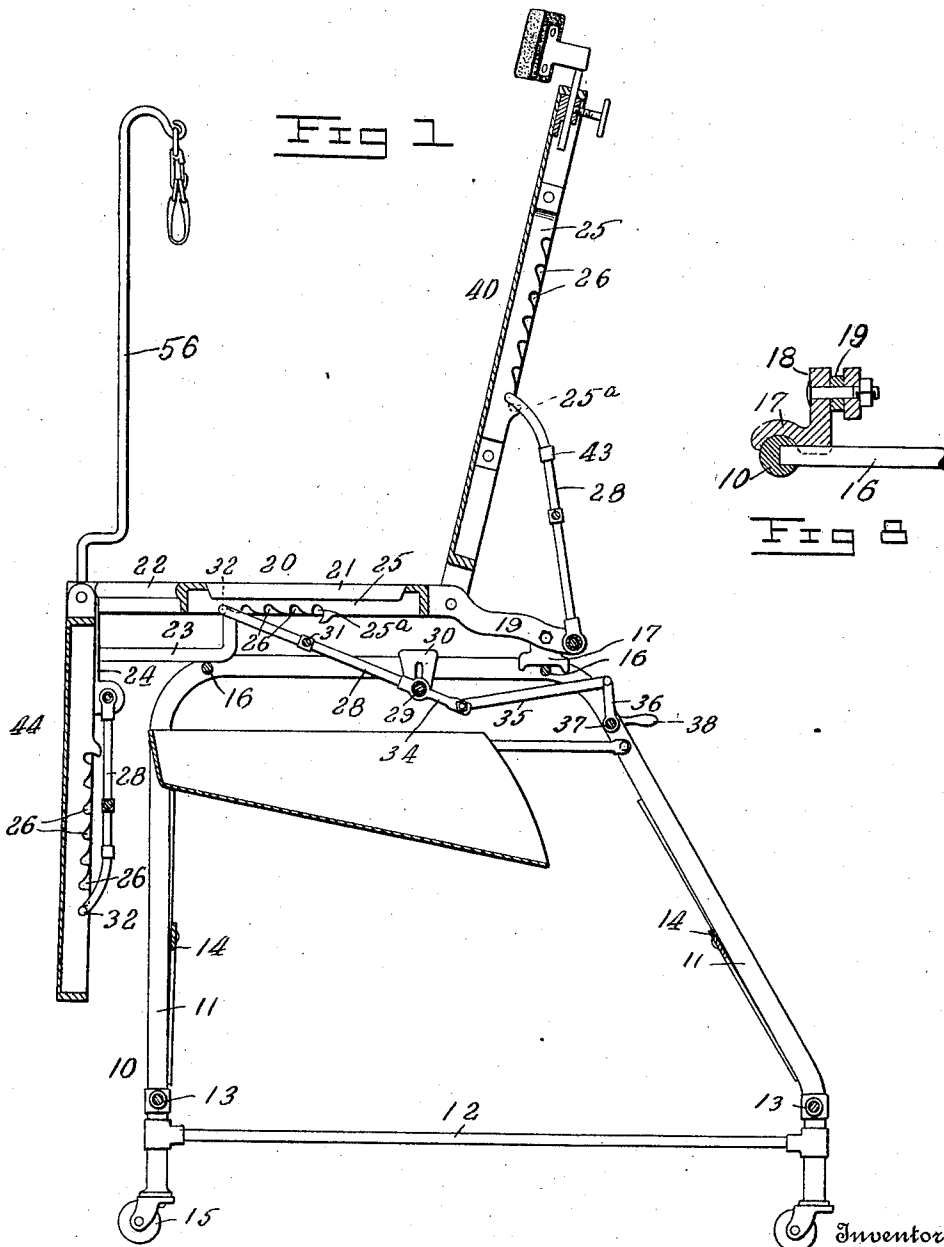


G. L. POLL.
TABLE FOR THE USE OF PHYSICIANS AND SURGEONS.
APPLICATION FILED JAN. 11, 1911.

1,053,214.

Patented Feb. 18, 1913.

