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CHIROPRACTOR'S FOLDING TABLE

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Fig. 4.

Fig. 5.

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This invention relates to a chiropractor's folding table.

An object of the invention is the construction of a simple and efficient table that can be easily adjusted to suit the patient, and which table can also be folded into a relatively small space for storage or transportation or any other purpose.

Another object of the invention is the improvement of the head section of a table of this character.

A still further object of the invention is to provide simple and efficient bumper means for the hinged body frame of the table.

Another object of the invention is the provision of a simple rack device which will hold the sliding body frame in different adjusted positions.

With the foregoing and other objects in view, my invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a fragmentary perspective view of an apparatus constructed in accordance with the present invention.

Figure 2 is a vertical longitudinal sectional view.

Figure 3 is a bottom plan view.

Figure 4 is a perspective view of the apparatus in a folded or closed position.

Figure 5 is a sectional view taken on line 5—5, Figure 2 and looking in the direction of the arrows.

Figure 6 is an enlarged, fragmentary perspective view of the primary section and the head section.

Figure 7 is an enlarged sectional view taken on line 7—7, Figure 6, and looking in the direction of the arrows.

Figure 8 is an enlarged fragmentary, perspective view of the apparatus showing the hinge for the leg.

Figure 9 is an enlarged, inverted, perspective view of the auxiliary section showing the rack device.

Figure 10 is an enlarged vertical sectional view of another bumper device, while Figure 11 is an elevated view of the auxiliary casing thereof.

Figure 12 is an enlarged sectional view taken on line 12—12, Figure 3.

Referring to the drawings by numerals, 1 designates the primary section, 2 the auxiliary section, 3 the head section, 4 the hinged body frame and 5 the sliding body frame. The sections 1 and 2 are hinged at 6 (Figs. 2 and 3), whereby they may be folded together, as shown in Fig. 4; when in an open position, their contiguous ends are abutting.

Each of the two hinged sections 1 and 2 is provided with a pair of hinged legs 7. On the section, contiguous to the leg, is a depending tit, around which the upper end of the leg revolves. The substantially L-shape hinge plate 9 is screwed to the upper end of the leg (Fig. 8) and is pivotally mounted on bolt 10. When the apparatus is in use, the leg is in a substantially vertical position, but when it is desired to fold up the apparatus, the leg is swung or pivoted around the tit 8 parallel with the section as clearly shown in Fig. 4. The L-shaped hinged plate is provided with an outstanding reinforcing web 11 for strengthening the same.

The hinged body frame 4 is provided with metal bars 12 that carry rod 13. These bars 12 are mounted at 14 on brackets 15 of the primary section. Preferably two head pieces 16 are mounted at their inner ends on rods 13; these head pieces 16 can slide on said rods. A rod 17 is also on said head pieces near their outer ends. These head pieces can be adjusted relative to each other to accommodate the face of the patient resting upon the apparatus. A bracing bracket 18 (Fig. 6) is placed at the center of rod 13, preferably between the head pieces 16. Pivotally mounted on rod 17 is a rack bar 19. This bar is provided near its upper end with an integral apertured lug 20, in the aperture of which is pivotally mounted catch 21 for the purpose hereinafter specified. The teeth 22 of rack bar 19 are adapted to engage and be passed over the edge of plate 23 (Fig. 7). A
guiding spring plate 24 is fastened in the aperture 25, through which rack bar 19 passes, holding the rack bar efficiently in place. The rack bar drops of its own weight into engagement with the plate 28, so that the head section 3 can be easily adjusted to different positions. When the entire apparatus is folded as shown in Fig. 4, the catch or hook 21 is hooked into eye 26 for holding the head section 3 in position.

On the under face of the head pieces 16 (Fig. 12) I fasten on one of said pieces a plate 27 that is provided with an aperture 28. On the other head piece, I place a lug or catch 29, over which the outer end of plate 27 is adapted to pass until the catch enters aperture 28 which will then cause the head pieces to be held together. A grip 30 is formed on one edge of plate 27 to facilitate the manual raising of the outer end of plate 27 to unlock the sliding head pieces 16 to permit same to be separated or spread apart on the rods 13 and 17.

The bumper device for the hinged body frame 4 shown in Fig. 5 comprises a board 31 laid upon the stringers 32. Each stringer 32 is provided with a longitudinally extending slot 33. The board 31 is provided with bolts 34 (Fig. 2) sliding in such slots, so that the board is held in an adjusted position upon said stringers 32. The board 31 is provided with a plurality of sockets 35 in which the lower ends of coil springs 36 are positioned. The upper ends of said springs project into similar sockets 37 formed on the board 38. Therefore, it will be seen that when the weight of a body is on the hinged body frame 4 and it is bounced or otherwise pressed up and down, the frame will hit against board 38 which acts as a bumper to take up some of the shock and thereby make the treatment more agreeable to the patient.

To prevent the outer unhinged end of body frame 4 from having too much rebound, after striking the bumper device, and to also serve as a means for limiting the hinging movement of frame 4 upon rod 18, I fasten (Fig. 5) the lower ends of flexible members 39 to the primary section and their upper ends to the hinged body frame 4. A coil spring 40 is placed between said section and frame; this spring is provided with end loops 41 through which the flexible members 39 extend. Coil spring 40 keeps the flexible members 39 taut, but allows certain movement of the outer end of the body frame 4. This unique device, comprised by said members 39 and spring 40 constitute a brake means for preventing too much vertical movement of body frame 4 and also constitutes means for retaining said frame close to the other units of the table when folded, Fig. 4.

