(No Model.)

J. W. PFEIFFER.

TRUSS.

No. 567,997. Patented Sept. 22, 1896.

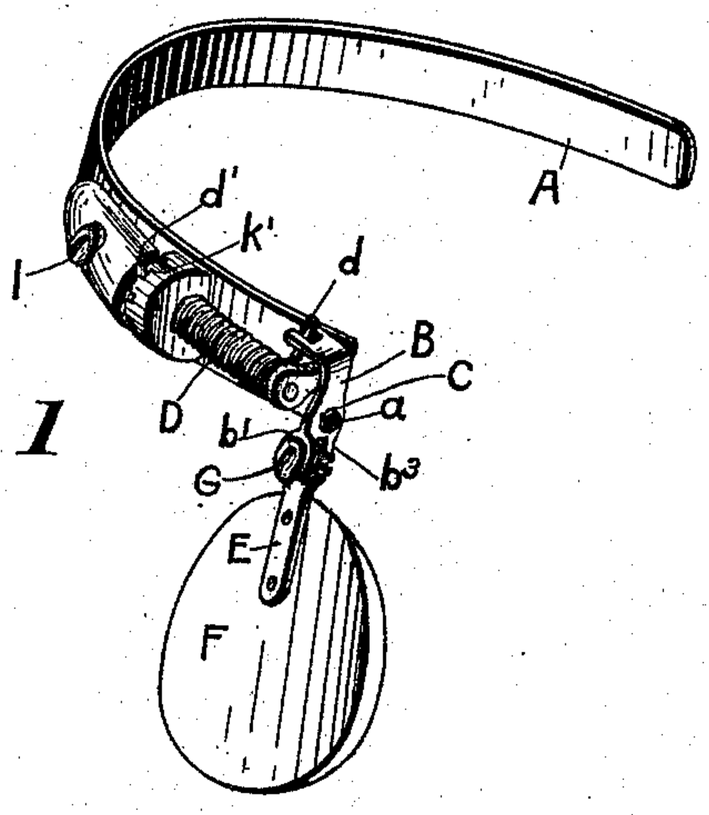


Fig. 1

Fig. 4

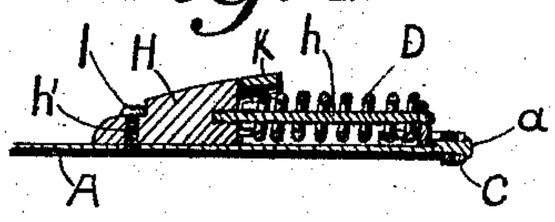


Fig. 2

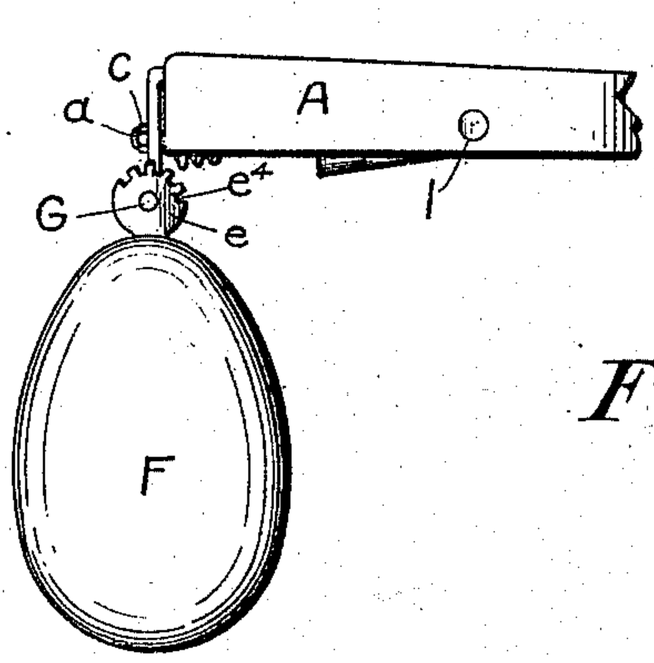


Fig. 3

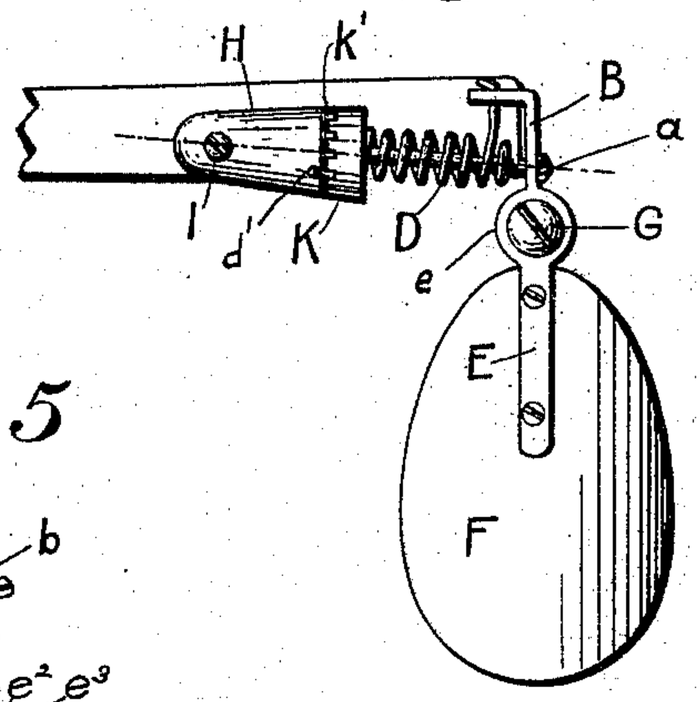
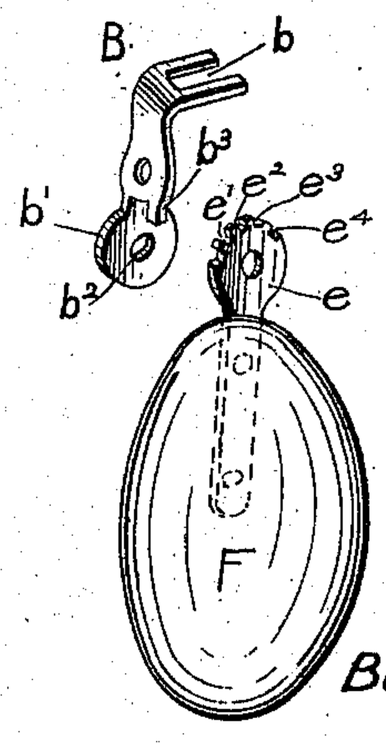


Fig. 5



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UNITED STATES PATENT OFFICE.

JOHN WILLIAM PFEIFFER, OF SANDUSKY, OHIO.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 567,997, dated September 22, 1896.

Application filed November 25, 1895. Serial No. 569,990. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM PFEIFFER, a citizen of the United States, residing at Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Trusses, of which the following is a specification.

The object of my invention is to provide a truss with flexible and adjustable pad-supporting devices, which will hold the pad securely at any required angular position relatively to the hip-band, which may be quickly adjusted to such position, and which may be so regulated that a variable pressure, either light or heavy, may be exerted upon the pad and the latter at all times have such scope and freedom of movement that it will automatically adjust itself to the different positions and motions of the body in walking, stooping, and lying down without varying the pressure of the pad upon the hernia; and the improvement consists in certain details of construction for holding and adjusting the pad in its angular position upon the hip-band, and also for adjusting the tension of the spring which regulates the pressure of the pad in any required position upon the hip-band.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a truss hip spring and pad with my improved connections applied thereto; Fig. 2, an elevation looking from the inner side thereof. Fig. 3 is an elevation looking from the outer side thereof, and Fig. 4 a longitudinal sectional view through the end of the hip-band and the spring-adjustment devices. Fig. 5 is a perspective view in detail of the adjusting elbow-lever and pad adapted to be adjusted one upon the other.

