

July 25, 1933.

M. SCHMIDT ET AL

1,919,908

UROLOGICAL TABLE

Filed July 12, 1929

3 Sheets-Sheet 1

Fig 1.

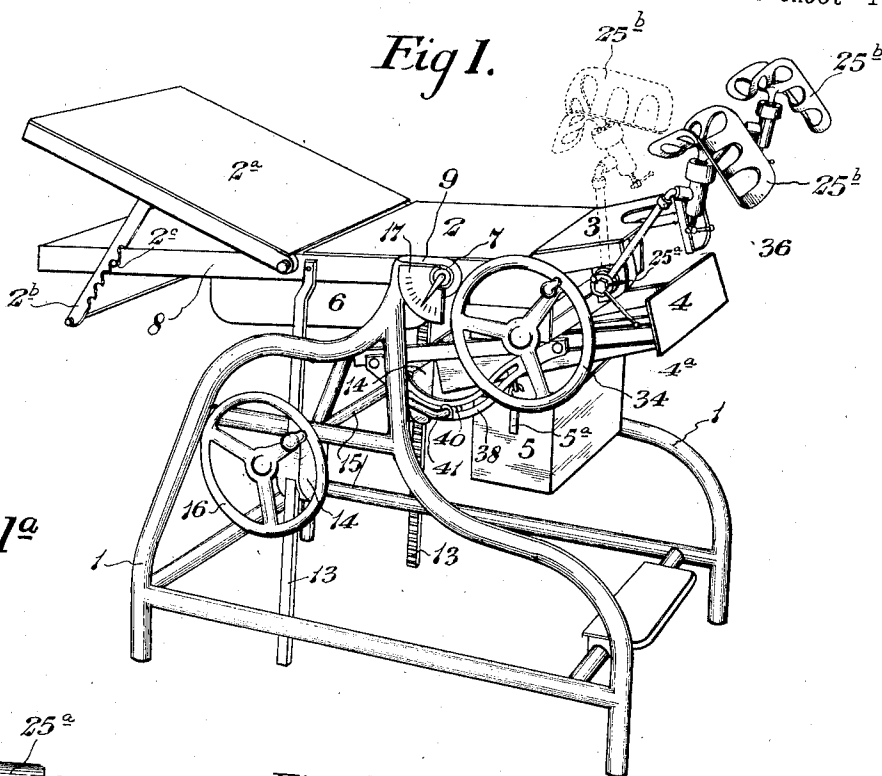


Fig 1a

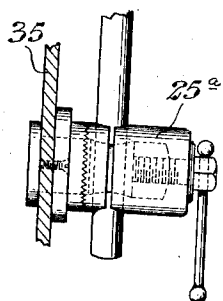


Fig. 3.

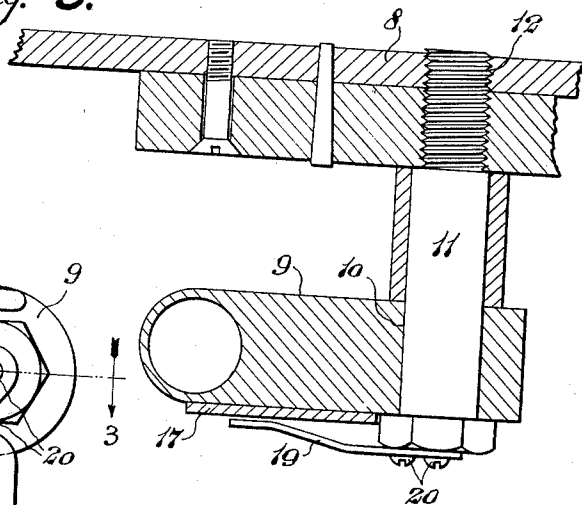
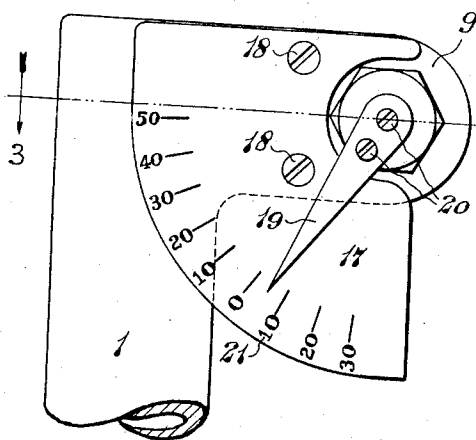


Fig. 2.



