J. W. Hood.

Truss.

No. 6,338. Patented Apr. 17, 1849.

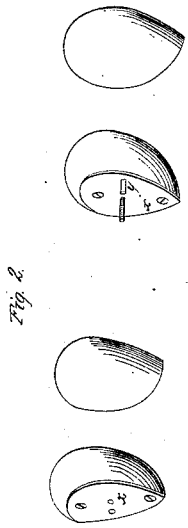

Fig. 2.

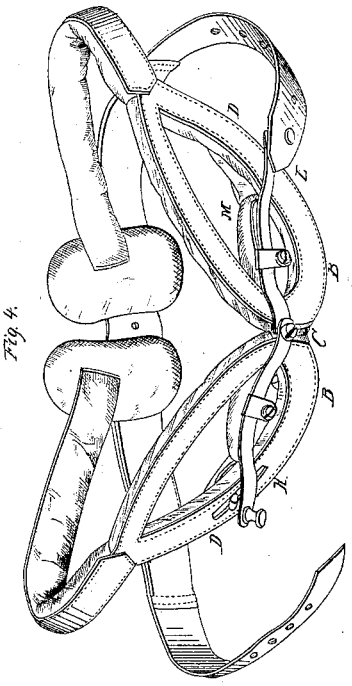

Fig. 4.

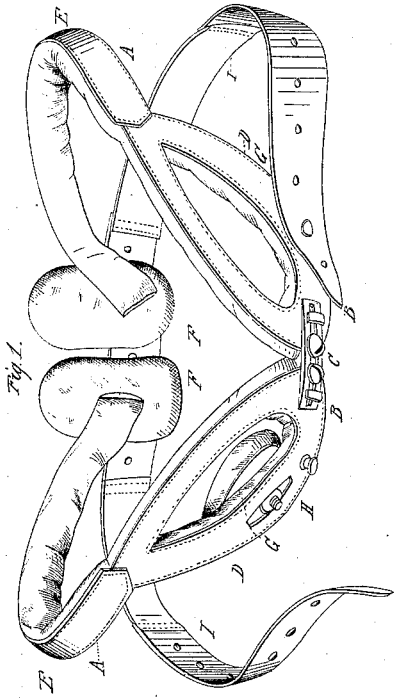

Fig. 1.

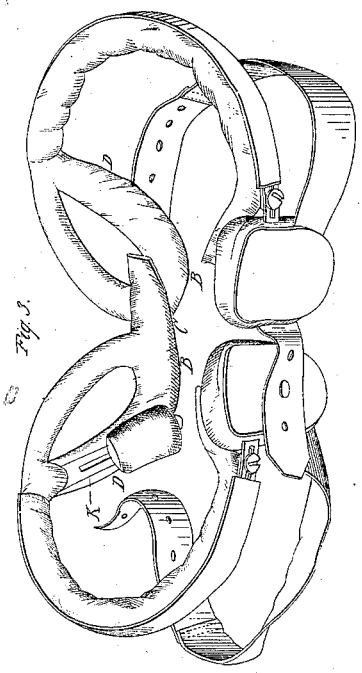

Fig. 3.

UNITED STATES PATENT OFFICE.

JOHN W. HOOD, OF MOUNT STERLING, KENTUCKY.

IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **6,338**, dated April 17, 1849.

To all whom it may concern:

Be it known that I, JOHN W. HOOD, of Mount Sterling, in the county of Montgomery and State of Kentucky, have invented an Improved Instrument denominated a Hernial Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, which form a part of the same.

Plate 1 represents a truss for crural, ventro-inguinal, and inguinal hernia; Plate 3, the pads for crural hernia, and Plate 4 for ventro-inguinal hernia, crural hernia, and inguinal hernia in one truss.

The nature of my improvement consists, principally, in the adaptation of my supporter-spring with fissures in the elliptic plates and springs, which are shown and described in the accompanying drawings, for the peculiar adaptation of the pads or blocks.

The springs, which are put around the body, are in exact accordance with the form of the upper boundary of the pelvic bones, and the improvements in the arrangement of the pads and springs, with their close adaptation to the inguinal region, avoiding the spermatic cord, the blood-vessels, and the muscles that are calculated to remove or displace the truss, are essential features of my improvement.

In inguinal hernia the front part of the instrument is closely fitted to the form of the upper boundary of the pubic bones. Thence it extends on each side with an inclination to the anterior superior spinous process of the ilium, and having a branch or upper boundary extending back in a curved line toward the center of the pelvis, forming a loop in front on each side of the center, which is traversed at the lower boundary by a fissure for the play of the pads, and reduced in the upper boundary to a narrow strip, which is intended to sustain the weight of the viscera of the abdomen, and thereby prevent their encroachment upon the internal hernial ring. Inside of the lower boundary, with a screw projecting outward through the fissure, is a block-rider, which has also a transverse fissure for the purpose of elevating or depressing the pad in a perpendicular line with the body. The pad or block is fastened to the rider by a screw, and is also so adjusted as to act at the upper boundary of the pubic bone in an angle corresponding with Poupart's ligament, escaping the blood-vessels and spermatic cord; and, except in cases where the adhesions are formed of a size that would cover half the length of the abdominal canal, this arrangement permits the upper portion of the abdominal canal and the internal ring to remain free and to overhang the pad which closes the ring, secures the part from the absorbents, and leaves it in the hands of nature, where it is reduced to its normal condition. In ventro-inguinal hernia the pads are fixed by screws to the elliptic springs, which are fastened at the center of the pubic portion, and by an attachment to the side straps the necessary pressure is made.