3 SHEETS—SHEET 1.



Witnesses
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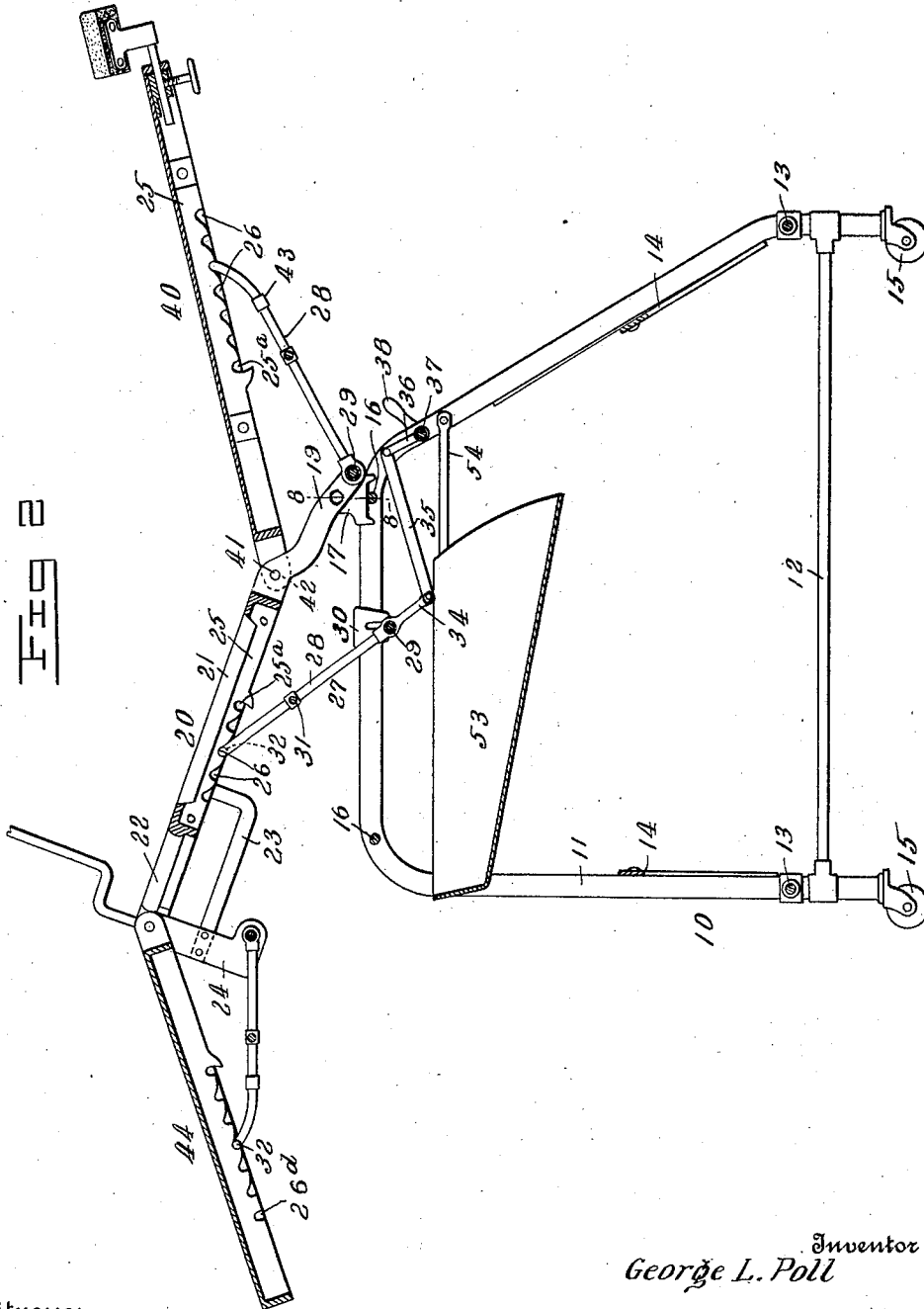
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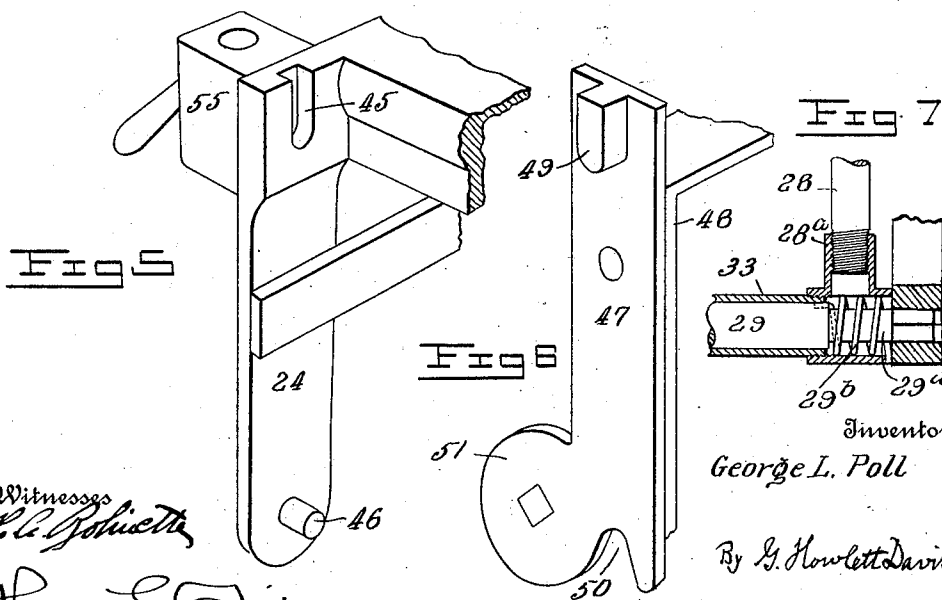
