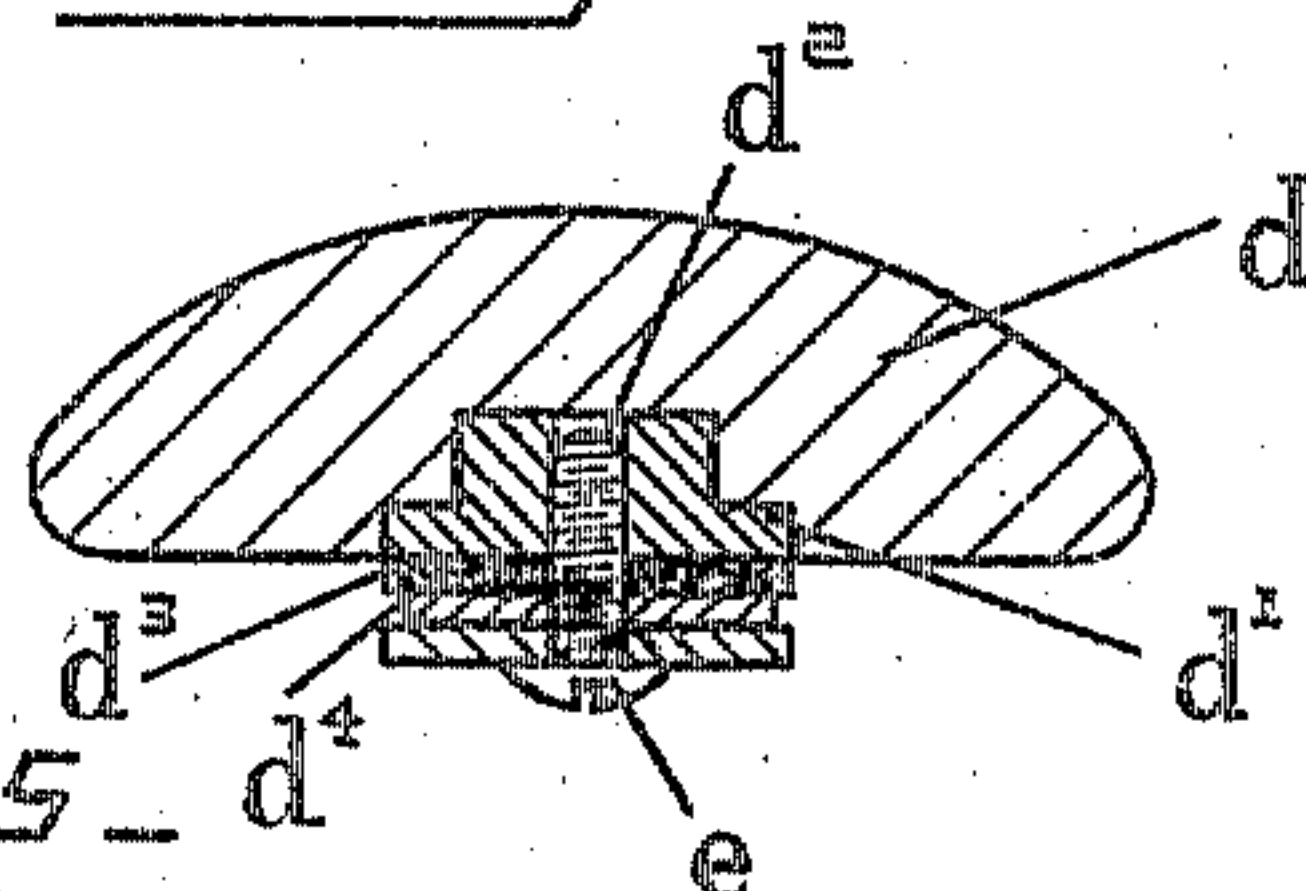
