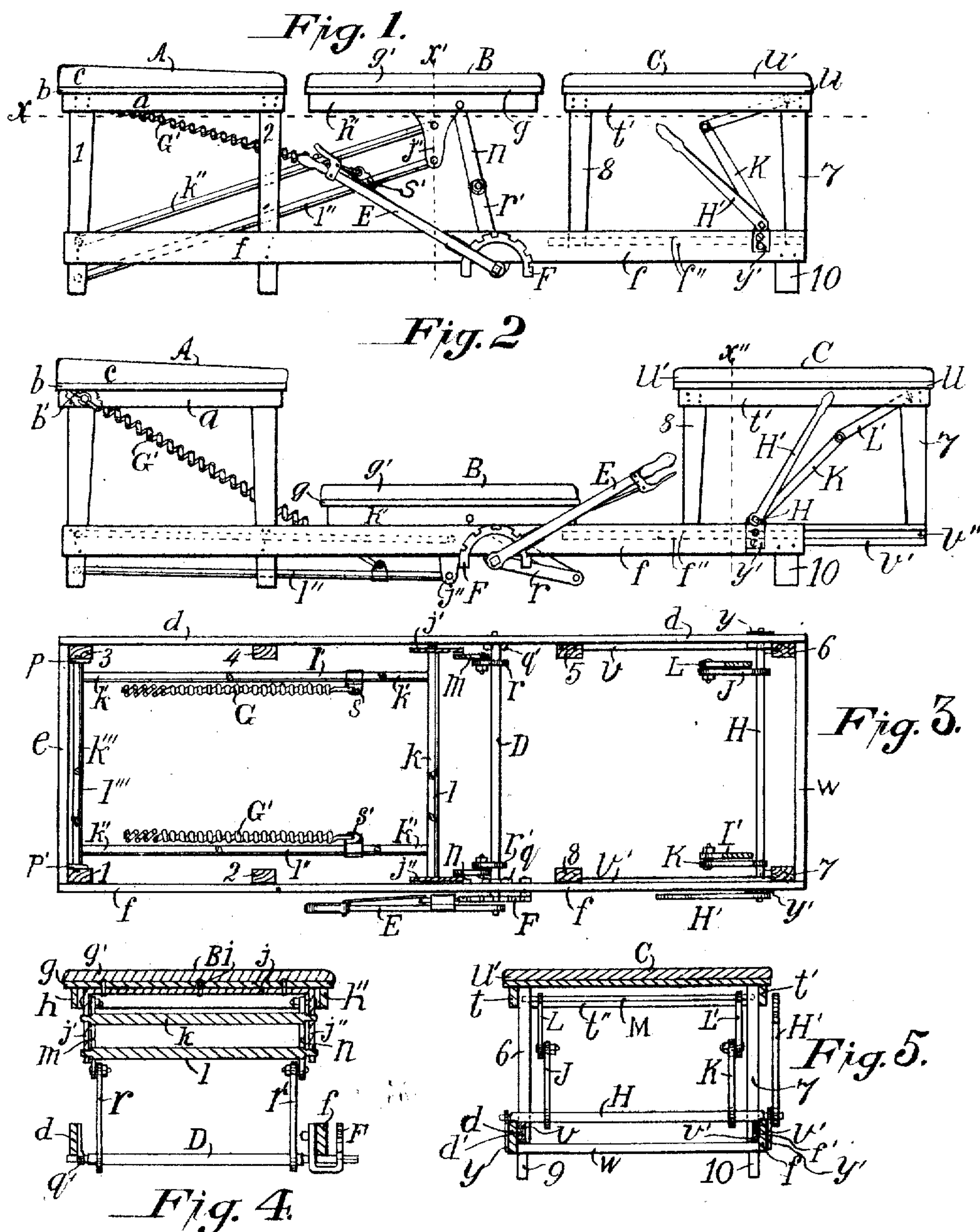


E. E. HELFRICH.
 OPERATING TABLE.
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948,447.

Patented Feb. 8, 1910.



Witnesses:

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OPERATING-TABLE.

948,447.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELMER E. HELFRICH, a citizen of the United States, residing at Oklahoma city, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Operating-Tables, of which the following is a specification.