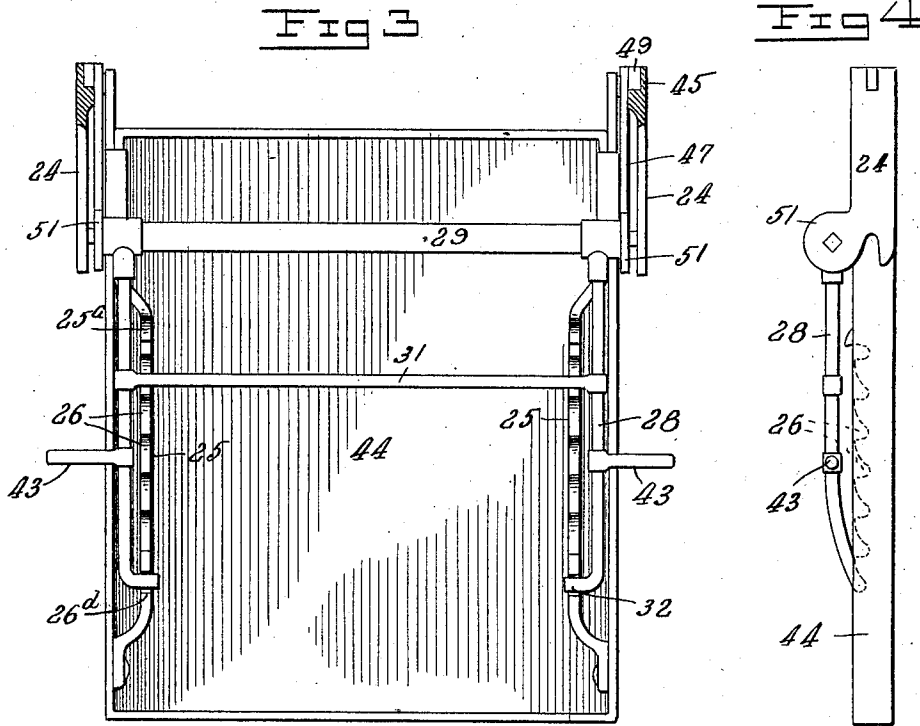
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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TABLE FOR THE USE OF PHYSICIANS AND SURGEONS.

