Jan. 29, 1935. H. L. THOMPSON 1,989,434

CHIROPRACTOR'S TABLE

Filed April 10, 1933

Fig. 1.

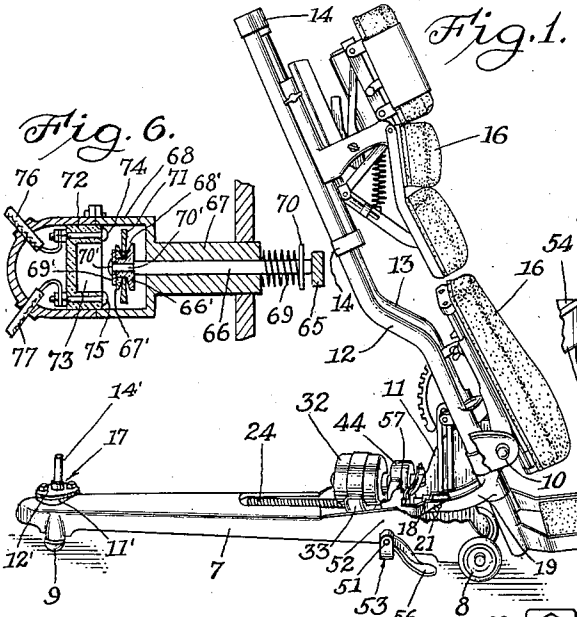


Fig. 2.

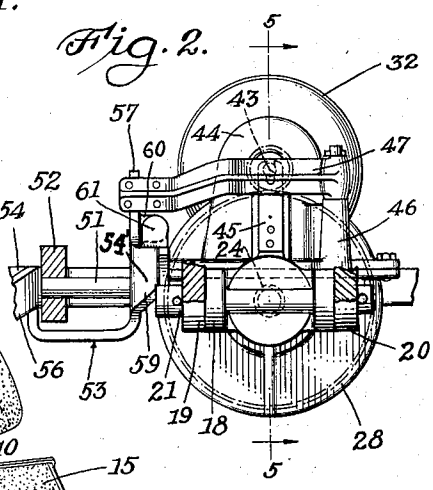


Fig. 6.

Fig. 3.

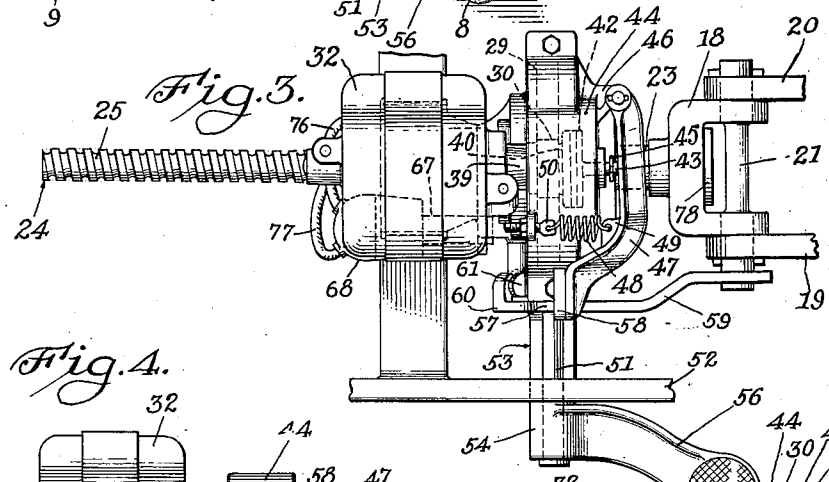


Fig. 4.

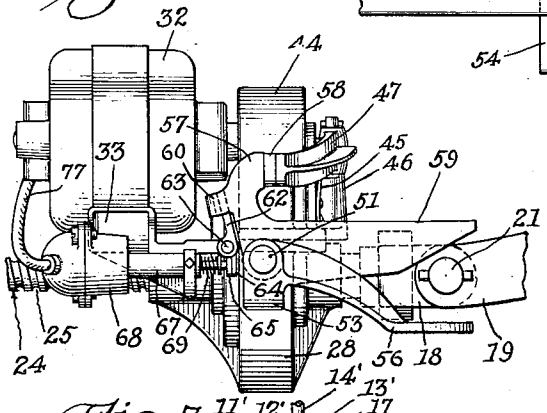


Fig. 5.