For the cure of crural hernia the form of the pads is plano-convex, about two inches in thickness, which, by an additional spring attached to the inner side at the anterior spinus process of the ilium, are made to rest with their lower portion on Gimbernant's ligament, with a sufficient excavation or bend to escape Poupart's ligament, so as to close the crural ring without interfering with the action of the muscles or otherwise pressing or checking the operation of the blood-vessels. These instruments are divided in the middle of the anterior part, and by a fissure in the attachment can be diminished or expanded, as the peculiar form of the pelvis may require. At the posterior ends of the spring there are also slides, by which they can be extended to the size of the wearer. To the back pads are attached a pair of elastic straps, which are intended to pass around the body, and by a fastening on the spring directly over the front pad the wearer is enabled to adjust the pressure. When a single back pad is used, the straps may cross and pass around the body and fasten in front with the same effect.

But to enable others to make and use my said invention I proceed to describe its construction and application by means of the accompanying drawings.

The spring A A is made of cast or other steel, such as is generally used for instru-

ments of the like kind. For an ordinary-sized instrument I take a plate or strip of steel thirty-six inches in length, from a half-inch to an inch in width, and about one-sixteenth of an inch in thickness. The pubic portion B B, I bend in the shape of those bones for about two inches on each side of the center. At the center C, I separate the spring and again attach it by a slide and adjusting-screw, for the purpose of increasing or diminishing the instrument to the size of the pelvis. From the outer part of the pubic portion D D the spring turns upward in a line with the pelvic bones to the anterior superior spinus process of the ilium, constituting what I call the "anterior iliac" portion, to which, on the inner side, is attached the spring K, Fig. 3, for the crural pad. The iliac portion takes up about four and a half inches of the spring on each side, and from thence the spring is bent to the shape of the crest of the ilium, E E, and extends back to the junction of the ilium with the sacrum, where it tertimates and is united with the back pad or pads, F F. This constitutes what may be called the "superior iliac" portion, and takes up about twelve inches on each side, making in all about thirty-six inches; but it must be understood that no exact measurement will suit the various cases. The plates X, to which the pads or blocks are fastened, may be made of sheet-copper or of any other suitable metal, about one-twentieth of an inch in thickness. By means of the fissure H H in the inguinal portion, through which an adjusting-screw passes into the transverse fissure Y in the block-rider, the surgeon is enabled to move and adjust the pads or blocks to the parts intended. The parts which rest upon the walls of the abdomen are padded on the side opposite the hernia to correspond with it, and otherwise to give comfort to the wearer. The back pads are riveted to the sacral part of the spring and are composed of the same material as the front. The side straps, T T, can be made of some firm or elastic substance, and from their attachment to the back pad or pads by studs or buckles they pass around the body to the front, where they are again attached by similar fixtures. The pad or block used by me in bubonocele or inguinal hernia is a plano-convexed form, with its convexity approaching a right-angle triangle or pear shape in form, with its angles rounded. (See Plate 2.) This pad is three-quarters of an inch in width and one inch and a half in length, and about half an inch in thickness at the lower boundary, which form is calculated to be accurately adapted to the one half of the inguinal canal. The ventro-inguinal and scrotal pads are two in number, varying in size, the ventro-inguinal being, like the foregoing, a right-angle triangle with a greater convexity at its lower boundary, and of sufficient width to press up the totality of the abdominal canal. The scrotal pads are of a similar form, with a parabolical projection on the under surface, which is calculated to give a greater force and to press upon the neck of the hernial sack. These pads, with their different shapes and sizes, are intended to meet the requirements indicated by the various protrusions of inguinal, ventro-inguinal, and scrotal hernia. For crural hernia the same apparatus is used, with the additional spring, K, placed on either side as the hernia occurs. In ventro-inguinal hernia the elliptic springs L L are used, to which the pads or blocks M M are attached by a slide and screws to admit of the proper adjustment. The whole instrument thus described, and again represented in the several drawings, should be covered with buckskin, morocco, or any other material to suit the fancy of the wearer.

Having thus fully described my improved instrument for the various kinds of hernia and the manner of applying the same to each case, what I claim therein as new, and for which I desire to secure Letters Patent, is—

1. An improvement upon the abdominal supporter, spring, and elliptical pad patented by me in 1835, by attaching the pads to the spring or supporter, so as to be moved into any position required by means of adjusting-screws, fissures, and slides, the pad having a perpendicular motion allowed by the fissure in the block-riders, as set forth.

2. In combination with the side springs, the straps to regulate the pressure, substantially as described.

3. The abdominal-supporter boundary above the hernial pads, forming an opening between it and the lower boundary, and which is intended to sustain the abdominal viscera and prevent its encroachment upon the internal abdominal ring.

4. The mode of closing the internal ring in inguinal hernia, as set forth, by leaving the upper portion of the abdominal canal and internal ring free, as above specified.

J. W. HOOD.

Witnesses:

J. J. GREENOUGH,

WM. GREENOUGH.