

May 29, 1915.

DRAWING

315

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AWK.

# UNITED STATES PATENT OFFICE.

ROBERT THOMPSON, OF COLUMBUS, OHIO.

IMPROVEMENT IN THE MODE OF CONSTRUCTING BANDAGES, PADS, AND OTHER ARTICLES CONNECTED THEREWITH FOR SUSTAINING DEBILITATED PARTS, CURING OR RELIEVING HERNIA, PROLAPSUS, &c.

Specification forming part of Letters Patent No. 315, dated July 29, 1837.

## *To all whom it may concern:*

Be it known that I, ROBERT THOMPSON, of Columbus, in the county of Franklin and State of Ohio, have invented certain improvements in the mode of constructing bandages, pads, and other articles connected therewith for the purpose of giving support to debilitated portions of the human system, and of effecting a cure or producing relief in cases of hernia, prolapsus, and other similar affections.

The bandages which I employ are sometimes wholly and generally in part made of gum-elastic webbing, to the use of which webbing I, of course, make no claim, it having been frequently applied in surgical cases for the purpose of bandaging and supporting parts requiring to be bandaged and supported, but not, as I verily believe, in the manner and under the combinations adopted by me.

In Figure 1 in the accompanying drawings, A is what I denominate the "sacral supporter or pad." This I usually make in a round form, from two to four inches in diameter. In forming it a piece of stiff leather, tinfoil, or other suitable article, dependent upon circumstances, is cut to the shape and size required, and is covered with soft leather or other proper material, and stuffed on one side, so as to constitute a soft pad adapted to the part to which it is to be applied. Upon the back of the pad there are loops or other suitable contrivances for the reception of the pelvic straps 2 2, which may be from one to two inches in width. The upper of these straps is intended to pass around the body upon or above the crista of the ilium, and the lower directly around the pelvis to the inferior anterior portion of the abdomen. Both the straps may be attached in front by buckles or otherwise to an abdominal portion or support, 3, usually made of leather, seven or eight inches long and three or four wide, rounded off at the corners. Sometimes I stitch these straps to the abdominal portion or piece 3, and buckle or otherwise connect them together, as may be deemed convenient. The abdominal portion 3, if made of suitable leather, will afford comfortable support to the abdomen without its being necessary in most cases to stuff or cushion it; but this may be done when required by the extreme tenderness of the parts.

C C are loops for the reception of the pelvic straps, when those straps are not permanently attached to the abdominal portion. There are two perinacal straps, E E, which may be appended to the abdominal portion by short straps D D, or otherwise. These perinacal straps may be from twelve to fifteen inches in length and from half an inch to an inch in diameter, more or less, dependent on the size or condition of the patient. They are generally made larger toward the middle than at their ends, as shown in the drawings, by the sectional or detached portion. I usually make them of soft leather; but most generally cover them with oiled silk or other article which will not absorb moisture. They, however, may be formed of various materials. Their shape is round, the leather or other stuff of which they are made being sewed together at its edges, so as to form a case or tube, which is stuffed with wool, cotton, or other soft and elastic substance; or they may be rendered air-tight and suitably inflated. They are at the back attached to the lower pelvic strap by loops or otherwise, as seen at G G.

In cases requiring the application of a pad this has been sometimes effected by the aid of a T-bandage, as in prolapsus ani; but instead of this I use a double or forked strap, which may have its hinder ends (seen at H H in the detached drawings of it) separated to any convenient distance, and at this end it is attached by means of buckles or otherwise to the pelvic strap, the part I forming a stuffed pad or cushion to sustain the perinæum. Anteriorly it is fastened upon the abdominal portion of the apparatus.

The pad may, if desired, be made movable upon the strap, so as to adapt it perfectly to any part requiring special pressure. Instead of being stuffed with wool, &c., it may be made of air-tight materials and inflated, so as to possess perfect elasticity.