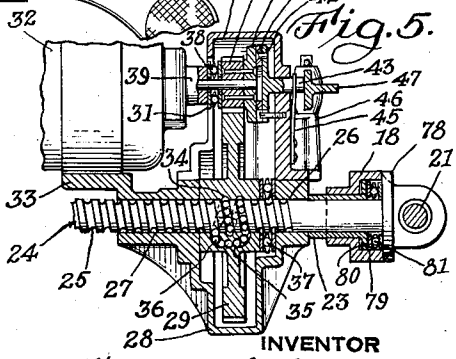
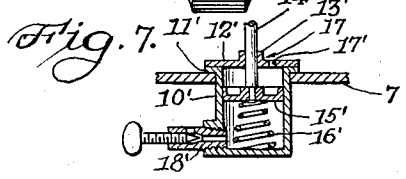


Fig. 7.



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1,989,434

CHIROPRACTOR'S TABLE

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Application April 10, 1933, Serial No. 665,288

26 Claims. (Cl. 128—73)

This invention relates to operating tables of the kind used by chiropractors and others and comprising a base and a movable table mounted on the base for raising and lowering a patient according to the desire of the operator, and one of the objects of the invention is to enable an operating table of this kind to be easily and smoothly raised and lowered without disturbing the patient regardless of his weight.

Another object is to enable the operator to maintain positive control of the table at all times during raising and lowering movements thereof so that these movements may be regulated as conditions may require to insure peace and comfort of the patient.

Further objects are to enable the operator to stop the raising and lowering movements of the table when desired so that a patient resting on the table may be properly positioned for treatment; to enable the movable table to be returned to the same upright position in repetitious lowering and raising movements thereof and to automatically stop the table when it attains this upright position; to prevent damage to the operating parts of the operating table by preventing improper operation thereof; to prevent binding of the moving parts and to reduce friction to a minimum to promote free and smooth movement of the movable table; to provide a novel single control for regulating the raising and lowering movements of the table; and to provide a novel operating table of simple and economical construction and efficient and positive operation.

A selected embodiment of my novel operating table is illustrated in the accompanying drawing wherein

Fig. 1 is a side elevation;

Fig. 2 is a front elevation, the movable table having been broken away;

Fig. 3 is a plan view of the parts shown in Fig. 2;

Fig. 4 is a side elevation of these parts;

Fig. 5 is a sectional detail view taken substantially on the line 5—5 on Fig. 2;

Fig. 6 is a fragmentary detail of the motor control switch; and

Fig. 7 is a detail view of a pneumatic stop for the movable table.

In the accompanying drawing I have illustrated an operating table embodying a base 7 mounted on wheels 8 and a caster 9. Brackets 10 and 11 (Fig. 1) are provided on opposite sides of the base near the front end thereof and the movable table, adapted to support the patient, is pivotally mounted on these brackets. The movable table includes two substantially parallel side bars 12 and 13 which are respectively pivotally connected to the brackets 10 and 11 and these side bars are interconnected by suitably located cross bars 14. A platform 15 is mounted at the ends of the side bars 12 and 13 adjacent the pivotal connection thereof to the brackets 10 and 11. Suitable cushions 16 are adjustably mounted on the side bars 12 and 13 in a known manner so that a patient standing on the platform 15 may rest against the cushions 16 which may be adjusted to properly accommodate the patient. The movable table is adapted to move between the upright position illustrated in Fig. 1 and a horizontal position determined by the stop 17 at the rear end of the base 7, and the table may be stopped and held in any desired position intermediate these two extreme positions.