1,053,214.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed January 11, 1911. Serial No. 602,030.

To all whom it may concern:

Be it known that I, GEORGE LEWIS POLL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Tables for the Use of Physicians and Surgeons, of which the following is a specification.

My invention relates to improvements in tables for the use of physicians and surgeons, and has particular relation to structures of this type capable of providing for various adjustments in the variations of planes in the direction of length of the table to permit the latter to assume various operating positions.

Among the objects of my invention are to be found the following: (1) The provision of a device of this character in which the table is formed in three sections, each adjustable relatively to the others, the intermediate section being adjustably mounted on the supporting frame, each section having independent means for adjusting its position with respect to the remaining sections. (2) To provide a device of this character in which the table sections are provided with one or more racks, the teeth or notches of which are so arranged as to provide, when certain of the notches are engaged by a movable element, a locking of the section against movement. (3) To provide a locking means for table sections of the type herein disclosed, the means being in the form of a locking dog or element and one or more racks, the racks having one or more notches which, when engaged by the dog, lock the section against movement excepting by a release of the dog through manual manipulation thereof, the points of pivotal support for the dog and section being so arranged that disengagement by manipulating the section alone will be prevented. (4) The provision of a removable end or foot section having its parts so arranged as to retain the section and its adjustable support relatively locked while the section is being removed and while in such removed condition. (5) To provide a novel connecting device for the end or foot section, said device retaining the section in proper position with respect to the remainder of the table when engaged and which enables the said section to be removed bodily without the requirement of

manipulation of locking dogs or other elements preliminary to such disengagement. (6) To provide a novel spring support for the locking dogs, the springs being adapted to normally retain the dogs in engagement with the complementary parts of the table sections. (7) The provision of operating devices, such as handles, etc., for the several locking dogs or elements so positioned as to permit manipulation of the dogs or elements from the side of the table, each section having its dog or element manipulable from either side.

Other and further objects are to provide a device of this character which is neat and attractive in appearance, which is of a form and shape and arrangement adapted to permit a ready rendering of the device antiseptic, which is composed of a minimum number of parts so arranged as to tend to eliminate disarrangement of parts, which is durable in construction, simple and efficient in operation, and which can be made at a relatively low cost.

To these and other ends, the nature of which will be readily understood as the invention is hereinafter disclosed, said invention consists in the improved construction and combination of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings in which similar reference characters indicate similar parts in each of the views,—Figure 1 is a central longitudinal sectional view of a table constructed in accordance with my invention, the table sections being shown as in chair position. Fig. 2 is a similar sectional view showing the sections as adjusted relative to each other in a manner to place the patient in a reclining position. Fig. 3 is a view in elevation of the rear or under side of the end or foot section, certain parts being broken away for the purpose of clearness in detail showing. Fig. 4 is a side elevation of the parts shown in Fig. 3. Fig. 5 is a detail view showing the structure which supports the removable end or foot section, the view showing more particularly the form of connecting member. Fig. 6 is a detail view of the member carried by the end or foot section and which coöperates with the structure of Fig. 5 to retain the end or foot section in position in the table. Fig.

7 is a detail sectional view showing the spring support for the locking dogs. Fig. 8 is a detail sectional view on line 8—8 of Fig. 2.

5 10 designates a supporting frame formed of the sides 11 having the shape indicated in Figs. 1 and 2, and formed of suitable material, such as tubing, each side being braced along its bottom by a connecting rod 12, the 10 two sides 11 being connected adjacent the bottom by rods 13, and by cross braces 14, at the front and back of the frame. The frame is also preferably provided with suitable casters 15.

15 16, 16 designate connecting rods for the two sides 11, said rods being located at the top of the frame adjacent the front and rear thereof, said rods and the rods 13 and cross braces 14 providing a rigid supporting 20 frame, of a character which will permit of a ready formation from tubular material, and which will, at the same time, provide for a maximum supporting strength to the frame.

