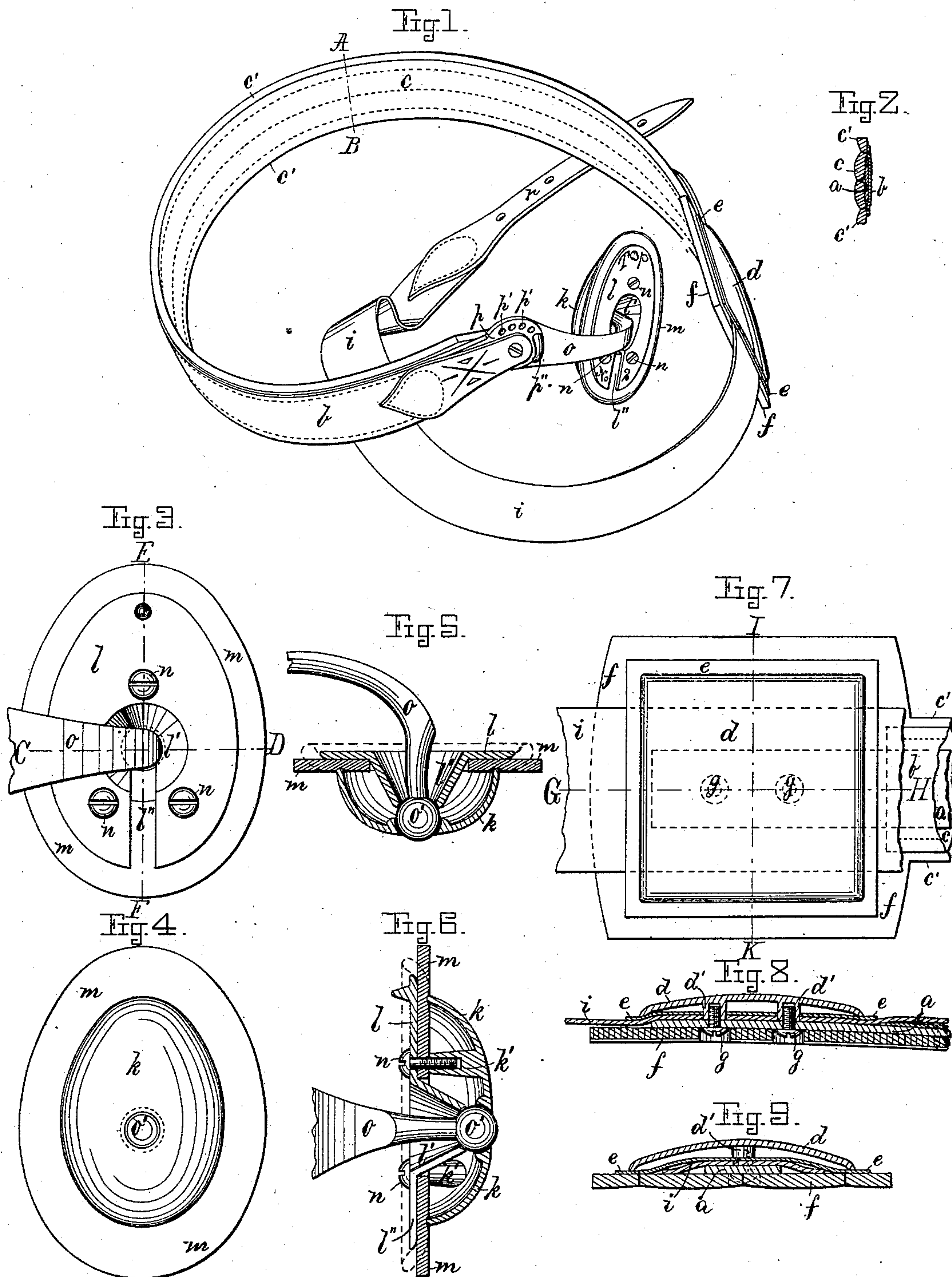


(Model.)