The stop 17 is preferably of the cushion type and includes a housing 10' having a flange 11' at the upper end thereof adapted to rest on the top of the base 7 when the housing 10' is passed through an opening in the base. A cover plate 12' is secured to the flange 11' by screws or similar devices and includes a bearing 13' through which the stop pin 14' of the stop 17 projects. The pin 14' is connected to a piston 15' reciprocally mounted in a cylinder provided in the housing 10' and a spring 16' acts on the piston to urge it toward the cover plate 12'. A vent 17' is provided in the cover plate 12' and affords an exhaust for air upon upward movement of the piston 15'. A variable vent 18' is provided near the bottom of the cylinder in the housing 10' and by varying the capacity of the vent 18' the exhaust of air from the cylinder may be regulated to thereby control downward movement of the piston 15' and consequently the pin 14'. This provides a cushion stop which absorbs any jar attendant to engagement of the movable table with the stop 17.

The foregoing is a preferred construction of operating tables with which my invention is used but it is to be understood that it might be used with other constructions without departing from the purview thereof.

My invention particularly resides in the power unit for the movable table. The power unit includes a yoke 18 rotatably mounted on a sleeve 23 carried by the front end of the spindle 24 which is screw threaded, as indicated at 25, throughout the major portion of its extent. A pin 21 is provided in the yoke 18 and two arms 19 and 20 have corresponding ends thereof mounted on this pin, the opposite ends of said

arms rigidly embracing the side bars 12 and 13, respectively.

The spindle is journaled in bearings 26 and 27 provided in a housing 28 mounted in an opening in the base 7 and supported by a suitable cradle. A gear 29 is mounted in the housing 28 between the bearings 26 and 27 and includes a bearing portion through which the spindle 24 is extended. The gear 29 meshes with a pinion 30 fast on the shaft 31 of the motor 32 carried by a bracket 33 on the housing 28.

A frictionless nut and screw connection is provided between the gear 29 and the spindle 24 and includes a spiral groove 34 in the face of the bearing of the gear surrounding the spindle. A channel 35 in the gear 29 interconnects the ends of the spiral groove 34. The spiral groove 34 cooperates with the screw threads 25 in the spindle 24 and in cooperation with the channel 35 provides a raceway filled with balls 36, which balls serve to interconnect the gear 29 to the spindle 24. A thrust bearing 37 is interposed between the end of the bearing on the gear 29 and the adjacent end of the bearing 26.

A thrust bearing 38 is interposed between the end of the sleeve 39, surrounding the motor shaft 31 and formed as a part of the housing of the motor 32, and the pinion 30. A brake disc 40 is fast to the opposite face of the pinion 30. A friction ring 41 is adapted to engage the face of this disc and is carried by a plate 42 including a plunger 43 which is journaled in a bearing provided in the shell 44 which encloses the pinion 30 and the upper part of the gear 29. A groove is provided in the plunger 43 in the portion thereof projecting beyond the shell 44 and the bifurcated end of a leaf spring 45 is engaged in this groove, the spring 45 being secured to the adjacent outer face of the shell 44 and urging the plunger 43 and consequently the plate 42 and the ring 41 outwardly and away from the brake disc 40.

A lug 46 (Fig. 3) is provided on the shell 44 and a brake arm 47 is pivotally mounted thereon. A spring 48 extends between a spring anchor 49 on the arm 47 and an adjustable spring anchor 50 provided on the shell 44, adjustment of the spring anchor 50 varying the tension of the spring 48. The spring 48 acts on the brake arm 47 to urge the plunger 43 inwardly against the action of the spring 45 which is weaker than spring 48, to frictionally engage the ring 41 with the face of the brake disc 40 to thereby hold the pinion 30 and consequently the gear 29 against rotation.

A stud shaft 51 is rotatably mounted in the housing 28 and is fast in the upstanding side rail 52 on the base 7. A rockable member 53 includes a bearing portion 54, which is rockably mounted on the stud shaft 51 outwardly of the rail 52, and another bearing portion 54' which is rockably mounted on the stud shaft 51 adjacent the housing 28. A foot pedal 56, unitary with the bearing 54, extends outwardly and downwardly from the bearing. An upstanding lug 57 is provided on the rockable member 53 and engages the face plate 58 at the free end of the brake arm 47. An arm 59 is provided on the rockable member 53 and extends forwardly to be engageable with the pin 21, as will be explained.