My invention relates to operating tables, in which the table is constructed in a manner to consist of three sections, a head section, a vertically adjustable central section with spring and lever adjusting mechanisms, and a longitudinally extendible foot section, all of which will hereinafter be fully explained.

The objects of my invention are; first, to provide an operating table in which the central third or section of the table can be depressed or lowered at will; second, that said central section shall at all times maintain a horizontal position; third, that the foot section may be extended longitudinally; fourth, to combine utility with cheapness. I accomplish these objects by the mechanism illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a side elevation of my table with the central section elevated; Fig. 2 is a side elevation in which the central section is lowered or depressed and the foot section is extended; Fig. 3 is a horizontal sectional view on line x Fig. 1; Fig. 4 is a vertical section on line x' Fig. 1; Fig. 5 is a vertical section on line x'' Fig. 2.

Similar characters refer to similar parts in the several views.

Referring to the drawings, A indicates the head section of the table consisting of the legs 1 2 3 4 having secured thereto and flush with their upper ends the side frame-boards a and the end frame-boards, all four of which are similar and which constitute the rectangular frame of the table section and to which the top b is secured provided with a padded or cushioned covering c to afford a yielding surface. See Figs. 1 and 3. To secure more firmly in position the said legs 1 2 3 4 have the stay-boards $d e f$ secured thereto near their lower ends.

The central section B consists of a table top board g having a padded or cushioned covering g' , to prevent said table top from warping and to preserve a uniformity of appearance of the three sections of the table the said top board has secured to its under

surface the edges of four similar boards of equal width three of which, $h h'$ and h'' , are shown. See Figs. 1 and 4. To provide support for said table section and that it shall at all times maintain a horizontal position the table top board g has firmly secured to its under surface, by bolts or rivets i , the body portion of the supporting plate j having its ends perforated and turned at right-angles forming the downwardly projecting attaching members j' and j'' in which the ends of the cross-bars k and l are pivoted and to which the pendent adjusting rods m and n are attached, pivotally by rivets or bolts. See Figs. 3 and 4. A short distance from the ends of the said cross-bar k the ends of the side bars k' and k'' are secured at right-angles thereto in any convenient manner, preferably by brazing as in the present case and to the opposite ends of the said side bars the duplicate cross-bar k''' is similarly secured, thus forming a rectangular frame of rods having end lateral-pivotal projections the said frame having a duplicate having an inner cross-bar l , side bars l' and l'' and an outer cross-bar l''' . The ends of the cross-bars k''' and l''' are pivoted into the perforated leg-plates p and p' secured to the lower portion of the inner sides of the table legs 1 and 3 of section A. The said rectangular frames of rods are properly duplicate guiding frames to guide the central section B of the table in its movements and by their being pivoted on a vertical line and equi-distant apart they are at all times parallel and maintain the table top in a horizontal position. To elevate and depress the said section B of the table an operating rod D is secured by stirrups q and q' to the under edge of the stay-boards d and f , and to rotate said rod D the ratchet lever E being provided with a spring pawl, has its lower end secured upon the front end of said rod and intermediate its ends, the operating arms r and r' have their lower ends firmly secured thereon and have their upper ends pivotally secured to the lower ends of the pendent rods m and n ; and to maintain the said table section in any position within its scope the ratchet F has its body portion vertical and its ends perforated and bent laterally and also upward and parallel to its circular body portion its ends being secured to the inner surface of the stay-board f and the ratchet lever E has its lower end secured upon the front end of the said op-

erating rod D, said ratchet lever having a pawl to engage the said ratchet. See Figs. 1 2 3 and 4. To assist in the elevation of the said section B of the table the spiral springs G and G' are provided having their inner and lower ends hooked into perforations in the rod clamps s and s' secured upon the rods l' and l'' of the lower guide frame and having their upper ends secured to the under surface of the table top board b of the section A in any convenient manner, as by an eye-hook b'.