Max Schmidt
INVENTORS.
Emit Neubacher
BY James V. Ramsey
ATTORNEY.

July 25, 1933.

M. SCHMIDT ET AL

1,919,908

UROLOGICAL TABLE

Filed July 12, 1929

3 Sheets-Sheet 2

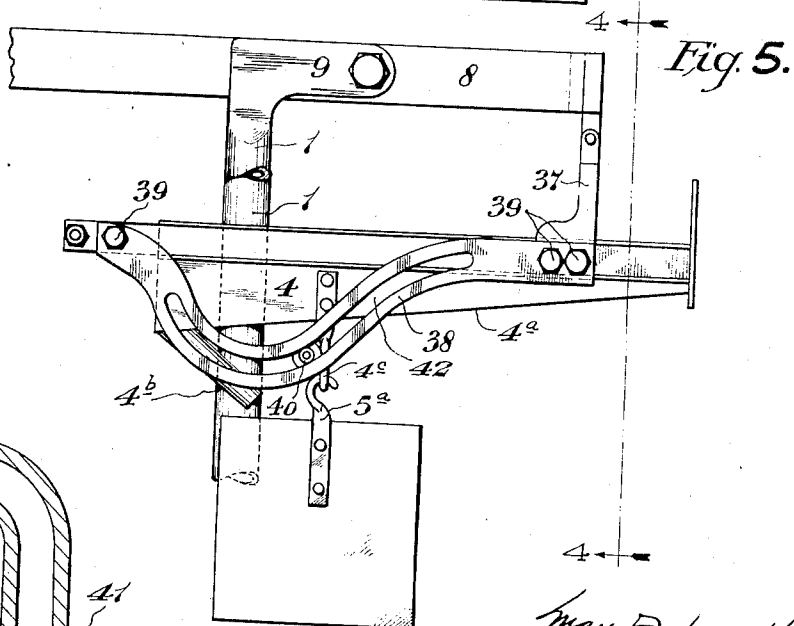
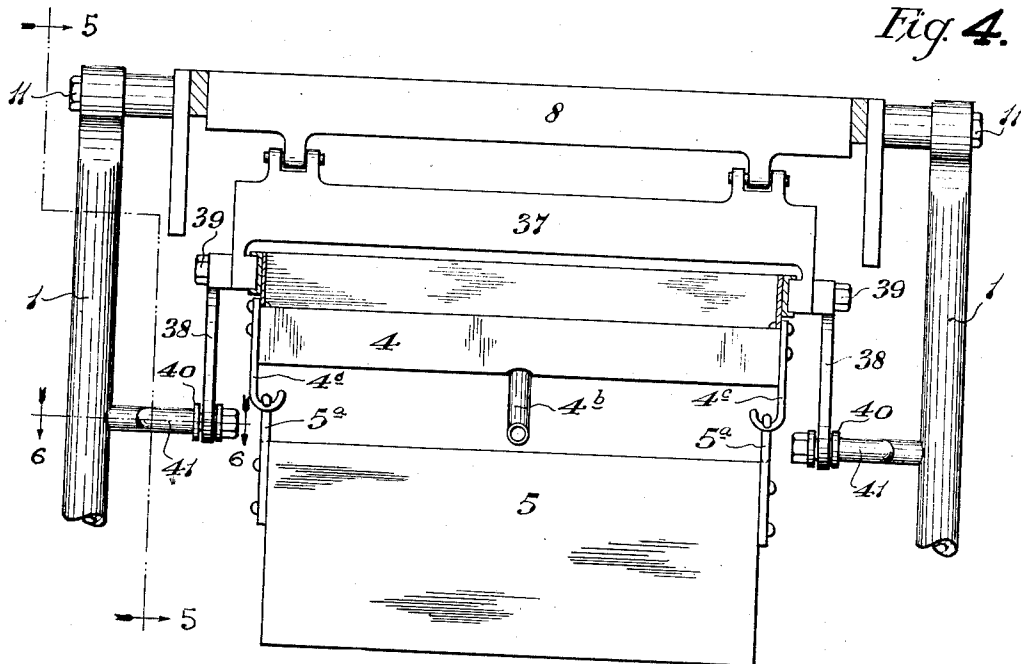
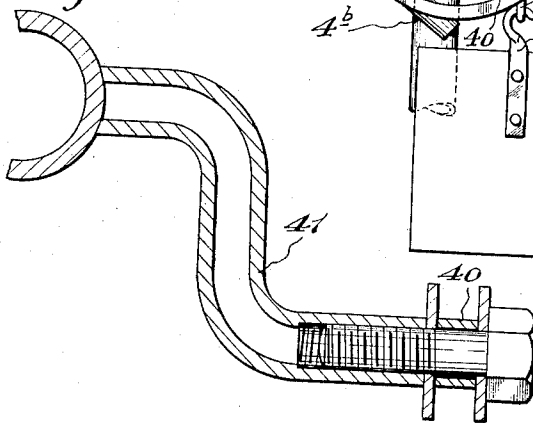