The lug 57 includes a depending arm 60 carrying a pad 61 adapted for engagement with the arm 62 pivotally mounted at 63 on the housing 28. The arm 62 includes a pad 64 engageable with the button 65 provided at the outer end of the plunger 66 journaled in a sleeve 67 of the switch housing 68. A spring 69 (Fig. 6) is disposed about the plunger 66 and extends between the end of the sleeve 67 and a collar 70 fast on the plunger 66 and normally acts on the plunger to retract the contact plate 71 from circuit closing position. The inner end of the plunger 66 is reduced and a collar 66' of insulating material is mounted on this reduced end. A ring 67' of insulating material is mounted on this collar and this ring and collar include cooperating rounded surfaces providing a slot 68' in which the hardened contact plate 71 is arranged, the plate extending between the ring and collar. The ring, plate, and collar are held in assembled relation on the reduced end of the plunger 66 by a washer 69' and the peened end 70' of the plunger. A contact plate 72 is fast in the housing 68 and has a medially located recess 73 therein. Contacts 74 and 75 are mounted in the plate 72 and conductors 76 and 77 are respectively connected thereto. When the plunger 66 is moved inwardly against the action of the spring 69, the end 70', washer 69' and the ring 67' enter the recess 73, and the plate 71 engages the contacts 74 and 75 to electrically interconnect them and upon so engaging the contacts the plate flexes, by reason of its innate resiliency and the loose mounting thereof between the rounded surfaces on the collar 66' and ring 67', and this assures good contact and quick disengagement. Upon engagement of the contact plate 71 with the contacts 74 and 75 circuit is closed between the conductors 76 and 77 to the motor 32 which is thereupon set in operation.

A disc 78 (Fig. 5) is provided at the front end of the spindle 24 outwardly of the yoke 18. The yoke 18 has a recess 79 in the forward face thereof in which a peripheral flange 80 at the forward end of the sleeve 23 is disposed. A thrust bearing 81 is mounted on the spindle 24 in the recess 79 between the disc 78 and the flange 80. The recess 79 is deeper than the combined thickness of the flange 80 and the thrust bearing 81 and, when the flange is retracted into the bottom of the recess, the disc 78 frictionally engages the forward face of the yoke 18.

The operation of the device is as follows: A patient stands on the platform 15 and rests against the cushions 16 which are adjusted to accommodate the patient. At this time the yoke 18 is in its innermost position and the pin 21 is so located that when the operator depresses the foot pedal 56, the arm 59 engages the pin 21 and limits the depressing movement. The permissible movement of the foot pedal rotates the rockable member 53 to move the brake arm 47 against the action of the spring 48. This moves the arm away from the end of the plunger 43 and the spring 45 then retracts the ring 41 from engagement with the face of the brake disc 40 which frees the pinion 30 and the gear 29 and permits rotation thereof. The weight of the patient resting on the cushions 16 (or the innate weight of the movable table) causes the movable table to move toward the stop 17 and this movement is transmitted through the arms 19 and 20 to the yoke 18 which is urged into tight frictional engagement with the disc 78 and this frictional engagement is sufficient to prevent rotation of the spindle 24. This movement causes the spindle to move outwardly and permits the movable table to lower toward the stop 17. The longitudinal non-rotary movement of the spindle causes rotation of the gear 29 and pinion 30. When the table has attained the desired position, the oper-

ator removes his foot from the pedal 56 whereupon the spring 48 acts through the arm 47 and the plunger 43 to reengage the ring 41 with the face of the brake disc 40 and this engagement prevents further rotation of this disc, the pinion 30, and the gear 29. As explained, the spindle 24 is held against rotation and, since the gear 29 is now held against rotation, further outward movement of the spindle 24 is prevented and the movable table is held in the attained position.

