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TREATING TABLE

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3 Claims. (Cl. 128-72)

My invention relates to treating tables and more particularly to tables for use in manipulative treatments and diagnostic procedures, and is an improvement upon the treatment table forming the subject matter of Letters Patent No. 1,371,502 dated March 15, 1921.

One object is the provision of simple and efficient means of the character mentioned.

A further object is the provision of a table of the character mentioned having means for taking advantage of the recoil of a resilient table section to aid in diagnosing and treating varying degrees of impaired motion in joints and other tissues.

Another object is the provision of a resilient table section in conjunction with relatively firm table sections.

A still further object is the provision of a resilient table section and means for alternately pressing a patient against the resilient table section and releasing this pressure.

My improvement is embodied in the apparatus illustrated in the accompanying drawing, in which:

Fig. 1 is a plan view, Fig. 2 is a side elevation, and Fig. 3 is an enlarged section taken on line 3-3 in Fig. 1.

Referring more particularly to the drawing, a base 4 or pedestal is provided with an upstanding cylindrical portion in which is mounted a piston 5. The piston 5 is held from rotary and vertical movements in base 4 by a set screw 6 having an adjusting handle 7. At the upper end of piston 5 is a head casting 8 cast integrally with or rigidly secured thereto. The head casting 8 has a bearing 9 in which is journaled a vertical shaft 10. On the upper end of shaft 10 is fixed a block 11 to which is pivotally mounted a frame 12 on a horizontal axis 13. Slidably mounted on the frame 12 is an auxiliary table section 14. An adjusting screw 15 is mounted in lugs on the underside of table 14 and threaded in a projection 16 on frame 12. The arrangement is such that by turning screw 15 by means of a handle 17 the table 14 can be adjusted longitudinally along frame 12.

On the lower end of shaft 10 is fixed a block 19. A frame 20 is pivotally mounted at one end to block 19 on a horizontal axis 21. A connecting link 22 has one end pivoted at 23 to frame 12 and its other end pivoted at 24 to frame 20. A block 25 is slidably mounted on frame 20 and a screw 26 is threaded in block 25 and rotatably mounted in a block 27 so that rotation of screw 26 by means of a handle 28 will move block 25 longitudinally

of frame 20. A tension spring 29 is connected to the axis 13 and to block 25 to resiliently sustain the table section 14 and its frame mounting. By turning crank 28 block 25 will be moved toward or away from axis 21 thereby effectively strengthening or weakening spring 29 to sustain different weights on table 14. A link 30 is pivoted at 31 to frame 12 at its upper end and provided with a slot 32 at its lower end engaging a bolt 33 in frame 20. Bolt 33 is provided with a handled nut 34 for frictionally locking the lower end of link 30 against frame 20 to prevent vertical swinging movement of table 14 on axis 13 when so desired.

A frame 35 has one end fixed rigidly on the head casting 8. On the frame 35 is an upstanding lug 36 to which is pivoted a main table section 37 on a horizontal axis 38 to permit vertical swinging of table 37. A bar 39 is pivoted as at 40 to the underside of table 37 and engaged between a cross pin 41 and a dog 42. The arrangement is such that weight on table 37 will press bar 39 downwardly against the pin 41 and dog 42 to lock said bar and hold table 37 at different inclinations.

An intermediate table 43 is mounted on a bracket 44 fixed on head casting 8. On the underside of table 43 is a shaft 45 in bearings 46. The ends of shaft 45 extend beyond the lateral edges of table 43 and carry rocker arms 47 which are fixed on said shaft. One rocker arm 47 is provided with a depending lever 48 which is connected by means of a connecting link 49 to crank wheel 50 on an electric motor 51. The electric motor is preferably of the enclosed reducing gear type so that the rotation of wheel 50 will be fairly slow.

At each end portion of each rocker shaft 47 is a button 52. Two straps 53 have their ends perforated and engaging said buttons 52 so that when a patient is lying on table 43 straps 53 will pass over the patient and hold him tightly on table 43. Rotation of the motor will cause rocker arms 47 to rock and alternately tighten the pressure of one strap 53 on the patient and loosen the pressure of the other strap 53 on the patient. The straps may be made adjustable by means of ordinary buckles (not shown) or in any other manner.

Table 43 is made up of a solid base 54 with a plurality of coil springs 55 mounted thereon to easily yield under the weight of the patient. On the tops of springs 55 is a pad 56 of sponge rubber or other padding. A covering 57 is secured to base 54 and envelopes springs 55 and pad 55

56. Perforations 58 may be provided in the base 54 to allow the free flow of air into and out of the table section 43. The tables 14 and 37 are each provided with a solid base 59 similar to base 54. On the base of each of these sections is padding 60 which is relatively firm and of such material as sponge rubber, hair, felt or the like. Each padding 60 is enveloped in a protective covering 61 similar to covering 57. Tables 14 and 37 are relatively firm and table 43 is quite resilient.

In practice, the springs 55 are of such size and number as will normally maintain the cover 57 in distended condition while the table is unoccupied, so that the top surface of the intermediate section 43 is normally projected above the horizontal plane of the other table sections in such manner as to be free to partially yield under the weight of a patient who may be placed on the table. The springs 55 are so constructed and arranged that while the patient occupies the table and the top of the intermediate section is brought down to approximately the same plane as the tops of the other sections, the top of the intermediate section will be capable of further yielding movements and recoils therefrom in response to the application and removal of pressure applied to that portion of the body of the patient which is directly over said intermediate table, patient is placed on the table with the head usually on section 37 but the head may be positioned on the section 14 when desired. While the table is unoccupied the resilient intermediate section 43 extends higher than the normal horizontal plane of sections 14 and 37 so that the portion of the patient over the section 43 is resiliently sustained. The patient may be positioned on the table with the head at different distances from section 43 to position different portions of the patient's body over said section 43 as desired.