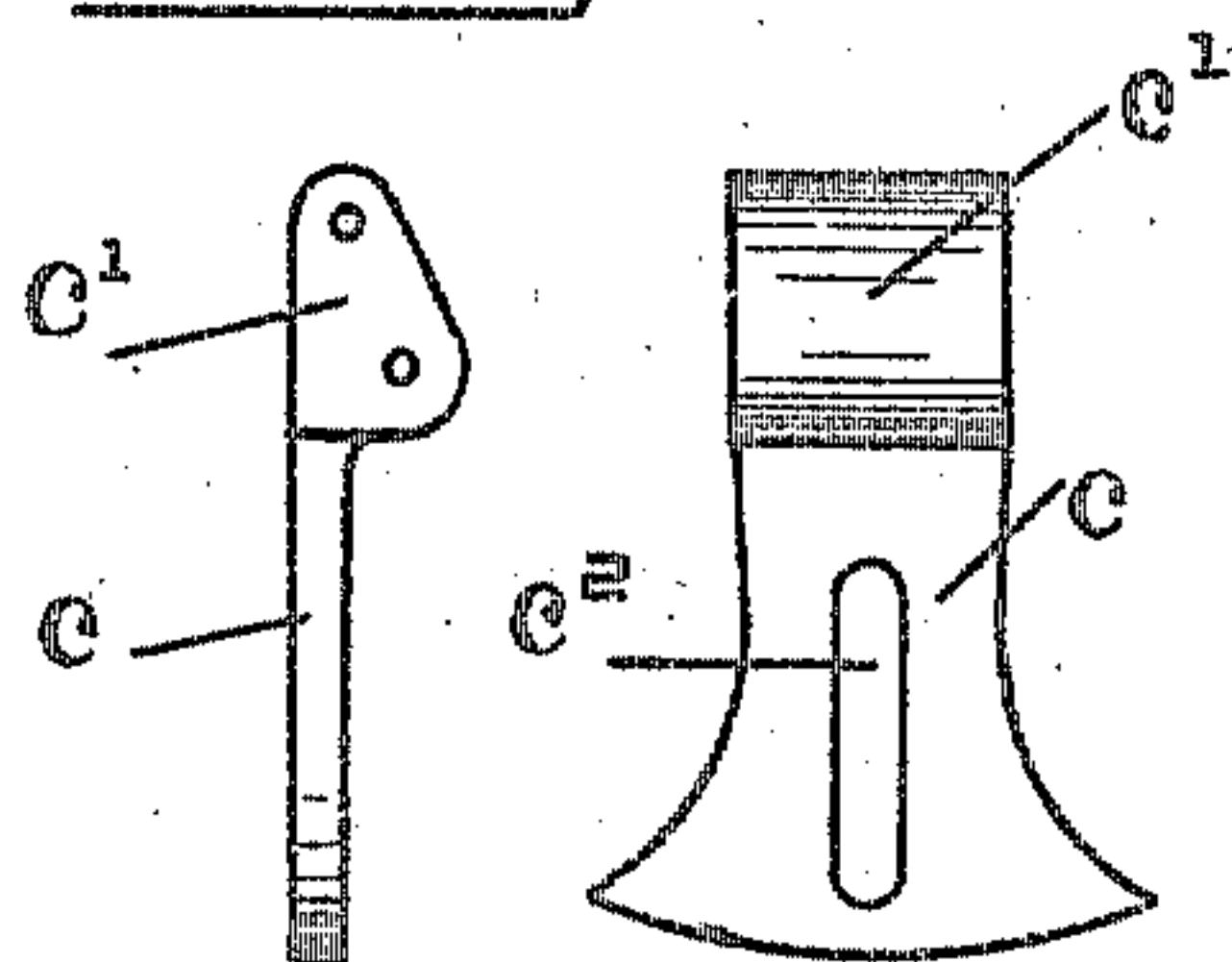