The outward movement of the spindle 24 positions the pin 21 beyond the end of the arm 59. Consequently, when it is desired to return the movable table to the position shown in Fig. 1, the operator again depresses the foot pedal 56 but since downward movement of the pedal is not at this time limited by engagement of the arm with the pin, the rockable member 53 is moved in a greater amount than when movement thereof is limited by engagement of the arm 59 with the pin 21. This greater movement of the rockable member 53 frees the ring 41 from the face of the brake disc 40 and it also causes the pad 61 to engage the arm 62 which does not occur when movement of the foot pedal 56 is limited by engagement of the arm 59 with the pin 21. Engagement of the pad 61 with the arm 62 causes the pad 64 to engage the button 65 on the plunger 66 and upon further movement this plunger is moved inwardly to engage the contact plate 71 with the contacts 74 and 75 to thereby close the circuit to the motor 32. When circuit is closed to the motor 32, the pinion 30 is driven and this movement is transmitted to the gear 29. Rotation of the gear 29 is transmitted through the balls 36 to the spindle 24 whereupon this spindle is caused to move inwardly. Inward movement of the spindle 24 causes the disc 78 to urge the yoke 18 inwardly and this movement is transmitted through the arms 19 and 20 to the movable table whereupon it is moved toward and returned to the position shown in Fig. 1. The end of the sleeve 23 engages the adjacent part of the housing 28 when the table attains the position shown in Fig. 1. The spindle 24 does not rotate during inward movement thereof since the frictional engagement between the disc 78 and the end of the yoke 18 is sufficient to prevent this.

When the movable table attains the position shown in Fig. 1, the yoke 18 and the pin 21 move into position whereat the pin 21 engages the arm 59 and this so moves the rockable member 53 that the pad 61 is disengaged from the arm 62 and consequently circuit to the motor 32 is opened, and when this occurs the operator removes his foot from the pedal 56 whereupon the ring 41 reengages the face of the brake disc 40 and holds the parts in the position illustrated.

Were it not for the momentum of the motor and the movement transmitting parts no provision would be necessary to allow the spindle 24 to rotate for when the switch was opened, the motor, the movement transmitting parts and the table would stop movement. The amount of overrun of the motor and the parts subsequent to the opening of the switch is dependent upon the speed of the operation which varies with the load, and hence the amount of overrun varies which would vary the upright position of the table were it not for the arrangement of the parts at the front end of the spindle. This arrangement includes the yoke 18 which is slidable on the sleeve 23 and when the spindle 24 moves inwardly and the sleeve 23 engages the adjacent part of the housing 28, there is relative sliding movement between the yoke 18 and the sleeve 23 which relieves pressure between the face of the yoke and the disc 78 and free rolling movement between these parts is provided by the thrust bearing 81. When the frictional restraint on rotation of the spindle is relieved, the spindle and gear 29 may rotate together. At the time the sleeve 23 engages the housing 28, the yoke is still being urged toward the disc 78 but when this engagement occurs, the spindle is free to rotate and it turns in the gear 29. However, the forcing of the yoke toward the disc reengages the yoke with the disc which instantly causes the spindle to stop rotating. But if the gear is still rotating the frictional engagement of the yoke and disc imparts an impulse tending to raise the table whereupon the sleeve 23 again pushes the thrust bearing forward thereby freeing the frictional engagement between the disc 78 and the yoke 18. This alternate relief of friction engagement and reengagement of the yoke 18 and the disc 78 continues until the frictional engagement of the spindle and yoke is just sufficient to balance the weight of the table even if the rotation occurs. This action occurs rapidly so that it does not jerk or have other noticeable effect on the table. In event the motor is not interrupted when the table reaches its upright position, the sleeve 23 will adjust the pressure between the yoke face and the disc 78 to provide the required amount of friction to keep the table in its upright position while the gear 29 and the spindle 24 continue to rotate. The point at which the sleeve 23 engages the housing 28 determines the limit of movement of the table with the result that it does not overrun the predetermined position.

Particularly because of the frictionless interconnection between the spindle 24 and the gear 29, the spindle may tend to overrun and to prevent this overrun binding the spindle, which might interfere with free lowering of the movable table upon subsequent operation, the thrust bearing 81 is provided, and this thrust bearing is brought into operation in the following manner: About the time the pin 21 initially engages the arm 59 the inner end of the sleeve 23 engages the adjacent part of the housing 28. Further inward movement of the spindle 24 causes the yoke 18 to slide along the sleeve 23 and this sliding movement of the yoke not only takes up the clearance between the flange 80, the thrust bearing 81 and the adjacent face of the disc 78 but it also disengages the disc from the yoke which relieves the frictional engagement of the forward end of the yoke with the disc, and then, since the thrust bearing 81 is substantially frictionless, the spindle 24 may rotate freely and consequently the spindle 24 may coast until it stops of its own accord, and it is to be understood that at this time the gear 29 is held against rotation in the manner described above.