Fig. 6.



Max Schmidt
INVENTORS
Emil Neubacher
BY James N. Ramsey
ATTORNEY

July 25, 1933.

M. SCHMIDT ET AL

1,919,908

UROLOGICAL TABLE

Filed July 12, 1929

3 Sheets-Sheet 3

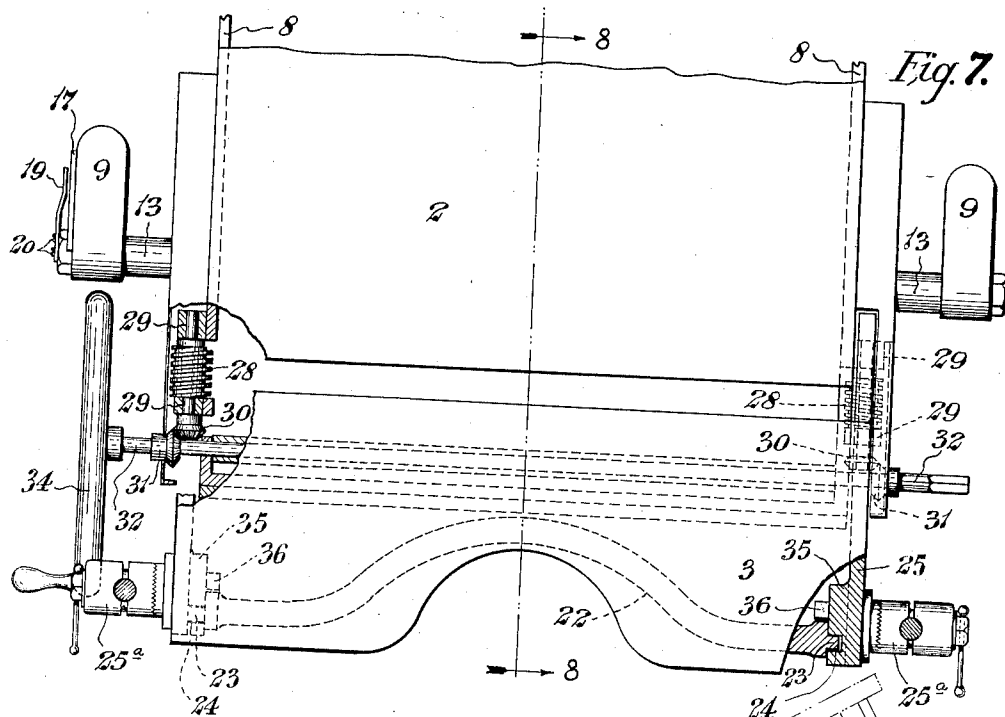


Fig. 8.

