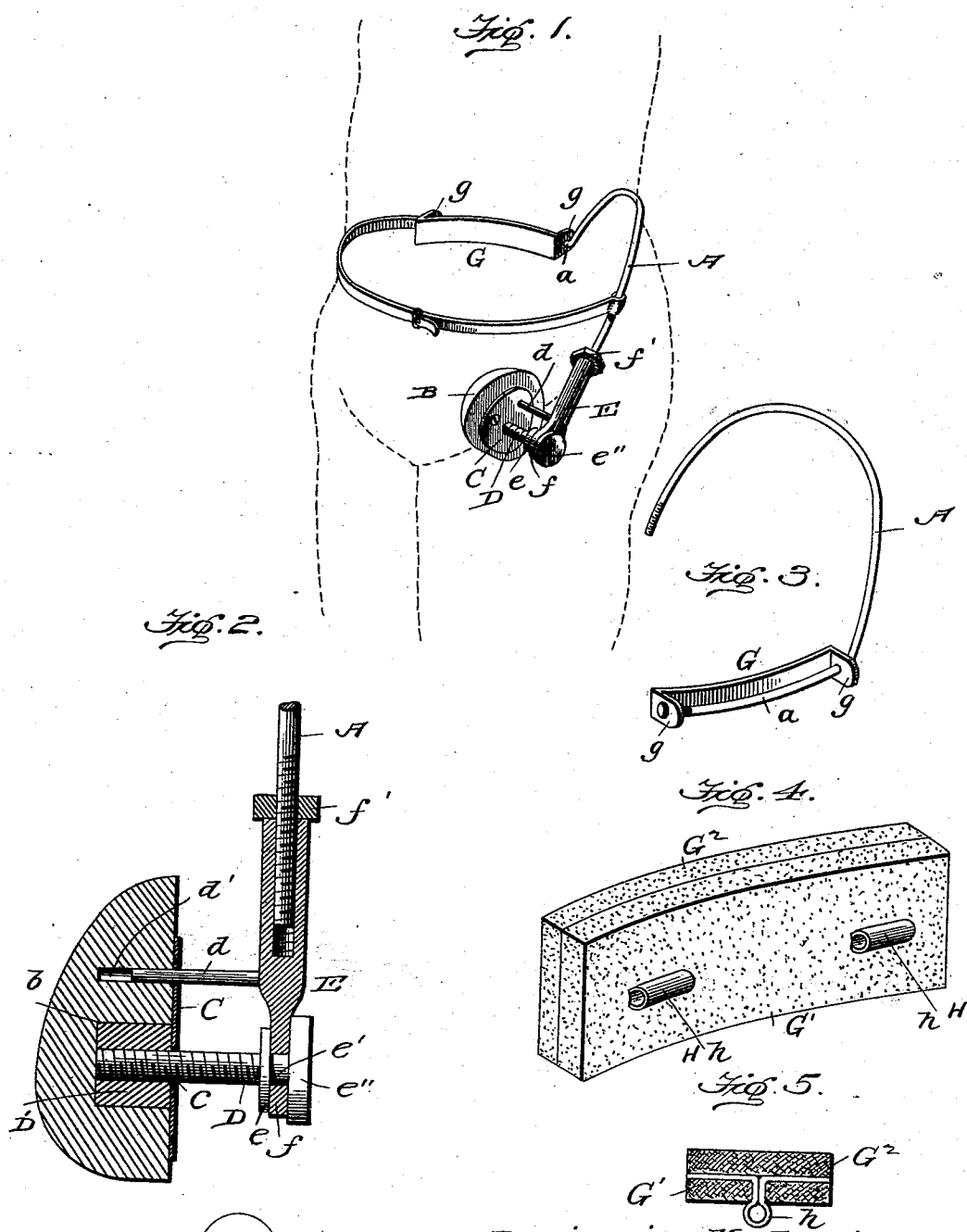


(No Model.)

B. M. LUGINBÜHL.
TRUSS.

No. 501,796.

Patented July 18, 1893.



Witnesses:

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UNITED STATES PATENT OFFICE.

BENJAMIN M. LUGINBÜHL, OF BLUFFTON, OHIO.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 501,796, dated July 18, 1893.

Application filed April 19, 1893. Serial No. 470,984. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN M. LUGINBÜHL, a citizen of the United States, residing at Bluffton, in the county of Allen and State of Ohio, 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.

This invention relates to an improved truss which can be worn without pain to the person both day and night, and which is simple in construction and cheap of manufacture.

In my improved truss I dispense with a spring between the pad and the band and make the waist belt of spring metal or stout spring wire to force or press the front and back pads in place; and said front pad can be adjusted at right angles to the spring or longitudinally with respect thereto while the back pad can oscillate or move on the spring.

The accompanying drawings illustrate my invention, in which—

Figure 1 is a perspective view of the truss applied to a person, the latter indicated by dotted lines, to show the manner in which the truss is to be worn. Fig. 2 is an enlarged detail sectional view through the front pad illustrating the means by which the pad can be adjusted both longitudinally and at right angles with respect to the body spring. Fig. 3 is a detail view of the rear pad, and Figs. 4 and 5 illustrate modifications of the rear pad showing the same provided with a soft bearing surface.