J. EDSON.
SURGICAL TRUSS.

No. 273,228.

Patented Feb. 27, 1883.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB EDSON, OF BOSTON, MASSACHUSETTS.

SURGICAL TRUSS.

SPECIFICATION forming part of Letters Patent No. 273,228, dated February 27, 1883.

Application filed June 5, 1882. (Model.)

To all whom it may concern:

Be it known that I, JACOB EDSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Surgical Trusses; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

10 This invention relates to improvements in surgical trusses, and it is constructed and designed with especial reference to obtaining a truss which shall be easy and comfortable for the wearer and without heating or chafing the
15 body, and so arranged and made as to be readily adjusted in relation to the ruptured part, and to be held firmly in place after being adjusted without undue pressure upon other parts of the body.

20 The invention is carried out as follows, reference being had to the accompanying drawings, on which—

Figure 1 represents a perspective view of my improved truss. Fig. 2 represents a cross-section of the spring belt on the line A B, shown in Fig. 1. Fig. 3 represents a front view of my improved composite pad and a portion of the curved holder. Fig. 4 represents a back view of the improved pad. Fig. 5 represents a cross-section of the pad on the line C D, shown in Fig. 3. Fig. 6 represents a longitudinal section of the improved pad on the line E F, also shown in Fig. 3. Fig. 7 represents an outside view of the rear pad. Fig. 8 represents a longitudinal section on the line G H, shown in Fig. 7; and Fig. 9 represents a cross-section on the line I K, also shown in Fig. 7.

40 Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

45 *a* is the steel spring, as usual, which spring is covered on its outside with a suitable covering-strip, *b*, made of cotton, linen, silk, or material suitable for the purpose. On the inside the spring is covered by the strip or band of felt *c*, which is made like the outer cover, *b*, somewhat wider than the spring *a*, outside of which the inner and outer coverings, *b c*, are
50 united together by sewing, as shown in Fig. 2. As before stated, the top and bottom edges, *c'* *c'*, of the inner felt band or lining *c* project be-

yond the upper and lower edges of the steel spring *a*, as shown in Fig. 2, by which I provide very soft and anti-chafing edges of the felt lining *c* above and below the edges of the spring *a*. The felt lining or belt-cushion *c* is made of proper thickness and density, so as to eliminate heat and moisture and at the same time be easy and comfortable to the wearer. 60

The rear end of the steel spring *a* is provided with a rear pad or rear support, which is made as follows: It consists of an outer metal plate, *d*, beneath which is arranged the holder *e*, made of leather or other suitable material, 65 the edges of which project a little beyond the metal plate *d*, as shown in Figs. 7, 8, and 9. On the inside of the steel spring *a*, beneath the leather holder *e*, is located the felt pad or cushion *f*, having its outer edges projecting beyond the leather holder *e*, so as to form a soft, comfortable, and non-heating edge for the inside of the aforesaid rear pad. The said rear pad or support is secured to the end of the spring *a* by means of the screws *g g*, which pass 75 through perforations in the felt cushion *f*, steel spring *a*, leather holder *e*, and the elastic belt *i*, and are screwed into the screw-threaded sleeves *d' d'*, which are cast on the inside of the metal plate *d*. The upper and lower 80 edges of the leather holder *e* and felt cushion *f* are united together by means of stitches, as shown in Fig. 9, and form together, as it were, a tube, into which the end of the elastic belt *i* is inserted and in which it may be adjusted to 85 obtain the desired tension previous to securing the cushion *f*, leather holder *e*, and spring *a* to the metal plate *d*. Thus it will be seen that the rear pad above described serves also as a buckle for holding and adjusting the length 90 of the elastic strap or belt *i*. The latter may be lengthened or shortened at any time simply by unscrewing the screws *g g* and sliding the elastic belt *i* forward or back, and when properly adjusted it is again secured in place by 95 screwing up the screws *g g* through corresponding holes in the elastic belt *i* and into the screw-threaded sleeves *d' d'* in the metal plate *d*.