The third or foot section C of said table is constructed as follows; four similar boards of equal width, the side boards t and t' being slightly longer than the end boards of which t'' is one are firmly secured to the upper ends of the four posts 5 6 7 8 and on a line therewith thus forming a rectangular frame to which the top board u is firmly secured the upper surface of said board having a padded or cushioned cover u'. To provide means whereby the said section C may be extended, longitudinally, the lower ends of the legs 5 and 6 and 7 and 8 have horizontal boards v and v' secured to their outer surfaces and flush therewith, each of said boards has a longitudinal groove v'' cut in its outer surface its entire length, and to the inner surfaces of the stay-boards d and f are secured strips d' and f' being adapted to slidably fit said grooves. See Figs. 1 2 3 and 5. To prevent the said stay-boards d and f from spreading the staying strip w is secured to the stub-posts 9 and 10 which support the said stay-boards. See Figs. 3 and 5. For the purpose of operating said extension section C duplicate perforated plates y and y' are secured to the outer surfaces of said stay-boards d and f and the ends of the operating rod H are pivoted therein; the said rod having secured thereon the operating lever H', and intermediate its ends said rod has firmly secured thereon the lower ends of the operating arms J and K which have their upper ends pivotally attached each to one of the ends of one of the operation rods L and L' which have their opposite ends pivotally attached to the cross-rod M which has its ends secured in the upper portion of the posts 6 and 7. See Figs. 1 2 3 and 5.

In operation, the central section of the table B is placed on the same horizontal plane as the other sections A and C and section C is placed near section B; the patient is placed upon the table, face downward, and section C is extended to suit the length of the patient; the two sections of the vertebra or spine which impinge upon the nerves and cause ailment are found, the central section B of the table is lowered to a desired position in which position it is maintained by the ratchet F and the ratchet lever G. The thumbs of the operator are placed

between the impinging vertebra and pressed downward until the patient contacts with the lowered section B of the table, thus adjusting the spine and relieving the impinged nerves.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is—

1. In an operating table; a table having a stationary or fixed head section for the support of the upper portion of the patient, a longitudinally slidable section provided with means for sliding the same for supporting the lower portion or limbs of the patient and a central or middle vertically adjustable section with means for adjusting the same to support the middle portion of the patient during operation.

2. In an operating table having a fixed head section having legs at the sides thereof; a pair of longitudinal stay-boards secured to the lower portion of the side legs of the said head section and having stub legs secured to their opposite ends to support said ends and maintain them in a horizontal position, a cross stay strip w having its ends secured to said stub legs to preserve the parallel position of the said stay-boards and in conjunction therewith form a table supporting frame; a foot extension section of said table having four legs the sides of which at their lower ends are rabbeted or cut down and have secured in the said rabbets duplicate longitudinally grooved boards flush with the outer surface of said legs the said boards being adapted to slide on strips fitting in the grooves thereof and which are secured to the inner surface of the said stay-boards to provide for the extension of the said foot section, substantially as described.

3. In an operating table having three sections, a fixed head section having legs at the sides thereof and having secured to the lower portion of its legs a pair of stay-boards having their opposite ends supported by stub legs secured thereto, a cross strip w having its ends secured to said stub legs to hold said stay-boards parallel and in conjunction with the same to form a supporting frame; a middle vertically adjustable section; a supporting plate having a body portion secured to the under surface of said middle section and having its ends perforated and bent downwardly forming attaching members; duplicate rectangular parallel guide frames having their inner ends pivotally secured in said attaching members and having their outer ends pivotally secured in the legs of the said head section to preserve the horizontal position of the said middle section; means being provided for elevating and depressing said middle section and maintaining it in any adjusted position; an extensible foot section having four supporting legs; a pair of horizontally grooved boards set in the sides

of said legs flush with their outer surfaces
and at their lower ends said boards be-
ing adapted to slide upon strips which fit
within the grooves thereof and are secured
5 to the inner surface of the said stay-boards
to support the said foot section; an operat-
ing rod H extending across and rotatably
secured to said stay-boards said rod having
firmly secured thereon a pair of operating
10 arms and a handle lever to rotate said rod;

and a pair of operating rods secured to said
table and to said arms to extend said table
section, for the purpose specified.

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

ELMER E. HELFRICH.

Witnesses:

JAS. S. GLADISH,
E. C. EDWARDS.