Like letters denote corresponding parts in all the figures of the drawings.

A designates the body spring, which is made of any suitable spring metal, either a stout steel wire or a flat spring, bent to the proper shape and covered with a sheath to protect the spring from rust, or the latter may be omitted, at pleasure. This body spring is curved into the bow shape indicated very clearly by Fig. 1, and at its rear end it is bent to form the straight arm *a* which carries the rear pad. When applied to the person, this curved or bowed spring passes over and around the hip of the wearer so that its rear straight arm *a* lies in approximately a hori-

zontal position while the front part of the curved spring extends downward from the hip to bring the front pad into proper position to bear upon the hernia.

B is the front pad, preferably made of the oval or egg shape shown by Figs. 1 and 2, and made of any suitable material, as for instance, wood. In the flat back side of this front pad is formed a recess *b* over which is placed a retainer plate C that is fastened to the pad by screws or equivalent fastenings; and in this plate is pierced an opening *c* through which freely passes the threaded shank of an adjusting screw D, the inner threaded end of which works in a nut D' which is placed and confined against movement in the recess of the pad B. This adjusting screw is swiveled to turn freely in an adjustable sleeve or bearing E on the front end of the body spring A, and said screw passes at right angles through the sleeve or plate E so as to adjust the pad toward or from the spring, whereby the pressure of the pad B upon the hernia can be regulated or varied according to circumstances.

The adjusting screw is provided with the fast collars or ribs *e, e*, on opposite sides of the plain cylindrical part *e'* that lies within the thumb piece or head *e''* of the adjusting screw, and this cylindrical part *e'* of the screw passes through an eye in the sleeve or bearing plate E while the fast collars *e, e*, fit against opposite sides of said sleeve or bearing plate, so that the screw can be easily turned in the sleeve or plate to adjust the pad B while at the same time said screw is held from displacement by the collar.

To maintain the pad B in proper operative relation to the body spring and at the same time provide for the necessary adjustment of the pad at right angles to the spring A, I employ a guide pin or stem *d* which is rigidly fastened to the sleeve or plate E and which projects into a recess or socket *d'* formed in the pad B at one side of the recess therein, said guide stem working freely in the socket and serving to hold the pad in place no matter to what extent the pad is adjusted by the screw D. This bearing plate or sleeve is made with a solid outer end *f* in which the screw is journaled, while the other end of said sleeve or plate is made tubular or hollow to receive

the front end of the body spring, said end of the spring being externally screw threaded as shown by Fig. 2. This tubular or hollow inner end of the sleeve or plate is provided with an interiorly threaded socket to enable the threaded front end of the body spring to be screwed into the sleeve or plate E and against the end of the threaded sleeve bears a jamb nut f' whereby the sleeve can be turned or rotated on the threaded end of the body spring to adjust the plate or sleeve and the pad B carried thereby longitudinally with respect to the body spring.

G is the rear pad which is curved longitudinally, or made in convex shape, to adapt the same to press against the back or spine of the wearer. The rear pad, in Figs. 1 and 3, may be made of suitable rigid material as for instance, wood or metal, and it is provided with perforated ears g , through which is passed the straight arm a of the body spring, said rear pad being capable of an oscillating or turning movement on said arm a to accommodate the plate to the motions of the wearer. The rear pad may be made of a soft fabric to provide an easy bearing against the back or spine of the wearer; and it can be attached to the straight arm a in the manner shown by Fig. 4. In this embodiment of my invention, the rear pad is composed of two pieces or layers G' , G^2 , of suitable fibrous material, which are united or cemented together throughout their length and width; and the inner layer or member G' of the pad is attached so as to oscillate on the arm a of the waist spring by means of the metallic keepers H, H. These fasteners are bent to form the loops h , h , which fit closely on the arm a ,

and the free end of each fastener is passed through a slot in the inner layer G' of the pad, and then bent at right angles, after which the member G^2 of the pad is united or cemented to the member G' so that the ends or prongs of the fastener are confined between the layers G' , G^2 , of the pad, as shown.

The method of applying and adjusting my improved truss will be readily understood and appreciated by those skilled in the art from the foregoing description, in connection with the drawings.

What I claim as new is—

1. In a truss, the combination of a body spring provided with the threaded end, the adjustable threaded sleeve or plate E screwed on the threaded end of said spring and held by a jamb nut, the pad B having the nut and the socket d' , the adjusting screw journaled in said sleeve or plate and working in the nut of the pad, and the guide stem carried by the sleeve or plate and fitted loosely in the socket d' of the pad, substantially as and for the purpose described.

2. In a truss, the body spring A provided with the arm a , the rear pad composed of two layers united together, and the metallic fasteners having the loops fitted on the arm a and with the free ends bent and confined between the members of said pad, substantially as described.

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

BENJAMIN M. LUGINBÜHL.

Witnesses:

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