Fig - 5 -



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# UNITED STATES PATENT OFFICE.

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## SURGICAL TRUSS.

No. 816,867.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed December 15, 1904. Serial No. 237,021.

*To all whom it may concern:*

Be it known that I, JAMES LEVERONE, a subject of the King of Italy, residing at New London, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Surgical Trusses, which improvement is fully described in the following specification.

This invention is in surgical trusses, my purpose being to provide an extremely simple yet effective truss that may be readily adjusted to meet the special requirements of the wearer.

In order to explain my said invention most clearly, I have provided the accompanying sheet of drawings, in which—

Figure 1 is a perspective view of a truss embodying my improvements. Fig. 2 is a top edge view of the plate *b* and the parts connected therewith. Fig. 3 is a view of the back side of the pad *d*. Fig. 4 is a relatively enlarged longitudinal central sectional view of said pad and of the bracket to which it is clamped. Fig. 5 shows edge and front face views of said bracket.

Referring to the drawings, the letter *a* indicates a frame formed of spring-wire and consisting of two substantially parallel limbs that are bent to partially encircle the body of the wearer. Hinged upon the rear end portion of frame *a* is a plate *b*, that provides an enlarged and comfortable support for said rear end portion against the back of the wearer. By thus hinging pad *b* to the frame *a* it (the pad) is left free to adjust itself automatically and so that pressure is equally distributed over its entire surface. The front end portion of frame *a* terminates in an eye *a'*, as here illustrated, and near said eye I have secured to said frame by means of a metallic clip *c'* a bracket *c*, which serves as a support for the pad *d*, as I will describe in detail. Pad *d* is preferably made of wood, its front or operative face being suitably formed to support the hernia and its opposite face having secured therein a disk *d'*, that is bored and tapped, as at *d*<sup>2</sup>, to receive a binding-screw *e*. The bracket *c* is slotted, as at *c*<sup>2</sup>, to receive the screw *e* and to permit a limited adjustment of the pad relatively to the said bracket. Between the disk *d'* and the clamp plate or bracket *c* I insert a washer *d*<sup>3</sup>, of rubber, leather, or the like elastic material. When the bracket *c*, washer *d*<sup>3</sup>, and pad *d* are assembled and clamped together by the binding-screw *e*, the pad will be secured to the

frame *a* with sufficient firmness to prevent said pad from slipping away from the hernia; but if extraordinary strain be brought to bear upon the pad the washer *d*<sup>3</sup> will yield sufficiently to allow the pad to change its position slightly, thus preventing injury or discomfort to the wearer of the truss. The slot *c*<sup>2</sup> permits a limited vertical adjustment of the pad with respect to the bracket *c*. The openings in the bracket *c*, by means of which the bracket is secured to the frame or body-band *a*, are not on a line parallel with the face of the bracket, but are on a line downwardly divergent therefrom. This relation of the openings to the face of the bracket, the lower being more remote therefrom than the higher, causes the bracket when secured to the body-band to be held inward and upward at an angle to the normal vertical alinement of the upper and lower members of the body-band. When in use, if the pad be pressed outward in adapting itself to the contour of that part of the body supported thereby the upper member will be subjected to a torsional or twisting strain throughout its entire length and the lower member will be deflected forward, subjected to a direct transverse strain. This is due to the fact that the upper and lower members of the body-band are held against rotation in a vertical plane by the pad *b'* and by contact with the body of the wearer, and as the bracket *c*, with its attached pad, moves downward and outward it rotates with the upper member, firmly gripping that member and twisting it throughout its entire length. The lower member at its free end rotates about the upper member as a center and is deflected from its original position outward, being subjected to a transverse strain at or near the pad *b'*. The strain imposed upon the members of the body-band by the pad through its bracket *c* is distinct from that imposed upon the body-band by the pressure of the body directly along the members and not through the interposition of the bracket *c*, the pressure along the members causing both members to deflect outwardly and subjecting both to a direct transverse bending strain. In both strained positions the resiliency of the frame causes the members of the body-band to return to a normal position when the pressure has been removed.

The reference-letter *f* denotes a flexible strap, one of whose ends extends through a slit in a plate *b*<sup>2</sup>, secured to the rear portion of frame *a*, the other end of said strap being



provided with a hook *g*, that is adapted to engage the described eye *a'*. After the strap *f* has been adjusted to fit the body of the wearer of the truss and the plate *b* has adjusted itself to the back of the wearer that portion of the strap that extends through the slit assumes an indirect or angular position, the engaging wall of slot *b'* acting practically as a chock that binds the strap and prevents it from slipping out of its adjusted position.

It will now be understood that by suitably bending the frame *a* and adjusting the pad *d* the said pad may be placed and held in position to support the ruptured part.

Having thus described my invention, I claim—

In a truss the combination with a curved

frame or body-band, consisting of a resilient wire bent upon itself to form upper and lower members; of a bracket secured to and pierced by the members on a line downwardly divergent from the face of the plate, and from the normal vertical alinement of the members of the body-band; of a pad-body adjustably secured to the bracket; of a pad hinged to the body-band; and means for holding the body-band in position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES LEVERONE.

Witnesses:

FRANK H. ALLEN,  
MAY F. RITCHIE.