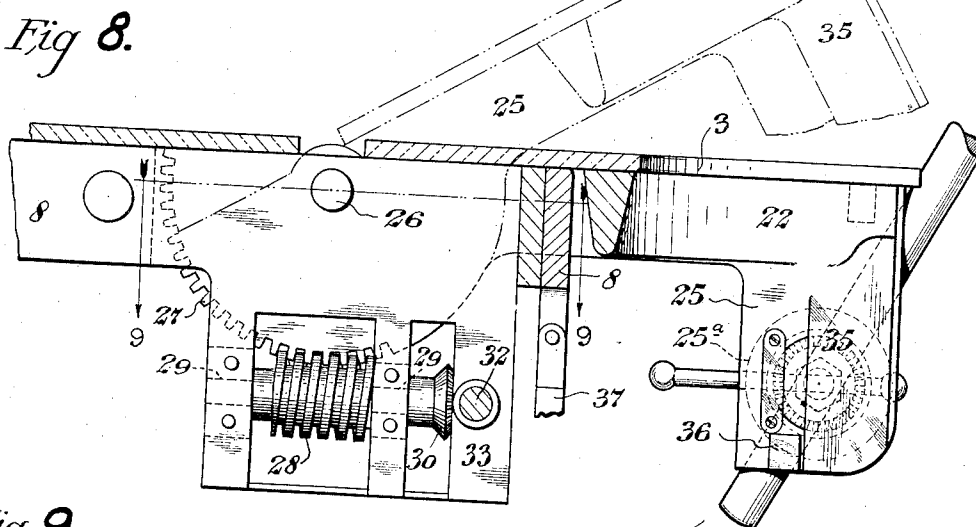
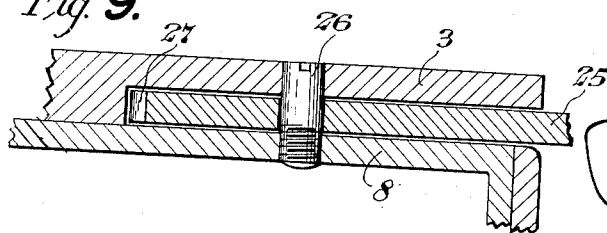


Fig. 9.



Max Schmidt
Emil Neubacher
INVENTORS

BY James N. Rousey

ATTORNEY.

UNITED STATES PATENT OFFICE

MAX SCHMIDT AND EMIL NEUBACHER, OF CINCINNATI, OHIO, ASSIGNORS TO THE MAX WOCHER & SON COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

UROLOGICAL TABLE

Application filed July 12, 1929. Serial No. 377,704.

Our invention relates to urological tables.

The objects of our invention are to provide a convenient, compact and substantial construction and arrangement of parts in

which the pivotally mounted platform or

top can be adjusted to, and firmly held at, any desired angle relative to the base while the patient is in position thereon; to provide easily operated means to enable the

operator to conveniently adjust the pelvic seat to any degree of angle desired while the patient is in position upon the table top, while making an examination of the

affected parts, and thus to enable him to make a more thorough inspection and examination than otherwise; to provide an

adjustable back rest which may be adjusted up or down to the required position to relax the abdominal muscles of the patient

during the taking of an X-ray picture; to provide indicating means so that a record can be made of the position of the top when a given photograph or X-ray picture is taken of the affected portion of the patient

so that the top may be set in exactly the same position at any subsequent time to correctly take additional pictures to accurately determine the later condition or development of the affected part; to provide

means whereby the longitudinally adjustable and universally mounted knee crutches may be readily adjusted forwardly and backwardly relative to the pivotally mounted pelvic or cystoscopic seat and be securely

held in such adjusted positions to obtain the requisite and comfortable position of the patient at any angle to which the table top and pelvic seat may be adjusted; to provide

a drain receptacle that will maintain its operative position regardless of the angle to which the top may be tilted and to provide

an auxiliary drain receptacle that will maintain an upright position at all times, regardless of the position or angle of the table top relative to the base.