25 17, 17 designate a pair of members mounted respectively on the sides 11 adjacent the rear of the top thereof, said members being secured to the sides in a suitable manner as by bolts or rivets, each member project- 30 ing inwardly and positioned above the rear rods 16, said inwardly projecting portions having an upwardly extending ear 18 to which is pivotally secured an arm 19 projecting rearwardly from the center section 35 of the table, the pivot point being intermediate the ends of the arm. As will be presently explained, the arms 19 form the front on which the table as an entirety operates, and owing to the fact that at times 40 the entire weight of the table and of its occupant may be borne by the ears, it will be readily understood that the structure in this respect must combine maximum strength with minimum size, and the requirements 45 are met by the particular structure disclosed and which is shown in detail in Fig. 8.

The center section of the table, indicated at 20, is of a preferred configuration, being provided with a slot 21 and a recess 22, the 50 latter being located at the front of the section, substantially midway of such front end, the slot extending from front to rear of the section substantially midway of its width and having its ends adjacent the rear 55 of the section and the recess 22 at the front. The arms 19 extend rearwardly from the rear of said section and are preferably of a compound curve as shown. The section 20 is normally supported at its front on the 60 front rod 16, the section being provided with angle irons 23 having one end secured to the rim of the section and the other end secured to the downwardly extending leg 24 secured to the front of the section and which 65 projects forwardly therefrom, the leg hav-

ing provision, as presently described, for supporting the front end or foot section of the table.

To provide for adjustably supporting the section 20 with its front end raised from 70 the rod 16, I preferably employ the following structure:—Secured to the inner face of the side rims of the section 20 is a pair of racks 25, each of which is provided with a plurality of notches 26 preferably shaped as 75 shown in Figs. 1 and 2, the said notches, with the exception of the rearmost one, being formed to lock in one direction only, the rearmost notch, designated as 25^a, being 80 formed to lock in the opposite direction. Each rack is preferably bowed laterally intermediate its ends so as to place the notched portion spaced from the rim of the section, while the ends of the rack are secured to 85 such rim, this construction permitting of the use of engaging members of greater length, rendering disengagement by accidental lateral pressure less liable. The complemental structure to the racks is provided with the 90 pivotally mounted element 27. This element is preferably in the form of a frame embodying two arms 28 pivotally mounted on a shaft 29 supported in brackets 30 carried by the top of the frame 10, the arms 28 being connected together intermediate their 95 ends by a rod 31, the outer end of each arm being bent laterally and outwardly, to form a dog 32, said dogs being adapted to co-operate with the notches 26 to provide for the adjustable support of the section. As 100 it is desirable that the element 27 have its dogs 32 normally in engagement with the racks 25, I preferably provide a spring support for each arm 28, a preferred form of such support being indicated in Fig. 7 in 105 which the shaft 29 is shown as having a reduced end 29^a, about which a coil spring 29^b is mounted, one end of said spring being connected to the shaft, while the other end of said spring is connected to 110 a coupling member 28^a secured to the inner ends of the arms 28, said members being coupled to a sleeve 33 mounted on the shaft 29. The outer end of the shaft 29 is preferably formed in such manner as 115 to retain the shaft against pivotal movement, one form of such sleeves being to provide a non-circular cross section to the end of the shaft, the brackets 30 having a complemental recess to receive such non-circular 120 end. By this construction, it will be readily understood that the element 27 will be under constant tension exerted in a direction which normally retains the dogs 32 in contact, and as the notches 26 are arranged so 125 to permit the dogs to freely ride thereover when the front of the section is being raised, it will be obvious that any desired adjusted position, within the limits of the racks 25, may be had when moving the table from its 130

normal position, the dogs 32 engaging the proper notches when the desired point is reached, the notch 25^a serving to limit the amount of vertical adjustment excepting when the element 27 is manually manipulated to carry the dogs 32 out of the path of movement of said notch.

Owing to the fact that the element 27 is located at a point where the frame 10 would prevent a free movement of handle mechanism for manual manipulation of the element, I preferably employ the following mechanism for operating the element by the operator when standing at the side of the table. Projecting radially from one of the members 28^a (preferably from a point diametrically opposite the arm 28) is an arm 34 which is connected, by means of a link 35, with an arm 36 carried by a rod 37 pivotally mounted in the frame 10 at the rear of its top, said rod or shaft extending through the sides 11 and having each of its ends provided with a handle 38 by means of which the rod or shaft may be rotated, the parts being so arranged that downward pressure on the handle will act to lower the dogs 32 from the notches, this particular form of connection being preferred for the reason that the operator is able, while at the side of the frame, to manipulate both the front of the section and the handle so as to provide for a ready separation of the dogs from the notches and permit of a return movement of the section to its normal position, it being understood that the movement of the handles 38 is against the tension of the springs 29^b.

