(No Model.)

G. MILLER.

TRUSS.

No. 334,968. Patented Jan. 26, 1886.

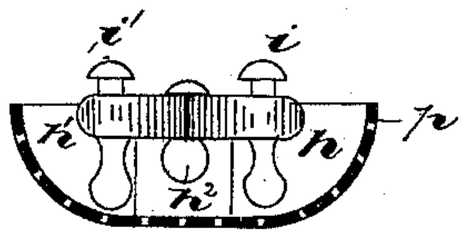

Fig. 3.

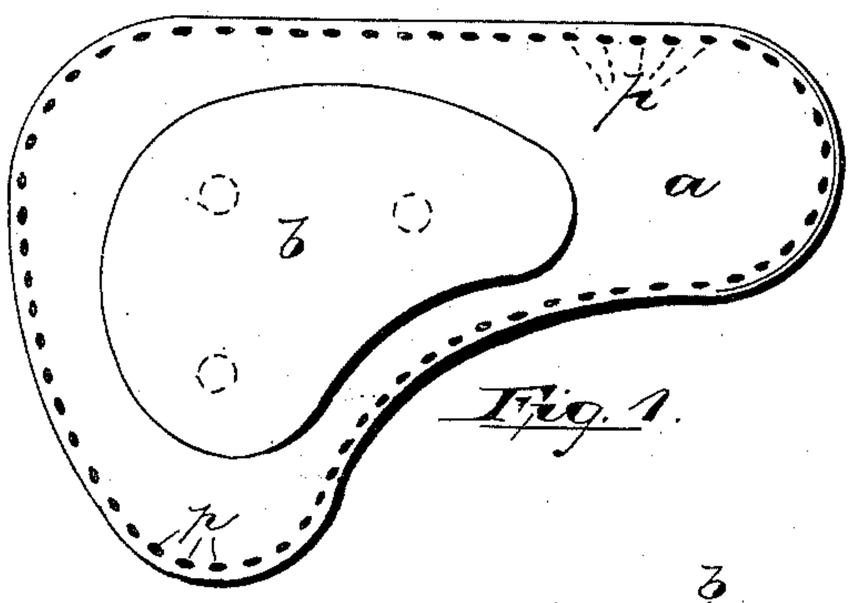

Fig. 1.

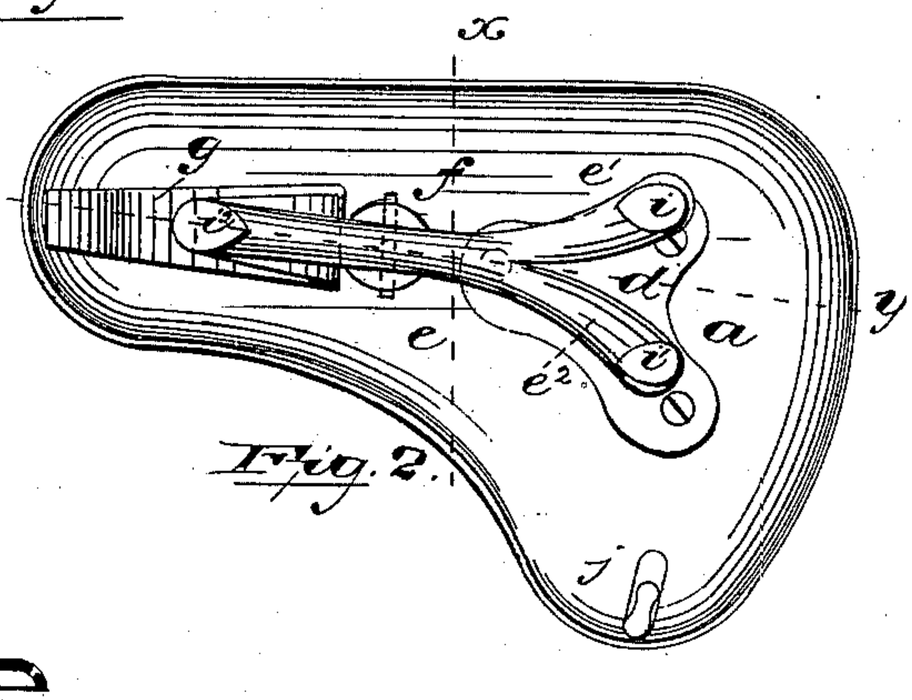

Fig. 2.

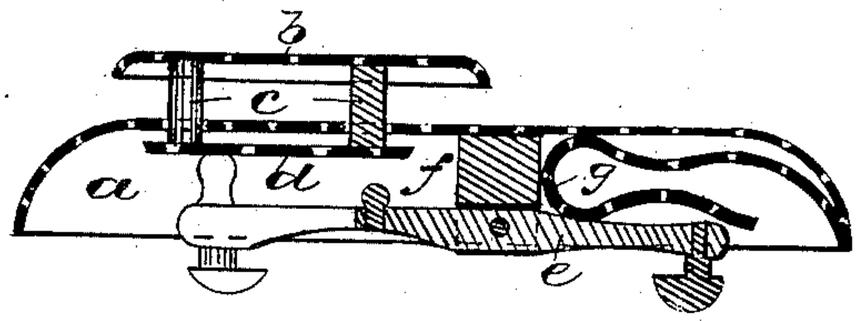

Fig. 4.