A is a truss hip-band, comprising a plate of spring-steel curved in the form of a half-ellipse and having at one of its ends a stud-bolt *a* formed or fitted thereon to receive an elbow-lever B, and threaded to receive a nut C, which holds the elbow-lever B securely upon the shank of the stud-bolt *a* and permits it to turn freely thereon. One end of the elbow-lever B projects outwardly from the plate at right angles to the stud-bolt *a*, and is then turned at a right angle to overlie the outer side of the hip-spring A, and the extremity of the lever has a slot *b* therein to receive the outwardly-bent end *d* of a coiled spring D, secured to said hip-spring A in a novel manner, as hereinafter described. The other end of the elbow-lever B is formed into a disk-plate *b'*, having a central hole b^2 therein, and a spur b^3 projecting radially from a shoulder of the lever B, the said spur being formed to snugly fit any one of a series of notches e' e^2 e^3 e^4 in a disk *e* of corresponding diameter to the disk-plate *b'* of the elbow-lever B, and forming the projecting extremity of a flat plate E, which carries the truss-pad. The plate E is secured by screws to the pad F, and is secured to the disk-plate of the elbow-lever B by a screw-bolt G, which passes through the disk-plate *b'* and screws into a central threaded hole in the disk *e*, the spur b^3 being first placed in any suitable one of the notches e' e^2, &c., in the disk *e* to hold the plate E and pad F at any required angle with the hip-plate.

The coiled spring D fits upon a spring-retaining pin *h* of an abutment-block H, having a hole *h'* therein to receive a screw-bolt I, which holds the said abutment-block H and its pin *h* securely upon the hip-spring A. A notched adjustment-block K is centrally bored to allow the pin *h* and the end of the coiled spring D to pass through it, and also notched at *k'* to receive outwardly extended and bent end *d'* of the coiled spring D, which latter is securely held in any one of the notches *k'* by the abutment-block H, which abuts closely against the notched face of the abutment-block. The coiled spring is thus truly held in position by the pin *h*, which is fastened at one end by the abutment-block H and screw-bolt I and at its other end by a staple or fixed block upon the end of the hip-spring A, which is drilled through to snugly receive the end of the said pin. The outwardly-bent end *d* of the coiled spring D thus serves to push against the elbow-lever B and through the plate E to hold the pad F with an ever-constant pressure against the protuberance of the rupture, and the long coil or length of the spring being greater and exerting a more extended movement than would a flat spring, without material or corresponding variance of pressure, a greater freedom of movement of the opposing parts of the body

in walking, sitting, or reclining is admissible without exerting undue pressure upon the hernia.

The degree of pressure of the pad may be regulated by placing the end d' of the spring D in any one of the notches k', first having removed the screw-bolt I and then having partly withdrawn the block H from the adjustment-block K.

The spur b^3 upon the shoulder of the elbow-lever B provides a strong and direct adjustable connection between the said lever B and the pad-plate E and permits the pad to be swung easily upon the bolt to secure the required adjustment.

The parts forming the connection between the pad and the hip-band are few and of simple construction. The pad-plate E and elbow-lever B may be stamped out of sheet metal and may be made strong, light, and simple, and their mode of connection, adjustment, and construction are such that they may be made of the best steel-plate, protected by non-corrosive electroplating. The elbow-lever pivoted to the hip-plate, provided with a bearing-disk and spur, provides a strong and simple means for holding the pad-plate and allowing it to be adjusted thereon and also connected with the free end of the spiral spring, which gives to the pad the required elasticity. The notched abutment-block and similarly-notched adjustment-block, with the spring and pin connected therewith, provide simple means for securing and adjusting the spiral spring upon the hip-plate.

The construction and arrangement of the parts last described comprise the essential features of my invention and provide a device of greatly-improved construction and capable of exact and positive adjustment.

I claim as my invention and desire to secure by Letters Patent—

In a truss the combination with the hip-band, of a spiral spring supported thereon and connected at one end therewith, an elbow-lever pivoted thereto to engage the free end of said spring, and provided with a disk-plate and spur projection, a pad and a pad-plate secured thereto and having a notched disk-plate to engage with the disk and spur of the elbow-lever, and pivot-bolt to connect said disks substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in the presence of two subscribing witnesses.

JOHN WILLIAM PFEIFFER.

Witnesses:
LOUIS E. WAGNER,
FRANK WAGNER.