40 designates the back or head section which is pivotally connected to the arms 19 adjacent the rear of the center section 20, the connection being by a suitable means such as bolts 41 passing through the arms 19 and ears 42 carried by said section 40, thus providing for pivotal movements of the section 40 relative to the section 20. The section 40 is also provided with racks 25 having notches 26 and the notch 25^a, said rack construction cooperating with a supporting element similar to the element 27, the element for the section 40 having its shaft 29 mounted in the arms 19 on the opposite side of the point of connection of said arms 19 and the ears 18 from the point of connection of the section 40 with said arms. Instead of providing the operating mechanism for the element 27 shown in connection with the center section, I preferably place a laterally projecting handle 43 on each of the arms 28, said handle projecting upwardly beyond the periphery of said section and at a point readily grasped by the operator. By this construction it will be readily understood that the head or back section may be freely pulled from a position approximately in the plane of the section 20 (in which case

the dogs 32 rest in the uppermost or outermost notch) and the position in which said section 40 approaches the vertical, as indicated in Fig. 1, in which case the dogs 32 engage the notches 25^a, this latter position providing the chair position, the movement from the first to the second position being provided by simply raising the back, the dogs 32 riding over the notches. To return the section, it is necessary only to grasp a handle 43, withdraw the dogs from the notches and permit the section to move downwardly to the desired position. When the section is at its lowermost position, it is not only supported by the element 27, but also by contact of the section with the arms 19, thus supporting said sections at points adjacent its opposite ends.

The end or foot section, designated as 44, is structurally of approximately the same character as the head or back section with the exception as to size, said foot section also being provided with racks of the general type indicated in connection with other sections, the racks for this section 44 however, having an additional notch 26^a, the walls of which are so arranged as will permit of disengagement of the dogs 32 therefrom only when the element 27 is moved pivotally, the section itself remaining stationary; any attempt to provide such disengagement by a movement of the section on its pivot will be resisted by the contact of the dogs with the walls of the notches 26^a, these notches being located at the opposite end of the series of notches from that occupied by the notch 25^a. By this particular construction it will be readily understood that accidental manipulation of the foot section cannot be had, since there is a requirement of two specific operations, viz.; the movement of the element 37 to disengage the dogs 32, and the movement of the section on its pivot while such disengagement is had. This ability to lock the element 27 is also of advantage in that the parts are securely connected together when the foot section is bodily removed from the table, as presently described, the element 27 being of a form as to lie closely to the plane of the section, so that the section as an entirety occupies but little room in addition to that required by the body portion of the section, enabling it to be placed away when not used, the parts remaining in position ready for the return of the section to its position in the table, such return placing the section immediately operative, there being no requirement of a manipulation of parts after connection of the section with the remainder of the table is had. In view of the particular mounting of the section 44, I prefer to form the element 27 with inturned dogs 32, as shown in Fig. 3.

For the purpose of providing for the removability of the foot section, I employ

complemental members such as indicated in Figs. 5 and 6. The member or structure shown in Fig. 5 is the leg 24 heretofore described. This leg, at its top and on its inner face is provided with a recess or depression 45 leading downwardly from the upper surface of the leg, and positioned intermediate the length of the top of such leg. The leg is also provided with an inwardly extending pin or lug 46 positioned adjacent the bottom of the leg, said pin extending inwardly. The supplemental member, carried by the foot section is shown in Fig. 6 as being in the form of a plate 47, said plate being secured to an ear 48 formed at the upper end of this section (it being understood that there is provided a plate 47 and ear 48 at each side of the section). The plate 47 is provided with a projection or lug 49 adapted to fit within the recess or depression 45, the opposite end of the plate being provided with a recess 50, preferably having its walls inclined outwardly (either straight or curved) toward the entrance to the recess, this recess being adapted to receive the pin 46, the particular shape of the recess 50, providing for a proper centering of the parts without the necessity of particular care in entering the pin 46 into recess 50. The plate 47 is also provided with an ear 51 in which the shaft for the element 27 is mounted. This particular form of connection for the foot section permits of an engagement and disengagement of the parts by simple vertical movement of the foot section relative to the table, the only requirement being the entering of the pin 46 into the recess 50 and the lug 49 into depression 45; as the latter engagement is at the top and therefore free to visual inspection, the engagement may be had without difficulty; while the pin and recess connection at the bottom of the leg is somewhat hidden, the particular shape of the recess 50 permits the parts to be readily engaged. No locking devices are employed in connection with this form of connection, the weight of the section being sufficient to retain the parts against relative movement excepting when it is desired to disengage the parts.