By making the inner lining, *c*, for the spring *a* of felt its edges are always kept soft and 100 comfortable without the annoyance of ripping or unraveling, as would be the case if cloth or a similar woven lining were used, as the edges of the felt will, as they wear off, retain their

normal soft, yielding, and comfortable condition, and this is a great advantage in the construction of surgical trusses.

The felt lining of both the spring *a* and rear pad may be removed whenever so desired to cleanse them in case they should become soiled or sticky, or replaced with new ones at a very small expense.

My improved composite pad is constructed as follows: It is composed of an inner convex metal shell, *k*, and an outer metal plate, *l*, between which is secured the felt or deer-skin cushion *m*, having its outer edge projecting beyond the outer edges of the inner metal shell, *k*, and outer metal plate, *l*, as shown in Figs. 3, 4, 5, and 6. The dotted lines in Figs. 5 and 6 show the curvature of the felt cushion *m* when the improved composite pad is in use, and in this manner I produce a very soft and comfortable as well as agreeable pad-cushion, and by its use the pad is prevented from being pressed too far into the ruptured place of the body. The inner convex metal shell, *k*, outer metal plate, *l*, and felt cushion *m* are firmly secured together by means of the screws *nnn*, which pass through holes in the outer metal plate, *l*, and cushion *m* and are screwed into screw-threaded projections *k' k' k'* on the inside of the convex shell *k*, as shown in Fig. 6.

Through the convex shell *k* is made a suitable perforation, into which is made to rest the ball *o'* of the curved metal holder *o*, as shown in Fig. 6, which ball *o'* is held in place by means of tapering tubular projection *l'* on the metal plate *l* in such a manner as to allow the extreme portion of the ball *o'* to project slightly beyond the convex shell *k*, so as to form a stationary fulcrum, resting on the ruptured part, and on such stationary fulcrum the improved composite pad may move or turn, according to the position or motion of the wearer, and in this manner the efficacy of the pad and truss is materially increased.

The outer metal plate, *l*, is provided on one side with a slotted opening, *l''*, extending from its center outward to its edge, so as to enable the shank of the curved holder *o* to be placed in its proper position, so as to place the

ball *o'* between the perforated part of convex shell *k* and inner end of tapering tubular projection *l'*, by which a universal-joint connection is established between the pad and its holder. The curved metal holder *o* is jointed to the perforated regulator-disk *p* by means of the adjustable set-screw *q*. The regulator-disk *p* is riveted or otherwise secured to the forward end of the metal spring *a*, and the relative position of the curved holder *o* to the regulator-disk *p* is obtained, as usual, by interlocking the usual projection on the outer end of the holder *o* with any desired perforation, *p'*, on the regulator-disk *p*.

Upon the front of the regulator-disk *p* is made a hooked projection, *p''*, which serves for the purpose of hooking and securing thereto the perforated strap *r*, which is attached to the front end of the elastic belt *i*, and by this means a very easy adjustment is obtained for securing the pad in place. By making the holder *o* curved, as shown, it enables me to adjust the pad at any desired inclination toward the body, so as to fit properly to the ruptured part without hinderance, and to occupy the least possible space.

What I wish to secure by Letters Patent and claim is—

1. In a surgical truss, the rear pad, with its fastening device and elastic-strap holder combined, consisting of the outer metal plate, *d*, holder *e*, felt cushion *f*, and fastening-screws *g g*, as set forth.

2. In combination, the convex metal shell *k*, outer metal plate, *l*, intermediate and outwardly-projecting cushion, *m*, and holder *o* with its ball *o'*, as described.

3. In combination, the convex shell *k*, outer metal plate, *l*, with its slot *l''*, intermediate and outwardly-projecting cushion, *m*, and the holder *o* with its ball *o'*, as and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

JACOB EDSON.

Witnesses:

ALBAN ANDRÉN,
HENRY CHADBURN.