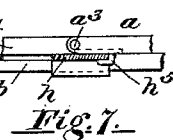
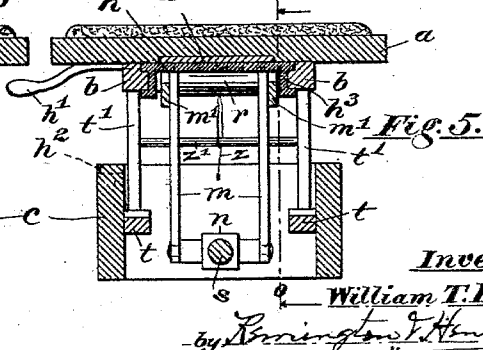
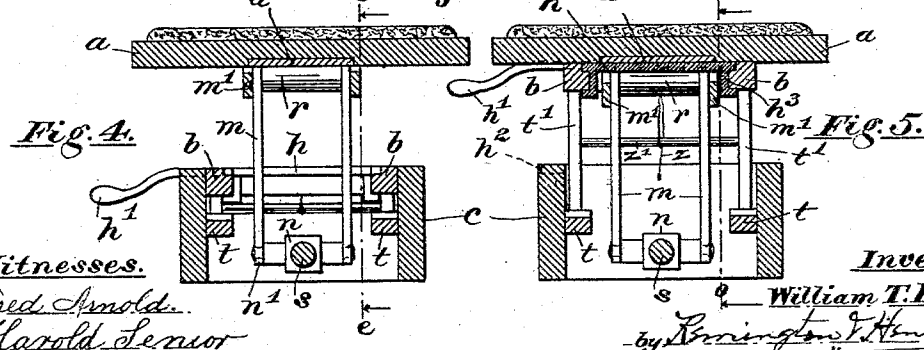
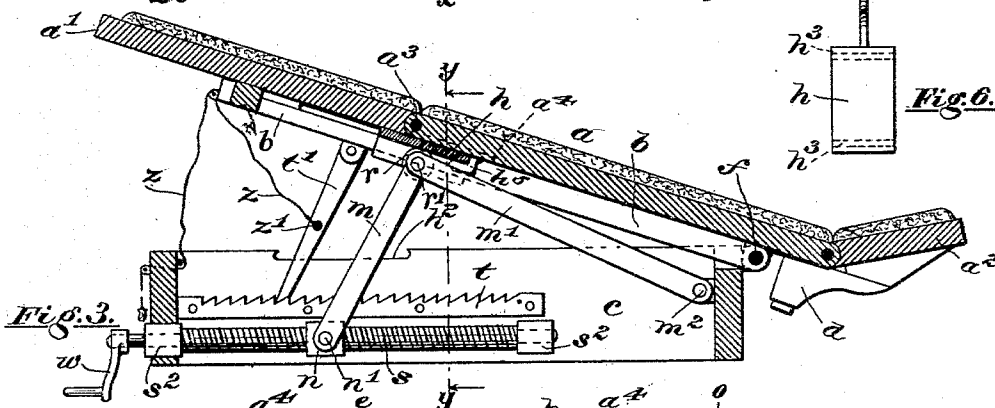
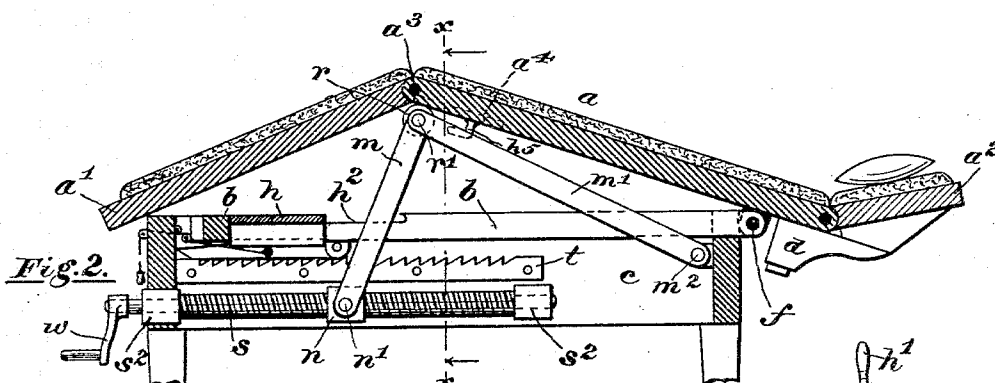
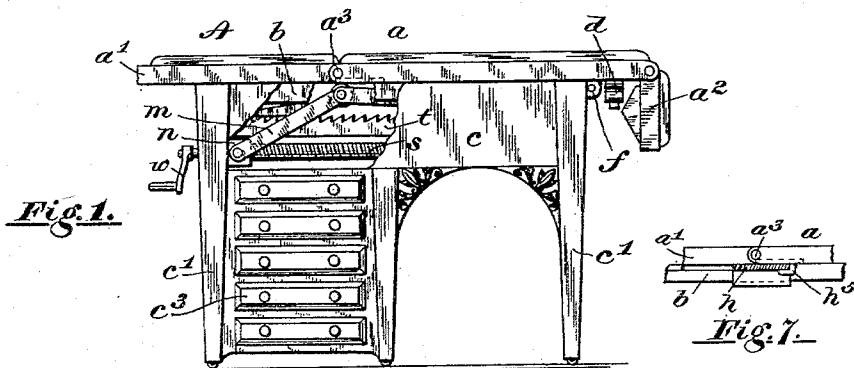


