

(No Model.)

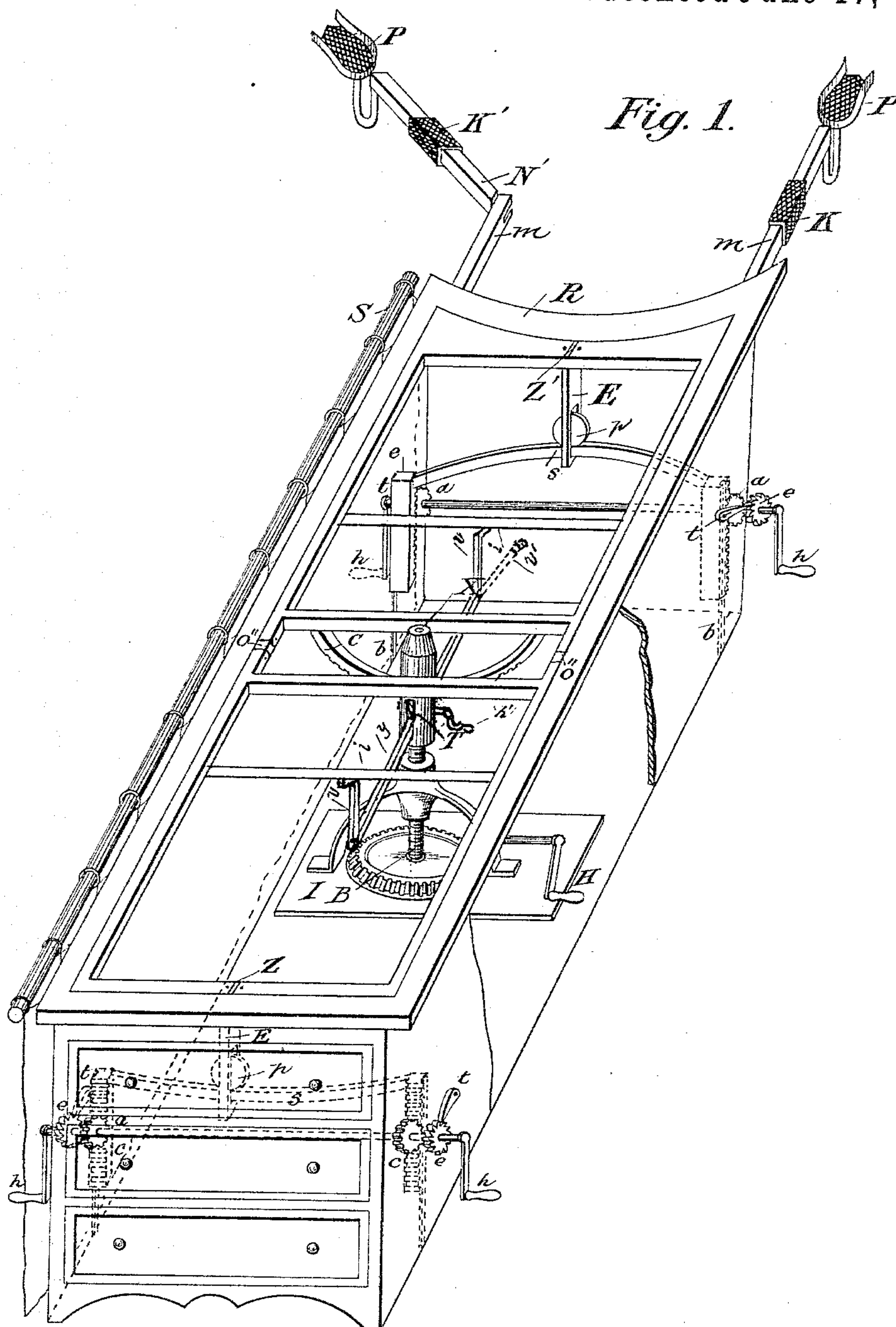
2 Sheets—Sheet 1.

J. D. ALEXANDER.

GYNECOLOGICAL AND SURGEON'S OPERATING TABLE.

No. 300,337.