Various other objects and advantages will become apparent as the description proceeds.

Our invention consists in the novel construction, combination, location and arrangement of parts, as herein fully set forth and claimed.

In the drawings:

Fig. 1 is a perspective view of a urological table having our novel features embodied therein;

Fig. 1a is a view partly in section and partly in elevation showing the rotatably mounted adjustable crutch support holder and its means of attachment;

Fig. 2 is an enlarged detail view of the angle indicator dial and pointer;

Fig. 3 is a horizontal section thereof taken on the line 3—3 of Fig. 2;

Fig. 4 is an end elevation of Fig. 1 with parts removed, parts appearing in vertical section on the line 4—4 of Fig. 5, and parts broken away;

Fig. 5 is a side elevation of Fig. 4, partly broken away, on the line 5—5 of Fig. 4;

Fig. 6 is a horizontal section taken on the line 6—6 of Fig. 4;

Fig. 7 is a plan view of Fig. 4;

Fig. 8 is a vertical section taken on the line 8—8 of Fig. 7, dotted lines representing an elevated position of the pelvic or cystoscopic seat; and

Fig. 9 is a horizontal section on the line 9—9 of Fig. 8.

In the embodiment of our invention as illustrated and which shows a preferred construction, we provide a urological table, as shown in Fig. 1, which comprises, broadly, base 1, top 2, pelvic seat 3, drain drawer 4, auxiliary drain bucket 5, flat Bucky diaphragm 6 and angle indicator 7. The top 2 is preferably made of bakelite or similar material and is pivotally supported by frame 8, said top also supporting said flat Bucky diaphragm 6. The upper ends of base 1 terminate in lugs 9, which lugs are each provided with a horizontally disposed hole 10, as clearly shown in Fig. 3. Threaded studs 11 are passed through holes 10 in lugs 9 and are screwed into threaded holes 12 in frame 8, as clearly shown in Fig. 3. Thus it will be seen that the frame 8 is pivotally supported by base 1. Racks 13, pivotally attached at their upper ends to frame 8 engage small pinions mounted within housings

14, which pinions are driven by a set of bevel gears fixed to shaft 15. When hand wheel 16 (fixed to one end of shaft 15) is manually turned in a clockwise direction, the top 2 is elevated or raised and when said hand wheel 16 is turned or rotated in an anti-clockwise direction, the top 2 is lowered. The angle indicator 7 comprises plate 17 fixed to one of the lugs 9 by screws 18, and pointer finger 19, fixed to the end of one of the studs 11 by screws 20 (see Figs. 2 or 3). Said plate 17 is provided with numerals 21, which indicate the degree of angle to which the top 2 is adjusted, as will be more fully described later.

The pelvic seat 3 is strengthened by curved rib 22 the outer ends of which are provided with lugs 23. Said lugs 23 are adapted to fit within sockets 24 of supporting arms 25. The arms 25 are pivotally supported upon studs 26 which studs are securely mounted in frame 8 of top 2. Each of the arms 25 includes a gear segment 27 cut integral therewith and adapted to mesh with a worm 28, as clearly shown in Fig. 8. The worms 28 are rotatably mounted in bearings 29 located upon the front ends of frame 8 and are rigidly connected with bevel gears 30, as clearly shown in Figs. 7 or 8. Bevel gears 30 are in meshing engagement with bevel gears 31, the latter gears being rigidly mounted upon shaft 32 and said shaft 32 being rotatably mounted in the ends 33 of frame 8, as clearly shown in Fig. 8. Hand wheel 34 is mounted upon one end of shaft 32 and, if desired, a similar hand-wheel may be mounted upon the other end of said shaft. The rib 22 (beneath pelvic seat 3) is provided with downwardly projecting arms 35 which rest against shoulders 36, integrally formed with supporting arm 25 and in this way strengthens said pelvic seat.