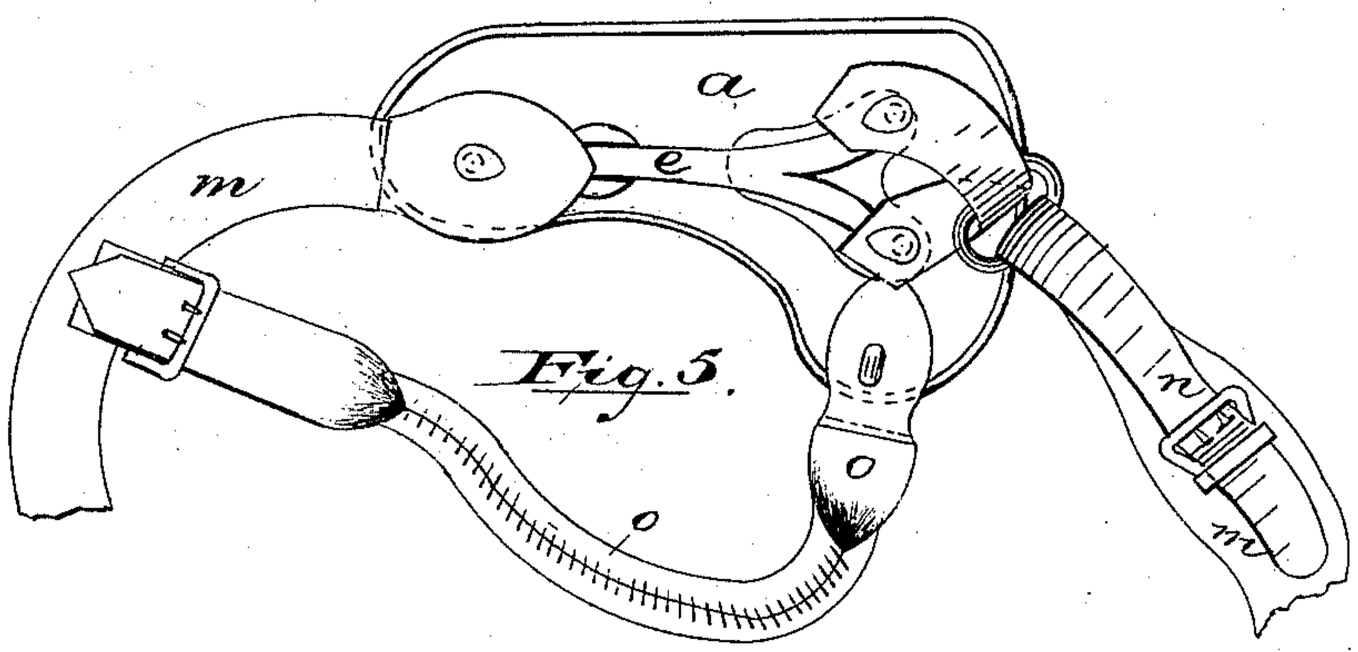

Fig. 5.

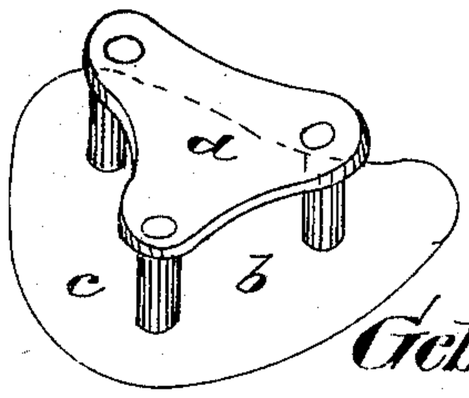

Fig. 6.

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UNITED STATES PATENT OFFICE.

GEBHARD MILLER, OF NEWARK, NEW JERSEY.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 334,968, dated January 26, 1886.

Application filed July 16, 1885. Serial No. 171,749. (No model.)

To all whom it may concern:

Be it known that I, GEBHARD MILLER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Trusses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The drawings above referred to consist of six views, of which Figure 1 is a plan of the improved rupture-pad. Fig. 2 is a plan view of the back of the larger pad or shell. Fig. 3 is a sectional view through line *x* of Fig. 2, the end of the lever being in elevation. Fig. 4 is a longitudinal section through line *y* of Fig. 2. Fig. 5 is a plan of the back of the pad, and a view of a portion of the belts or straps by which the pad is held upon the body, and Fig. 6 is a perspective view of the automatically-adjustable pad.

Similar reference-letters indicate corresponding parts in each of the figures.