In Fig. 2 the pelvic straps are represented as continuous with the covering of the sacral pad, separating near to its margin. This and various other modifications of form may be made, according to fancy or convenience, while the general object and the means of attaining it remain unchanged.

Fig. 3 represents a modification of the up-

per part of the apparatus which is particularly well calculated to afford support to the abdomen and parts adjacent, and is applicable in cases of umbilical or ventral hernia and unusual prominence and relevation of the abdomen from any cause. It will frequently be found to give comfort to parturient females. The anterior portion or abdominal bandage may be made of such materials as are used for corsets. It is to be stitched so as to receive a sufficient number of strips of whalebone or other elastic material, to keep it extended in width. Along its lower edge is sewed a width of elastic webbing, which serves to constrict that edge and cause this abdominal bandage to assume the proper roundness and adapt itself to the form of the abdomen. Elastic webbing and buckles are attached to it, as shown in the drawings. At the back the elastic straps pass through loops in a spinal pad, J J, which may be five or six inches long, and two or three wide, serving to keep the elastic portion flat and smooth, and also to sustain the spine.

In some cases, where the principal object is to apply the perinacal straps, I use for this purpose a simple leathern girdle, such as is shown in Fig. 4. It has elastic extremities, and a sacral pad attached to it by studs, buckles, or otherwise, and is also provided with the means of attaching the perinacal straps.

In Fig. 5 a simple variety of the apparatus is shown as applied to a female, the two perinacal straps passing one on each side of the labia pudendi, and affording all the desired support without producing distress or interfering with the natural functions.

When a pad is to be used for the relief or cure of hernia, it is a point of great importance to adapt such a pad to the particular part upon which it is to press, by giving it the precise form required by the individual to whom it is to be applied, and in this case a pad of very hard material, when made by the process adopted by me, may be used without inconvenience, and to much greater advantage than heretofore. I take beeswax, or any other substance which is so yielding that by being pressed upon the part it will take the exact form of the cavity upon which the pad is to act, and will afterward retain this form, so that a plaster cast may be taken therefrom, in which the pad to be applied may be molded, or by the aid of which a perfect counter of the cavity may be procured by carving or otherwise. Such a pad will not only be more perfectly adapted to the part

than any other, but will have less tendency to be displaced by the motion of the patient.

This pad I apply by means of the abdominal portion and elastic bandages, without the employment of steel springs, or any of the means of exerting pressure ordinarily resorted to in cases of hernia.

This pad is to be applied directly in its place without being attached to anything, and the abdominal portion is made to cover it, and held down, if necessary, by elastic bands.

By thickening the pad any desired degree of pressure may be given to it without increasing the tightness of the bands.

In applying this instrument under any of its modifications, or for any of the purposes indicated, care should, of course, be taken to adjust the several parts of it in a proper manner. The instrument itself must also be suited to the size and particular condition of the patient, of which things the professional adviser will in general be the only competent judge.

What I claim as new in the above-described apparatus is—

1. The employment of two perinacal straps in the manner and for the purposes set forth; the manner of making and adapting the abdominal bandage to the form and to the support of the abdomen by the employment of an elastic band of webbing along its lower edge, serving as a constrictor to it, as herein fully explained; the formation of a pad for hernia by taking an impression of the part to which it is to be applied, for the purpose of procuring a pad possessing the exact form thus obtained, by casting, carving or otherwise; and the mode of applying such a pad by confining it in its place under a bandage unattached thereto, or to any of the usual appendages of such pads.

2. The employment of a spinal pad, combined with the elastic straps proceeding from what I have denominated the abdominal portion or bandage, and uncombined with a steel or other spring, with which such pads have heretofore been connected for the purpose of effecting a counter-pressure, which makes no part of the object had in view by me in its employment; and, lastly, the use of the forked strap having its hinder or forked ends attached to the back portion of the pelvic strap, giving support to the hips as they proceed toward the pad from which they bifurcate.

ROBT. THOMPSON.

Witnesses:

THOS. P. JONES,  
W. THOMPSON.