Patented June 17, 1884.



Witnesses:
E. A. Harman
H. B. Swartz

Inventor.
J. D. Alexander

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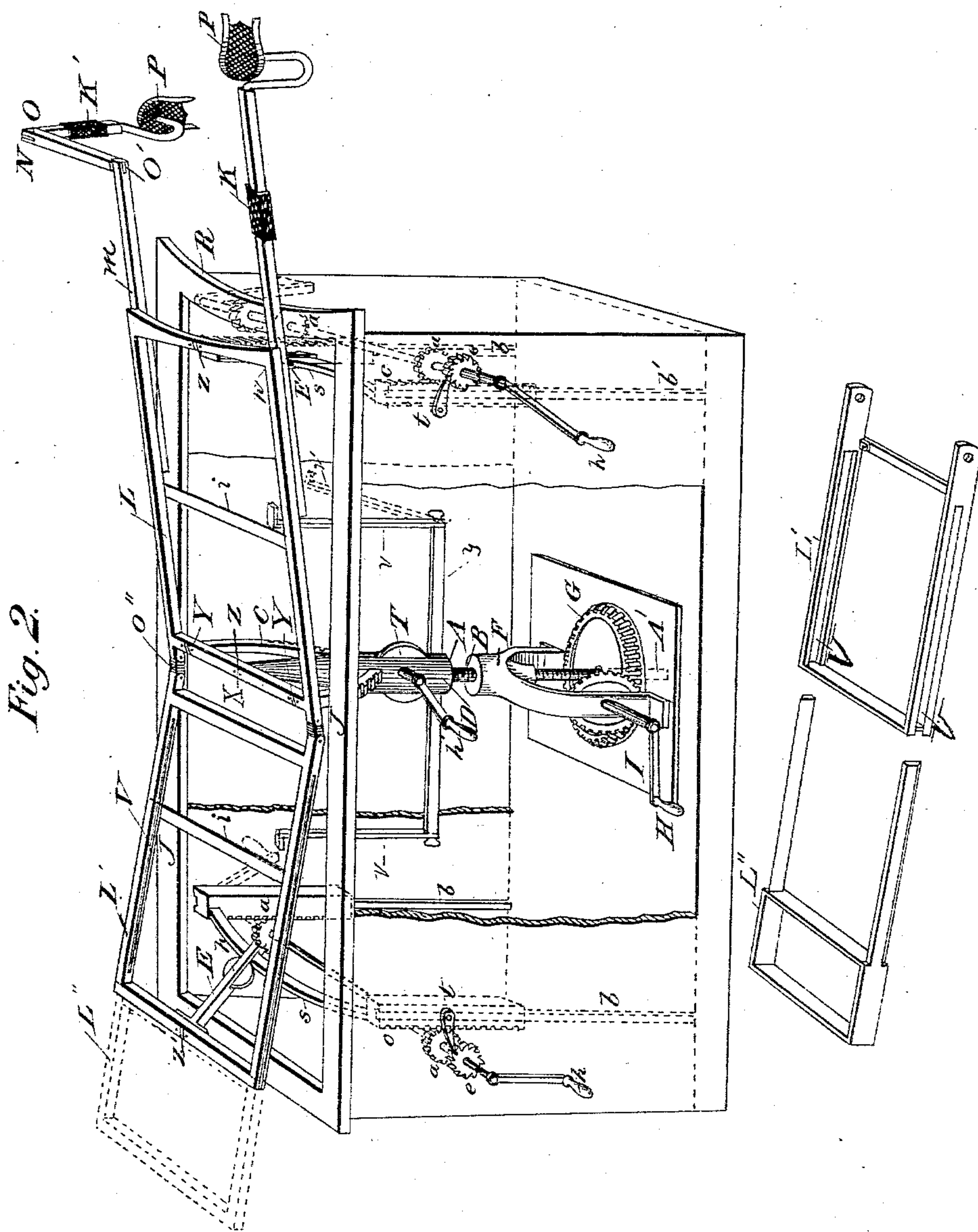
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H. B. Swartz

Inventor:

J. SalZell Award

UNITED STATES PATENT OFFICE.