As will be seen, all of the operating parts employed in connection with the foot section, are carried by the plates 47, so that such foot section and its adjusting devices all provide a substantially unitary structure engageable or disengageable relatively to the table as such unit. As shown in the drawings, the sections are each formed of sheet material, having depending rims. This provides for strength and lightness and enables the arrangement of the operating parts in such manner as to be partially housed thereby.

As shown in Figs. 1 and 2, I provide the head section with a bearing, through which

and an opening in the section rim, I pass the shank of a head rest, the rest being adjustably positioned in the bearing by means of a suitable set-screw device, such as indicated. This arrangement provides for the location of the fastening mechanism entirely within the bounds of the section rim. 53 designates the drainage pan slidably mounted on rods 54 extending from front to rear of the frame 10. I preferably mount on the outer face of the legs 24 a clamp device 55 by means of which the lithotomy staffs, used in connection with genito-urinary operations, are employed, these staffs being indicated at 56. As will be seen, each of the sections is pivotally supported, the head and foot sections being pivotally movable with respect to the center section; each section is also provided with its adjustable element 27, so that each section may be adjusted independently, and in addition an adjustment of the center section carries with it the other sections in the positions occupied by them relative to the center section. Furthermore, the entire foot section is removable bodily by a simple raising of the section as a unit, thereby taking away not only the section but its operating parts as well, leaving the front of the center entirely exposed. Inasmuch as the elements 27 of all of the sections each have handles projecting on both sides of the table positioning of the sections can take place without necessity of the operator moving from the side of the patient. A number of other advantages are present in the particular construction disclosed, but are thought to be obvious and are not herein pointed out in detail.

While I have herein shown and described a preferred embodiment of my invention, I desire it to be understood that I reserve the right to make such modifications and changes therein as conditions in use may require, so long as such modifications and changes fall within the spirit and scope of the invention as expressed in the following claims.

Having thus described my invention, what I claim as new is:—

1. In an adjustable support for physicians' tables or the like, the combination of a supporting frame, a shaft rigidly secured to said frame, a sleeve inclosing said shaft and capable of rotation thereon, an arm secured to said sleeve and constructed to form a dog, a second arm secured to said sleeve, a rod journaled in said frame, a handle rigidly secured to said rod outside of said frame, a crank arm also rigidly secured to said rod, and a link pivotally connected between said crank arm and said second arm whereby the dog may be operated by means of said handle.

2. In an adjustable support for surgical tables and the like, a pair of side members rigidly connected in fixed, spaced relation, a shaft extending between and having its ends

non-rotatably secured to said side members,
said shaft having a reduced portion adja-
cent one of its secured ends, a sleeve extend-
ing between said side members and wholly
5 inclosing said shaft, said sleeve being rota-
table on said shaft, an arm rigidly secured
to said sleeve adjacent each end thereof, said
arms extending parallel to each other, and a
tie rod connecting the same, the free ends of
10 said arms being bent toward each other to
constitute dogs, and a helical spring encir-

cling the reduced portion of said shaft inside
said sleeve, said spring having one of its
ends secured to said fixed shaft, and the
other to said surrounding sleeve.

In testimony whereof I affix my signature 15
in presence of two witnesses.

GEORGE LEWIS POLL.

Witnesses:

E. M. THOLT,
I. M. POLL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