The table of this invention lowers by gravity when the brake is released and power need only be applied to raise the table. The parts are so arranged that when the table is in its normal upper position the circuit to the motor cannot be closed, this constituting a safety feature, although a further safety feature is provided which prevents damage to the parts by the arrangement at the forward end of the spindle that frees the frictional engagement between the parts and therefore permits the spindle to freely rotate. A substantially frictionless interconnection is provided between the spindle 24 and the power driving

means therefor which facilitates the gravity lowering of the table as it obviates any binding effect and permits the table to move freely and smoothly without disturbing the patient. The movement of the table is under direct control of the operator and it may be stopped when and as desired to properly position a patient resting on the table and this positive control promotes the peace and comfort of the patient. The table moves freely and smoothly regardless of the weight of the patient and the brake may be manipulated to regulate the speed of movement without jerking or jarring or otherwise discomforting the patient.

While I have illustrated and described a selected embodiment of my invention it is to be understood that this is capable of variation and modification and I therefore do not wish to be limited to the precise details set forth but desire to avail myself of such changes and alterations as fall within the purview of the following claims.

I claim:

1. In a device of the class described, a table movable between raised and lowered positions, means for holding the table in adjusted positions and against movement toward and into lowered position, means for moving the table toward and into raised position, and means for conjointly releasing the holding means and operating the moving means and for separately releasing the holding means and controlling movement of the table into adjusted positions.

2. In a device of the class described, a table movable between raised and lowered positions, brake means for holding the table in adjusted positions and against movement toward and into lowered position, power operated means for moving the table toward and into raised position, and means for conjointly releasing the brake means and operating the power operated means and for separately releasing the brake means and controlling movement of the table into adjusted positions.

3. In a device of the class described, a table movable between raised and lowered positions, means for holding the table in adjusted positions and against movement toward and into lowered position, means for moving the table toward and into raised position, means for conjointly releasing the holding means and operating the moving means and for separately releasing the holding means and controlling movement of the table into adjusted positions, and means for preventing conjoint releasing of the holding means and operation of the moving means when the table is in raised position.

4. In a device of the class described, a base, a table pivotally mounted on said base, operating means for moving the table relative to said base, releasable means for controlling movement of the table independently of said operating means, and means for conjointly releasing the releasable means and operating the operating means and for separately releasing the releasable means and controlling movement of the table into adjusted positions.

5. In a device of the class described, a base, a table pivotally mounted on said base, operating means for moving the table relative to said base, releasable means for controlling movement of the table independently of said operating means, means for conjointly releasing the releasable means and operating the operating means and for separately releasing the releasable means and controlling movement of the table into adjusted positions, and means for preventing conjoint releasing of the releasable means and operation of the operating means when the table is in a predetermined position.

6. In a device of the class described, a base, a table pivotally mounted on said base, electrically operated means for moving the table relative to said base, releasable means for controlling movement of the table independently of said electrically operated means, a switch for controlling operation of said electrically operated means, and means for conjointly releasing the releasable means and closing said switch and for separately releasing the releasable means and controlling movement of the table into adjusted positions.

7. In a device of the class described, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said table, driving means in said power unit for imparting movement to said spindle to move said table, brake means in said power unit and cooperating with said driving means to hold said spindle and said table against movement, a switch for controlling operation of said power unit, and manually operable means for conjointly releasing the brake means and closing said switch and for separately releasing the brake means and controlling movement of the table into adjusted positions.

8. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for imparting movement to said spindle to move said movable table, brake means in said power unit and cooperating with said driving means to hold said spindle and said movable table against movement, and control means for separately releasing the brake means upon movement of the control means in a limited amount in one direction and for conjointly releasing the brake means and operating the driving means upon additional movement of the control means in the same direction and controlling movement of the table into adjusted positions.

9. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for moving said spindle longitudinally in one direction to move said movable table in one direction, brake means in said power unit and cooperating with said driving means to hold said spindle and said movable table against movement, and manually operable means for releasing said brake means to permit said spindle and said movable table to freely move in the other directions.

10. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for moving said spindle longitudinally in one direction to move said movable table in one direction, brake means in said power unit and cooperating with said driving means to hold said spindle and said movable table against movement, manually operable means for releasing said brake means to permit said spindle and said movable table to freely move in the other directions, said driving means including an electric motor, a switch to control operation of said motor, and means operable by said manually operable means to close said switch upon operation of said manually operable means.

11. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit, a rotatable member in said power

unit, means connecting said rotatable member to said spindle, means connecting said spindle to said movable table, and means for rotating said rotatable member to move said spindle longitudinally through said power unit to thereby impart movement to said movable table.

12. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit, a rotatable member in said power unit, means connecting said rotatable member to said spindle, means connecting said spindle to said movable table, means for rotating said rotatable member to move said spindle longitudinally through said power unit to thereby impart movement to said movable table, and brake means in said power unit for holding said rotatable member against rotation to hold said spindle and said movable table against movement.

13. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit, a rotatable member in said power unit, means connecting said rotatable member to said spindle, means connecting said spindle to said movable table, means for rotating said rotatable member to move said spindle longitudinally through said power unit to thereby impart movement to said movable table, and means to prevent binding of said spindle at the inner end of the movement thereof in said power unit.

14. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit and having a screw thread on the periphery thereof, a rotatable member in said power unit and mounted on said spindle and having a screw thread therein and a channel interconnecting the ends of the screw thread, the screw thread and channel in said rotatable member cooperating with the screw thread on said spindle to provide a raceway, a plurality of balls in said raceway and interconnecting said spindle and said rotatable member, means connecting the forward end of said spindle to said movable table, and means for rotating said rotatable member to move said spindle forwardly to thereby move said movable table in one direction.

15. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit and having a screw thread on the periphery thereof, a rotatable member in said power unit and mounted on said spindle and having a screw thread therein and a channel interconnecting the ends of the screw thread, the screw thread and channel in said rotatable member cooperating with the screw thread on said spindle to provide a raceway, a plurality of balls in said raceway and interconnecting said spindle and said rotatable member, means connecting the forward end of said spindle to said movable table, means for rotating said rotatable member to move said spindle forwardly to thereby move said movable table in one direction, and brake means in said power unit for holding said rotatable member against rotation to thereby hold said spindle and said movable table against movement.

16. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit and having a screw thread on the periphery thereof, a rotatable member in said power unit and mounted on said spindle and having a screw thread therein and a channel interconnecting the ends of the screw thread, the screw thread and channel in said rotatable member cooperating with the screw thread on said spindle to provide a raceway, a plurality of balls in said raceway and interconnecting said spindle and said rotatable member, means connecting the forward end of said spindle to said movable table, means for rotating said rotatable member to move said spindle forwardly to thereby move said movable table in one direction, brake means in said power unit for holding said rotatable member against rotation to thereby hold said spindle and said movable table against movement, and manually operable means for releasing said brake means to permit said spindle to move rearwardly to thereby move said movable table in the other direction.

17. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit and having a screw thread on the periphery thereof, a rotatable member in said power unit and mounted on said spindle and having a screw thread therein and a channel interconnecting the ends of the screw thread, the screw thread and channel in said rotatable member cooperating with the screw thread on said spindle to provide a raceway, a plurality of balls in said raceway and interconnecting said spindle and said rotatable member, means connecting the forward end of said spindle to said movable table, means for rotating said rotatable member to move said spindle forwardly to thereby move said movable table in one direction, brake means in said power unit for holding said rotatable member against rotation to thereby hold said spindle and said movable table against movement, manually operable means for releasing said brake means to permit said spindle to move rearwardly to thereby move said movable table in the other direction, the means for rotating said rotatable member including a motor, a switch for controlling the circuit to said motor and operable by said manually operable means, and means on said spindle for limiting movement of said manually operable means whereby said manually operable means may be operated to release said brake without closing said switch.