J. DALZELLE ALEXANDER, OF WOOSTER, OHIO.

GYNECOLOGICAL AND SURGEON'S OPERATING-TABLE.

SPECIFICATION forming part of Letters Patent No. 300,337, dated June 17, 1884.

Application filed August 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, J. DALZELLE ALEXANDER, a citizen of the United States, residing at Wooster, in the county of Wayne and State of Ohio, have invented a new and useful Gynecological and Surgeon's Operating-Table, of which the following is a specification.

My invention relates to adjustable gynecological and surgeons' operating-tables. Its object is to provide, by a simpler method than heretofore, an adjustable table having a flexible cushioned bed situated within a table-frame, and of such construction that the cushioned bed may be elevated, tilted, flexed, or rotated at the desire of the operator, so that the surface of the bed will place the patient in any desired elevation or posture for gynecological or surgical operation, and at the same time, by means of adjustable double-jointed stirrup-shafts, to secure the legs and feet of the patient in any desired position while the body lies upon the table for examination or operation.

My invention consists, first, of a flexible cushioned bed adapted to and situated within a table-frame made concave at one end, for reasons hereinafter specified, in connection with a device for tilting or flexing the cushioned bed in any desired angle or position by means of two sets of tilting-bars, in combination with a perpendicularly-operating screw-shaft adapted to elevate the rise-post, and serve as a spindle upon which to rotate the bed, and vertically-adjustable pulley-tracks to support and carry each end of the bed, respectively, by means of tilting-bars provided with pulleys to run upon the tracks.

It consists, secondly, in adjustable double-hinged stirrup-shafts, which are adjusted upon the concave end of the table-bed, and are adapted to be drawn out therefrom. The shafts of the stirrups are constructed with two joints each, the joints operating at right angles to each other, and either or both joints adapted to be made rigid by means of a sliding sheath, which may be moved over the joints or hinges at the will of the operator. Heretofore but one joint has been employed, and that without any means of making the shaft rigid, or of allowing the stirrup to be elevated or lowered. This method is objec-

tionable because it does not admit of the control of the legs, as required in many cases. By means of my double joints I am able to adjust the feet of a patient perpendicularly as well as laterally, or to make the stirrup-shaft rigid, when required, by means of the movable sheath; and, lastly, it consists in the combination of the parts above described.

Referring to the drawings, in which similar letters of reference indicate like parts, Figure 1 is an isometric view of a gynecological and surgeon's operating-table embodying my invention, and showing drawers and side curtains, which may be attached, and whereby the interior mechanism for operating the table is concealed. Fig. 2 is an isometric view showing the bed-frame raised above the table-frame, also joints of the stirrup-shafts with sheath, upon and off the same.

The mechanism for operating the bed-frame which I claim, is hereinafter fully described and set forth.

J is the rim or table-frame, made concave at R, the foot end thereof, for the purpose of getting close to the lower parts of the body, as is necessary in gynecological operations. This rim or table-frame may be supported by legs, with drawers or panels, or hung with adjustable curtains, as shown, Fig. 1, to hide the interior mechanism; but as to these or other mere variety of manufacture no claim is made. Within the table-frame J is the frame for the cushioned bed. This frame is constructed with two leaves, L L', hinged together at o". The leaf L' has an extension-leaf, L'', which may be readily attached to it by means of supporting-bars adapted to enter the corresponding slots, V V, in the leaf L', as shown, when required for surgical purposes. These leaves constitute a flexible frame for the cushioned bed, and are supported upon a central rise-post, D, by means of a lateral tilting-bar, C, and a longitudinal cross-bar, y, having adjustable arms v v, projecting upwardly to come into contact with the leaves, respectively. The lateral tilting-bar C is controlled and operated by means of a thread-gear, T, and crank h', whereby the bed-frame may be tilted laterally at the will of the operator. The tilting-bars E E are each hinged under the outer ends of the leaves, respectively, the