(No Model.)

W. T. LUTHER.
SURGICAL TABLE.

No. 546,235.

Patented Sept. 10, 1895.



Witnesses.

Fred Arnold
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Inventor.

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UNITED STATES PATENT OFFICE.

WILLIAM T. LUTHER, OF PROVIDENCE, RHODE ISLAND.

SURGICAL TABLE.

SPECIFICATION forming part of Letters Patent No. 546,235, dated September 10, 1895.

Application filed June 24, 1895. Serial No. 553,801. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. LUTHER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Surgical Tables; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in "surgical tables," so called; and it consists, essentially, in the combination of the lifting top table proper hinged to the fixed frame and comprising two or more jointed sections, a similarly-hinged frame or lower table located below and capable of supporting the upper table when the latter is elevated, and mechanism for elevating the upper table independently of the lower one and also capable of elevating both tables conjointly, all as will be more fully hereinafter set forth and claimed.

The object I have in view is to provide an improved table of the type or class above referred to. By means of my improved table surgeons, physicians, and specialists are enabled to work or perform operations peculiar to their profession in a more expeditious manner, since the adjustments of the several parts may be effected easily and quickly and without liability of the mechanism becoming inoperative or disarranged when in use.

Another advantage of my improved table is that it is comparatively inexpensive, considering the range of positions to which it is capable of being set or adjusted.

In the accompanying sheet of drawings, Figure 1 is a side elevation of a surgical table provided with my improvements, a portion being broken away to show the arrangement of the interior mechanism when the parts are in the normal position. Fig. 2 is an enlarged longitudinal sectional view showing the upper table raised substantially as when adjusted for the "Trendelenburg posture," the line of section being on *ee* of Fig. 4. Fig. 3 is a similar sectional view taken on

line *oo* of Fig. 5, showing both the upper and lower tables elevated and extended. Fig. 4 is a transverse sectional view taken on line *xx* of Fig. 2. Fig. 5 is a similar sectional view taken on line *yy* of Fig. 3. Fig. 6 is a plan view, in reduced scale, of the movable supporting-plate; and Fig. 7 is a partial side elevation showing a manner of securing the upper and lower tables together.

A, Fig. 1, again referring to the drawings, indicates one form of my improved surgical table. It is provided with the usual table proper *a*, composed of suitably-upholstered jointed sections, the fixed frame or body *c*, and legs *c'*, supporting the body. If desired, it may be provided with a series of conveniently-arranged drawers, as *c²*. I would add that the several parts thus far referred to are usually made of wood.

The upper or operating table member *a* is provided at its head end with a section *a²*, jointed thereto, the same capable of being held in a fixed position by one or more swinging arms *d*. (See Figs. 2 and 3.) The opposite end portion of the table consists of the part *a'*, jointed thereto at *a³*. The table itself in turn is hinged at its head end to a rod *f*, passing through ears secured to the said body or frame *c*, as clearly shown. Immediately below the table *a* is located the swinging frame or lower table *b*, the latter being let into the body *c* and hinged to the said rod *f*. The opposite or rear end portion of table *b* extends well under the rear section *a'* of the upper table, thereby supporting the latter (in conjunction with the mechanism soon to be described) when in an inclined position, as shown in Fig. 3. The rear end of said table *b* is provided with a sliding supporting-plate *h*. When the tables are lowered, the bottom table, as well as all the supporting mechanism, is concealed within the body portion *c*, as shown in Fig. 1.