18. In an operating table, a movable table, a power unit, a longitudinally movable spindle in said power unit and having a screw thread on the periphery thereof, a rotatable member in said power unit and mounted on said spindle and having a screw thread therein and a channel interconnecting the ends of the screw thread, the screw thread and channel in said rotatable member cooperating with the screw thread on said spindle to provide a raceway, a plurality of balls in said raceway and interconnecting said spindle and said rotatable member, means connecting the forward end of said spindle to said movable table, means for rotating said rotatable member to move said spindle forwardly to thereby move said movable table in one direction, brake means in said power unit for holding said rotatable member against rotation to thereby hold said spindle and said movable table against movement, manually operable means for releasing said brake means to permit said spindle to move rearwardly to thereby move said movable table in the other direction, and means at the forward end of said spindle for stopping rearward movement of the spindle when it moves into its rearwardmost position relative to said power unit and permitting free rotation of the spindle with the rotatable member.

19. In an operating table, a base, a movable table pivotally mounted on said base at one end thereof, operating means for moving said table relative to said base, and a stop on said base for

limiting movement of said table toward said base and including a cylinder having a piston therein, a stop pin connected to said piston, resilient means urging said piston upwardly in said cylinder, and means providing a variable exhaust from said cylinder to regulate movement of said piston downwardly in said cylinder.

20. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for moving said spindle longitudinally to impart movement to said movable table, brake means for holding said spindle against movement, a switch for regulating the operation of said driving means, a stop on said spindle, and manually operable means for operating said brake means and said switch and including a part engageable with said stop to limit movement of the manually operable means whereby said brake means may be released without operating said switch.

21. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for moving said spindle longitudinally to impart movement to said movable table, and a switch for regulating the operation of said driving means and including a pair of spaced contacts, a resilient contact plate adapted to engage said spaced contacts, and means movable past said spaced contacts to flex said contact plate upon engagement of the plate with the contacts.

22. In an operating table, a movable table, a power unit, a spindle in said power unit, means connecting said spindle to said movable table, driving means in said power unit for moving said spindle longitudinally to impart movement to said movable table, and a switch for regulating the operation of said driving means and including a plunger having a resilient contact plate mounted thereon, a plate of insulating material having a recess therein, a pair of contacts mounted in said plate of insulating material and engageable by said contact plate upon movement of the end of said plunger into said recess, said contact plate flexing upon movement of the end of said plunger into said recess and subsequent to engagement thereof with said contacts.

23. In an operating table, a substantially horizontal base, a movable table pivotally mounted on the base and movable angularly relative to said base, operating means for moving the table away from said base to raise the table, a brake for holding said table in adjusted positions relative to said base and against lowering movement, and means to release the brake to lower the table and to release the brake and operate the operating means to raise the table.

24. In an operating table, a substantially horizontal base, a movable table pivotally mounted on the base and movable angularly relative to said base, operating means for moving the table away from said base to raise the table, a brake for holding said table in adjusted positions relative to said base and against lowering movement, and common means to release the brake to lower the table and to release the brake and operate the operating means to raise the table.

25. In an operating table, a substantially horizontal base, a movable table pivotally mounted on the base and movable angularly relative to said base, operating means for moving the table away from said base, a brake for holding said table in adjusted positions relative to said base, and foot operated means for controlling said operating means and said brake and movable in a restricted amount to release said brake without rendering said operating means operative to permit said movable table to move toward said base and movable in an additional amount to release said brake and render said operating means operative to cause said movable table to move away from said base.

26. In an operating table, a substantially horizontal base, a movable table pivotally mounted on said base and movable angularly relative to said base and into an elevated position, operating means for moving the table away from said base to raise the table, a brake for holding said table in its elevated and adjusted positions relative to said base and against lowering movement, control means to release the brake to lower the table and to release the brake and operate the operating means to raise the table, and means for preventing operation of the control means to release the brake and operate the operating means when the table is in its elevated position.

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