Suitably mounted in each arm 25, we provide a rotatable adjustable crutch holder 25a whereby each clutch 25b is adapted to be moved forwardly and backwardly and held in any desired adjustable position relative to the pelvic seat 3 and moved in unison with said seat upon its pivotal mounting.

The support for drain drawer 4 is in the form of a frame 37 which is hingedly attached to the front end of frame 8, as clearly shown in Fig. 4. A slotted track 38 is fixed to each side of frame 37 by bolts 39, and rollers 40, supported by brackets 41, are rotatably mounted within the slots 42 of slotted track 38. It will, therefore, be readily seen that as the position of top 2 is changed relative to base 1 (by the turning of hand wheel 16) the drain drawer 4 will maintain an operative non-overflowing position and drain-bucket 5 will maintain a horizontal or upright position regardless of the angle to which said top 2 is moved.

The bottom 4a of drain-drawer 4 prefer-

ably slopes rearwardly and is provided with a spout 4b which directs the flow of liquid from drain drawer 4 to drain bucket 5. The bucket 5 is provided with hook straps 5a, the hook ends of which are pivotally received by cooperating hook straps 4c mounted upon the sides of drain drawer 4, as clearly shown in Figs. 4 and 5, respectively.

To tilt or raise the pelvic seat 3 from the position shown by full lines in Fig. 8 to the position shown by broken lines in the same figure, it is merely necessary to manually rotate hand wheel 34 in a clockwise direction. To lower the pelvic seat 3 on studs 26, simply rotate hand wheel 34 in an anti-clockwise direction. To raise or tilt the top 2 simply rotate handwheel 16 in a clockwise direction which, in turn, raises the rack 13 and to lower said table-top 2, simply reverse the direction of hand-wheel 16, or, in other words, turn it in an anti-clockwise direction.

To more fully describe the purpose of the angle-indicator 7, let us assume that the table top 2 has been elevated so that the pointer finger 19 points to the numeral 40 on plate 17 and with the table top in this position a patient is placed thereon and a photograph or X-ray picture taken. A record of the position of the table top as thus indicated may be made and should it thereafter become necessary to take additional photographs to determine the development of the affected part the table top may be placed in exactly the same position, whereupon a second photograph may be made. When making or taking the pictures the number (to which the pointer finger 19 points) may be marked upon the picture or plate (at that time) and in this way a permanent record is made of the exact position of the table top 2 during the making of the photograph.

The back rest 2a is pivotally attached at one end to the table top and is adjustably supported by notched arms 2b adapted to engage studs 2c on the edges of the table top to enable said back rest to be disposed in either horizontal position, or in any elevated position desired, such as that shown in Fig. 1. By elevating the back rest 2a and pelvic seat 3 slightly the abdominal muscles of the patient will be relaxed and thereby better results in the taking of the picture, or in the examination of the patient, will be obtained.

One of the novel and important features of this invention is the adjustable platform which is adapted to be moved, by suitable gear mechanism, to any angle desired and held in adjusted position while the patient is in position thereon.

An advantage of this improved urological table is that no matter to what position the table top 2 is adjusted the drain drawer 4 will always maintain an operative position

and auxiliary drain bucket 5 will always maintain a horizontal or upright position.

Still another advantage of this improved table is that the pelvic seat 3 may be adjusted to any desired angle relative to the table top 2 by the mere turning of hand wheel 34 while the patient is in position upon the table and without the necessity of removing the patient for the purpose of making the adjustment. This is an important feature as the pelvic seat is adjustable to any slight change in position, thereby insuring thorough examination of the affected parts of the patient.

The knee crutches having a ball and socket mounting and being adjustable forwardly and backwardly relative to the pelvic seat provide a comfortable position for the legs of the patient and also permit ready adjustment or change in position when desired.

A still further advantage of this invention is the peculiar shape of the base 1. This shape, as clearly shown in Fig. 1, has proved to be very satisfactory when in use and permits the table top 2 to be tilted at a very great angle without the forward end or pelvic seat 3 coming into contact or interfering in any way with the forward part of base 1.