The device for raising and lowering the tables *a* and *b* consists, essentially, of a horizontal screw *s*, arranged to turn in boxes *s²*, suitably mounted in the body portion. The screw extends through the rear end of the body and is adapted to receive the operating-crank *w*. A traveling nut *n* is mounted upon the screw and is provided with oppositely-arranged short studs or pins *n'*. A pair of links

m' are hinged at m^2 to the front end of body c , a similar pair of shorter links m being hinged to the said pins n' of the nut n . These two series of links form a toggle connection, the adjacent ends being jointed together by a rod or pin r' , on which an intermediate roll r is mounted. This roll is adapted to engage the under side of table a at or near the joint a^3 . As drawn, a metallic wear-plate a^4 is let into the table for the roll to bear upon. When it is desired to elevate the table a to an extreme position, substantially as shown in Fig. 2, or to any intermediate position, it is effected by simply turning the screw s in the proper direction, a reversal of the movement permitting the table to readily assume its normal position.

In case it is necessary to elevate the table a and at the same time have the foot extension a' form a prolongation of the inclined plane, as in Fig. 3, (the table in such event not forming a reflex joint, as in Fig. 2,) the operator first slides the plate h ahead to its limit by means of its handle h' , thereby interposing said plate between the wear-plate a^4 and the roll r , followed by turning the screw until the desired altitude or inclination is attained. At the same time the lower ends of the pawls t' , pivoted to the under side of table b , automatically drop into the corresponding notches of the strips t , secured to opposite sides of the interior of the body c . These pawls may be used as auxiliary to the screw for supporting the tables, or they may be employed to receive the entire weight of the table and its load. The pawls, as drawn, are connected by a light rod z' , to which is secured a cord z , the latter being so arranged that a slight pull or tension upon it will swing the pawls upwardly from the notches after first relieving the pressure from them by slightly elevating the table through the action of screw. The front side of the frame or body c is cut away, as shown at h^2 , Figs. 2 and 3, to allow a free movement of the handle member h' of the sliding supporting-plate h . This plate extends laterally across the lower table b and is provided with longitudinal grooves h^3 , into which the adjacent sides of the table a are fitted. (See Figs. 4 and 5.)

In order to more securely fasten the table members a and b together, the said wear-plate a^4 of the former may be provided with one or more rearwardly-extending hooks h^5 , so constructed and arranged that upon sliding the plate h ahead to its limit its forward portion will be snugly interposed between the wear-plate and hook, as shown in Fig. 7, wherein the plate h is sectionally represented, the toggle connection being omitted.

By means of my improved table gynecological operations can be performed with greater efficiency, the range of adjustments being especially adapted for operations of this class.

I claim as my invention—

1. In an operating table of the class described, the combination, with the fixed frame

or body, of an upper table composed of a plurality of sections jointed together and hinged to said frame, a movable frame hinged to the fixed frame interposed between the latter and the upper table and capable of supporting the said table member, an operating screw, a nut adapted to traverse said screw, and suitable connections controlled by the nut through which the table and movable frame, jointly or independently, are elevated upon turning the screw, substantially as described.

2. In an operating table, the combination, with the suitably supported body or base, of the top table member hinged to the base, the movable frame b located below the table member and hinged to said base, a slidable plate mounted in the frame b , a jointed connection or links hinged to the base adapted to be brought into engagement with the under side of the said table and plate, an operating screw, and a nut mounted to travel on said screw having said jointed connection hinged thereto, substantially as described and for the purpose set forth.

3. In an operating table, the combination, with the body or base portion and upper and lower table members, as a , b , capable of being attached together, hinged to the base, of an operating screw, a movable nut mounted thereon, a jointed connection hinged both to said base and nut, a slidable plate, and suitable supporting pawls, all constructed and arranged for operation substantially as hereinbefore described and for the purpose set forth.

4. In an operating table, the combination, with the movable upper and lower table members, of a slidable plate interposed between and mounted on one of said table members, and lifting mechanism arranged to bear upon said plate in one position for elevating both tables simultaneously, substantially as described.

5. In an operating table, the combination, with the body or frame, the movable upper table member, a screw and a traveling nut mounted thereon, of a jointed connection hinged to said nut and frame and having the joint portion of said connection provided with a sleeve or roll in frictional engagement with the under side of the table, substantially as described.

6. In an operating table, the combination of an upper table, a lower table or frame adapted to support said upper table and both being hinged to the table body or base, a working screw and nut and connections for elevating one or both tables at will, and pawls and ratchets capable of supporting the tables in position after adjustment, substantially as described.

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

WM. T. LUTHER.

Witnesses:

GEO. H. REMINGTON,
FRED. ARNOLD.