The pivotal mounting of the auxiliary table section 14 is such that said section may be swung laterally in either direction and also vertically in either direction, the combination of which movements produces circumduction. Said table section 14 is also sustained during its circumduction swinging movements by the spring 29, the tension of which is adjustable. It will be noted that the yielding character of the top of the intermediate section 43 and its location above the plane of the other sections possesses a decided advantage when the patient reclines upon the table because then the top surface of the intermediate section is in approximately the same horizontal plane as that of the other sections and this prevents any undue distortion of the body of the patient.

Should the patient recline face down with, say, the part of the mid-dorsal, lower dorsal or lumbar spine on the resilient intermediate section, the yielding resilience of the top of the latter feels remarkably comfortable to the patient and thus enables him to relax his body to a high degree. Obviously, the complete relaxation of the patient's body is a very important result to secure and makes it much easier to diagnose the state of being in the spine. The finer restrictions, adhesions and limitations in spinal suppleness and motion are much more readily diagnosed. Relaxation of the patient's body also enables the operator to give a much better treatment, said treatment is less difficult to give and does not require as much force as might otherwise be required.

Should the patient lie face down on the table as above suggested, with his chest on the main table top section 37 and his lower back and pelvis on the swinging section 14, then, as the auxiliary table top is lowered the patient's body, due to the friction of the chest on the main table top section tends to remain there. Therefore, as the swinging leaf 14 moves downwardly it produces an appreciable stretching effect upon the spine. This is especially true if the patient is asked to hold to the distal end of the main table top section. Hence, it will be seen that without any additional mechanical apparatus whatever, a splendid stretching effect upon the body, or rather the spine may be obtained. Therefore, as the leaf 14 descends, the spinal tissues are stretched and as it returns to its level position a production of relaxation is again obtained by reason of the resiliency of the top of the intermediate table section. Hence, alternate stretching and relaxation are produced. This effect is good to literally milk the stale blood and fluids out of the body tissues in that area and to encourage the inflow of fresh nutritive material.

Again assuming the patient to be occupying the table face down, the operator, without moving the swinging leaf 14 at all may, by placing his hand upon the patient's back, which is directly over the resilient intermediate table section, and by pressing down and then releasing the pressure produce a springing effect in the spinal tissue in that area. In this movement the recoil of the resilient mechanism which is incorporated in the upholstering of the intermediate section plays a very important part, and in fact this recoil effect could not be obtained in the absence of the resilient means to restore the body to its original position after displacement by the hand pressure above referred to. As has already been stated, the circumduction movements of the type produced by the swinging leaf 14 accomplish alternating stretching and relaxation effects. If at the time these stretching and relaxation effects are occurring there is alternate pressure downward upon the spine by the operator's free hand, producing downward pressure and relaxing effects, a more comprehensive and complex movement is effected upon the spine. It is to be noted that the pressure made upon the spine by the operator's free hand is made during the movement of the swinging leaf 14, thereby bringing about alternating stretching and relaxing effects in the spine as well. Hence, it will be seen that a very comprehensive and complex system of movements occur with a wide range of effects upon the tissues being stretched, and this treatment is of such a character as to permit a complete approach to the involved restricted tissues and prevents, or at least helps to prevent the overlooking of something that may be deeply hidden in the tissues.

I claim:

1. In a table of the character described, the combination of a pedestal, a main top section supported by said pedestal, and an auxiliary top section also supported by said pedestal, of an intermediate section comprising a base also supported by said pedestal, a distensible cover having its edges attached to said base, a pad positioned within the cover opposite to said base, and resilient means located within said cover and interposed between the base and the pad, and reacting against both of them in such manner as to maintain said cover in normally

distended condition, the resilience of said distending means being such that said pad and the adjacent portion of the cover will partially yield under the weight of a patient occupying the table, and yet be capable of further yielding movements in the same direction, and recoils therefrom, in response to the application and removal of extraneous pressure upon the body of the patient.

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2. A table of the character described comprising a base, a main top section supported by said base, an auxiliary top section supported by said base, an intermediate section supported by the base and interposed between the first mentioned sections, said intermediate section having a distensible top portion, and resilient means for yieldingly maintaining said distensible top portion in normally distended condition, the resilience of said distending means being such that it will partially yield under the weight of a patient occupying the table and yet be capable of additional yielding movements and recoils therefrom in response to the application and removal of pressure applied to the body of said patient, straps connected with said interme-

diate portion in such manner as to pass around the body of the patient, and means for intermittently applying tension to said straps in such manner as to effect alternating, yielding and recoiling movements to said distending means.

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3. A table of the character described comprising a base, a main top section supported by said base, an auxiliary top section also supported by said base and spaced from the main top section, an intermediate section also supported by the base and interposed between the first mentioned sections, said intermediate section having a top portion having incorporated within its upholstery a highly resilient compressible means, a rock shaft extended laterally across said intermediate section beneath said top portion, rocker arms on said rock shaft, straps connected with said rocker arms and adapted to pass over the body of a patient, and means for oscillating said shaft in such manner as to intermittently apply tension to said straps in such manner as to effect alternate compressive and recoil movements to said top portion.

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