The invention consists of a twofold pad composed of two pads, one of which is preferably smaller than the other, and adjustably attached to the larger pad between it and the body, to which the pad is held by suitable straps.

The preferred construction and arrangement of the device are substantially as illustrated in the drawings, described in the specification, and finally embodied in the claims.

The twofold pad consists of two parts or pads, of which *a* is preferably larger; and it consists of a metallic shell, shaped as indicated in the drawings both as to its outline and also its concave form. To the face of the larger pad, *a*, is connected a smaller pad, also preferably made of metal, and adjustably secured upon the face of the pad *a*, so that it accommodates itself to every movement of the body. One manner of construction and arrangement of the pad whereby this adaptability is attained is illustrated in the drawings, in which *b* is the smaller pad, to the under side of which are secured rods *c*, preferably three in number, which extend through perforations in the shell *a*, and are firmly secured to a plate, *d*, in the hollow of the said shell, as shown in Fig. 2.

Within the hollow of the larger pad or shell is arranged a lever, *e*, which is pivoted to a post, *f*, and at one end bears upon the plate *d* in the concavity of the shell *a*, a spring, *g*, being arranged under the other end of the lever and operates by the upward pressure imparted to one end of the lever to hold the other end of the lever in constant engagement with the plate *d*, and still permit the plate and the parts connected therewith to move freely. The end of the lever which bears upon the plate *d* is bifurcated, forming arms e' e^2, and provided with posts *h* h' h^2, two of which, *h* and h', are secured to the ends of the arms e' e^2, being of the same length, and bear directly and constantly upon the plate *d*. The third post, h^2, is situated at the junction of the arms e' and e^2, and is shorter than the posts *h* h', so as to permit the plates *b* and *d* to have the same amount of play in every direction, the persistent pressure of the posts *h* h' under the power of the spring being sufficient to exert the requisite amount of pressure upon the hernial opening. On the back of each of the arms e' e^2 and on the opposite end of the lever, are formed hooks *i* i' i^2, to which are attached the straps which hold the pads in contact with the body. The said strap-hooks for the belt which encircles the body are preferably formed on the lever, as shown in the drawings, as the pressure is increased by attaching the said straps thereto; but the pad can be made with the hooks formed on the shell similar to the hook *j*, Fig. 2.

One of the straps *m*, by which the pad is held in proper position upon the body is attached to one hook, as *i*, and passing entirely around the body is attached to the hooks i' i^2, being provided with a tongue, *n*, and buckle, so that the strap may be drawn either tightly or loosely around the body. The strap *o* is attached to the hook *j*, and extends down between the thighs and up at the back, where it is buckled to the waist-strap *m*, as indicated in Fig. 4. The straps, either or both, may be elastic or non-elastic, according to the pressure desired.

Around the edge of the larger pad, *a*, are a row of perforations, *p*, by which the pads may

be covered, either the front of the said pads or back or both, the stitches passing through the perforations.

When the truss is adjusted in proper position upon the body, with the belt *m* encircling the body, and the strap *o* passing between the thighs, whatever movement is made by the wearer, the pad by reasou of the operation of the adjustable smaller or supplementary pad readily accommodates itself to any position, and in proportion as the action becomes more violent, rendering liable the escape of the hernia the more pressure is brought to bear upon the hernial opening.

I am aware that trusses have been devised which are composed of separable parts, one of which is held in contact with the body by a spring; but these have not been arranged with the spring-actuated portion between the main or larger pad and the body, so that when by reason of the complete depression of the adjustable pad the large or main pad re-enforces or "backs up" the smaller pad, thereby increasing the pressure.

Having thus described my invention, I desire to claim the following:

1. In a truss, the combination, with a pad, as *a*, and a spring-actuated lever arranged in said pad, of an automatically-adjustable pad consisting of plates *b* and *d*, placed without and within said pad *a*, respectively, and connected by rods passing through perforations in the pad, for the purposes set forth.

2. In a truss, in combination, a shell or pad, *a*, plates *b* and *d*, arranged without and within said shell, respectively, and connected by rods, which pass trough perforations in the shell, a spring-actuated lever pivoted within said shell, one end of which bears upon the plate *d*, and a strap which is attached to the ends of the lever, for the purposes set forth.

3. In a truss, in combination, a shell or pad, *a*, plates *b* and *d*, arranged without and within said shell, respectively, and connected by rods which pass through perforations in the shell, a spring-actuated lever, one end of which is bifurcated and provided with posts $h\,h'\,h^2$ thereon, which engage with the plate *d*, said lever being also provided with hooks $i\,i'\,i^2$, a strap, *m*, which is attached to the hooks $i\,i'\,i^2$ on the lever and passes around the body, and a strap, *o*, which is attached to the pad *a*, and extends down between the thighs, and is connected with the waist-strap, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of June, 1885.

GEBHARD MILLER.

Witnesses:

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FREDK. F. CAMPBELL.