lower end of each bar having a sheathed pulley, *p*, which operates upon a corresponding vertically-adjustable track, *s*, adapted to be elevated or lowered by means of the racks *c c*, pinions *a a*, and crank *h*. The tracks may be limited in downward movement by means of the ratchet and pawl *c t*. By means of these vertically-adjustable tracks *s s* the outer end of the leaves, respectively, may be elevated or lowered independently of each other, or the bed may be rotated thereupon horizontally. The longitudinal cross-bar *y* is attached to the lower end of the rise-post *D*. The upwardly-adjustable arms *v v* come into contact with the under surface of the bed-frame *i i*, so that either or both leaves may be elevated or lowered with the corresponding movement of the rise-post *D*. These arms *v v* are also adapted to be moved out of position, as shown at *v'*, so as to permit the ends of the leaves to be lowered independently of each other. The longitudinal tilting-bars *E E* extend below and underneath the corresponding track, *s*, so as to elevate or lower the tracks by elevating or lowering the ends of the leaves, respectively.

In the lower end of the pedestal *D* is a socket, *A*, to receive the upper end of a perpendicular thread-screw, *B*, which enters the socket as a spindle, so as to admit of the pedestal being rotated upon the spindle when the bed is elevated above the frame *J*. The thread-screw *B* extends perpendicularly through a standard, *F*, attached to a bed-plate, *I*, the spindle at the lower end of the screw-shaft extending through the bed-plate, which forms a bearing for the same at *A'* and holds it in upright position. This thread-screw is operated by means of a bevel-gear, *G*, and crank *H*, in connection with the standard *F*; but I do not claim this device for operating the thread-screw. The bed-plate *I* is firmly secured to the base of the table, so as to rigidly support the rise-post *D*. By this double-spindled thread-screw, in connection with the spindle-socket in the rise-post and spindle-box in the bed-plate, the operating-bed may be elevated without loss of strength in the pedestal, and at the same time adapt the bed to be rotated above the table-frame at the will of the operator. From the concave end of the bed-frame *I* extend the shafts *m m* to support the stirrups *P P* through slots or clamps in the sides of the bed-frame *L*. These shafts are double jointed or hinged at *O O'*,

the joints or hinges acting at right angles to each other. The joint *O'* is adapted to lateral flexion and the joint *O* to perpendicular flexion. These joints may either or both be made rigid at will by sliding over them the movable sheath *K'*, as shown at *K*, thereby enabling the operator to support the legs of the patient in any desired position while the body lies upon the operating-bed, or to secure the same against any movement whatever, as is sometimes necessary.

I am aware that flexible mattress-frames similar to those I use are not new, and that the vertically-moving racks *c*, in connection with pinions *a*, operated upon a common shaft, have been heretofore used for similar purposes. I do not therefore claim such, broadly, nor do I claim the stirrups *P*, except in combination with shafts *m*, constructed as shown.

Having thus fully described my invention in connection with certain features not claimed, what I claim as new, and desire to secure by Letters Patent, is the following, to wit:

1. In combination with table-frame *J* and supporting-structure with concave end *R* and mattress-frame *L L'*, the rise-post *D*, adjusting-screw *B*, standard *F*, gear *G*, and bed-plate *I*, the lateral tilting-bar *C* with adjusting-screw *T*, and the longitudinal bar *Y*, provided with adjustable arms *v*, substantially as and for the purpose specified.

2. In combination with table-frame *J*, supporting structure, and mattress-frame *L L'*, the tilting-bars *E*, attached to each of said mattress-frames, provided with track-pulleys *p*, the vertically-adjustable pulley-tracks *s*, together with racks *c*, pinions *a*, and the operating-shaft, provided with ratchet *c* and pawl *t*, and devices for giving an inclined position to the mattress-frame, substantially as and for the purpose specified.

3. In combination with the table proper, consisting of table-frame *J*, supporting-structure, and mattress-frame *L L'*, as shown and described, the stirrups *P* and stirrup-shafts *m*, the said shafts being provided with double joints *O O'*, and movable sheath *K'*, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand this 13th day of June, 1883.

J. DALZELLE ALEXANDER.

Witnesses:

LUCAS FLATTERY,
HIRAM B. SWARTZ.