It will be understood that certain changes and modifications can be made without departing from the scope or spirit of the invention as defined in the claims.

What we claim as new and desire to secure by Letters Patent is:

1. A urological table having a base and top pivotally mounted thereon in combination with means for determining the angle of movement of said top relative to said base comprising a plate rigidly mounted with said base and having indicia thereon, and a pointer finger mounted rigidly with said top and movable therewith and adapted to point to any of said indicia.

2. In a urological table, the combination of a base, a top pivotally and adjustably supported thereon, a drain support frame hinged to said top, a drain drawer slidably mounted in said frame, a slotted track attached to said frame, a bracket mounted on said base, and a roller on said bracket engaging said slotted track, for the purposes specified.

3. In a urological table having a base and top, a pelvic seat pivotally attached to said top, a pair of segmental gears secured to said pelvic seat and a pair of worm gears mounted on said base and adapted to engage said segmental gears, respectively, and mechanism adapted to operate said worm gears to tilt and firmly hold said pelvic seat to any angle desired relative to said top.

4. A urological table having a base with a top pivotally supported thereby, in combination with a pelvic seat removably mounted upon the forward end of said top, a frame

pivotally mounted to the forward end of said top and adapted to support said pelvic seat, gear segments on said frame, worms rotatably mounted in said top and in meshing engagement with said segments and means for rotating said worms whereby said seat is tilted relative to said top and firmly held in any desired tilted position.

5. A urological table having a base with a top pivotally supported thereby and having means for tilting and holding said top to different angles while the patient is in position thereon, in combination with a pelvic seat, a frame pivotally mounted upon the forward end of said top and adapted to support said pelvic seat, gear segments on said frame, worms rotatably mounted in said top and in meshing engagement with said segments and means for rotating said worms whereby said seat is tilted to different angles relative to said top, for the purposes specified.

6. In a urological table having a base with a top pivotally supported thereby and having means on said base for tilting said top upon its pivotal support, a drain-drawer, and auxiliary drain bucket pivotally supported by said drain-drawer, and means for holding said drain-drawer and bucket in substantially horizontal position at all times, substantially as set forth and for the purposes specified.

7. In a urological table having a base with a top pivotally supported thereby and having means on said base and pivotally connected to said top for tilting said top upon its pivotal support and holding it in any desired adjusted position, a drain receptacle pivotally attached to said top and slidably connected to said base to maintain said drain receptacle in operative non-overflowing position independently of the position of the table-top.

8. In a urological table having a base with a top pivotally supported thereby and having means for tilting and holding said top to any angle desired, a drain receptacle pivotally attached to said top adjacent and beneath one end thereof, and a curved guide fixed to said drain receptacle and a support on said base adapted to slidably engage said guide whereby said drain receptacle is maintained in operative non-overflowing position regardless of the angle of the top.

9. A urological table of the class described and having a pelvic seat, adjustable supports carried by and adapted to move with said pelvic seat, knee crutches carried in said supports and adapted to be adjusted forward and backward on said supports relative to said pelvic seat in any of its adjustments, for the purposes specified.

10. In a urological table having a base, a top pivotally supported thereby said top comprising a central section having a back

rest pivotally connected thereto and having at one end a short pivotally mounted pelvic seat, means on said base and connected to said top for pivotally adjusting and securely holding said top to any angle desired while the patient is in position thereon, and means to tilt said pelvic seat relative to said top with the patient thereon.

11. In a urological table having a base and a pivotally and adjustably mounted top supported thereby said top having a back

rest pivoted thereto and an adjustable short pelvic seat with a cut out portion pivotally mounted on one end of said top.

12. A urological table having a top comprising a central section having a back rest and pelvic seat pivoted thereto and means to move and hold said pelvic seat on its pivot to any angle desired relative to said central section.

MAX SCHMIDT.
EMIL NEUBACHER.

75	80
80	85
25	90
30	95
35	100
40	105
45	110
50	115
55	120
60	125
65	130