In Figures 10 and 11, I have shown another embodiment of the bumper device and it will be understood that I may use as many of these devices as I desire on the primary section 1 and the hinged body frame 4. This bumper device comprises a primary casing 42 extending through the primary section 1. The upper end of casing 42 is slotted at 43, producing bent over wings 44 on the outer end of which is a horizontal flange 45. Bolts 46 secure both flanges 45 to the primary section 1. In primary casing 42 is mounted auxiliary casing 47. Around auxiliary casing 47 is coiled spring 48. The lower end of coil spring 48 bears against the sleeve 49 within the lower end of casing 42. A collar 50 is around the upper end of auxiliary casing 47 and the upper end of spring 48 bears against same. The auxiliary casing 47 is provided with a pair of slots 51, in which large cotter pin 52 works. This cotter pin 52 is passed through the primary casing 42 and sleeve 49. A coil spring 53 is in the lower end of auxiliary casing 47 with its upper end bearing against cotter pin 52 and its lower end around bolt 54. An angle bracket 55 is fastened to the under face of hinged body frame 4 with an extension 56 projecting into the top of auxiliary frame 47. A bolt 57 extends through collar 60, casing 47 and extension 56 securing the parts together. When weight is placed upon body frame 4, spring 48 will be depressed, but when the weight or pressure is removed, spring 48 will force upwardly on body frame but not too suddenly, because of spring 53.

The sliding body frame 5 is provided with two slotted cleats 58, fastened on the under side. Each cleat is provided in its side face with a longitudinally extending slot 59 (Fig. 9). In slot 59 is a track 60 which 60 are fastened to the inner faces of the auxiliary section 2. Therefore, it will be seen that the sliding body frame can be moved longitudinally of the auxiliary section without fear of displacement unless drawn too far outwardly. This longitudinal adjustment is desirable for accommodating different size patients on the table. On the bottom of one of the slotted plates 58, I fasten a rack plate 61. This plate 61 is provided with a plurality of openings 62 formed by cutting away the metal, producing downwardly extending tongues 63 over which the inner end of pivoted catch 64 rides. Catch 64 is mounted on bracket 65, Fig. 9. As the body frame 5 is pulled outwardly, the operator can reach under and hold the catch 64 from engagement with the rack plate 61, but upon releasing the catch, it will ride at its inner end into one of the openings 62, thereby locking the body frame in the desired adjusted position. When the body frame is pushed inwardly, the catch device will ride freely over the rack plate.
for permitting the quick closing, so to speak, of the body frame upon the auxiliary section. This rack device constitutes fastening means for holding the body frame in adjusted positions upon the auxiliary section.

On the sides of the sections, I place hand grips 65 for enabling the easy handling of the apparatus.

The primary, auxiliary and head sections are suitably upholstered as shown in Fig. 4.

When it is desired to fold the table, as shown in Fig. 4, the legs 7 are closed in, parallel with the sections and the primary section is hinged or folded in under the auxiliary section, with the head section folded upwardly and hook 21 fastened in the eye 26.

In operation, it will be seen that the patient can recline on the table, and by means of the adjustability of the sliding body frame and the head section, the apparatus can be adapted to the size of the patient's body and then the patient can be treated for the best results.

While I have described the preferred embodiments of my invention and illustrated the same in the accompanying drawings, certain minor changes or alterations may appear to one skilled in the art to which this invention relates, during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as may fairly fall within the scope of the appended claims.

What I claim is:

1. In an apparatus of the class described, the combination of a plurality of sections, a body frame hingedly mounted at one end upon one of said sections, a head section mounted at one end upon said body frame, means for holding said head section in different vertical adjusted positions, bumper means interposed between one of said sections and said hinged body frame, and a longitudinally movable body frame mounted upon the other one of said first mentioned sections.

2. In an apparatus of the class described, the combination of a section provided with a rod, a pair of head pieces slidably mounted on said rod, a second rod on said head pieces, a rack bar on said second rod and engaging a portion of said section for securing said head pieces in different adjusted positions, and means on said head pieces for holding the same together.

3. In an apparatus of the class described, the combination of a section, a body frame mounted upon said section, said body frame provided with a rod, a sectional head section adjustable mounted on said rod, and manually adjustable holding means connected to said head section and engaging said first mentioned section for retaining the head section in different adjusted positions.

4. In an apparatus of the class described, the combination of a section provided with brackets, a body section provided with bars at one end, means pivotally mounting said bars upon said bracket, a rod on the outer ends of said bars beyond said section, a plurality of head pieces slidably mounted at their inner ends on said rod, a second rod on said head pieces near their outer ends, said section provided with an aperture, a plate on said section at said aperture, a rack bar pivotally mounted at its upper end on said second rod and extending through said aperture and engaging said plate, and a guiding spring plate extending into said aperture and engaging said rack bar.

5. In an apparatus of the class described, the combination of a section, a body frame hingedly mounted at one end on said section, spring pressed bumper devices interposed between said section and body frame near the end opposite to the hinge, and means for limiting the upward movement of said body frame above said bumper devices.

6. In an apparatus of the class described, the combination of a section, a body frame movably mounted on said section, a bumper device fastened to said section and body frame, said bumper device comprising a pair of casings one slidably mounted within the other, and yieldable means interposed between said casings.

7. In an apparatus of the class described, the combination of a section, a body frame above said section, a primary casing fastened to said section, a bracket fastened to said body frame, an auxiliary casing fastened to said bracket and extending into said primary casing, means for limiting movement of said auxiliary casing on said primary casing, and a spring interposed between said casings.

8. In an apparatus of the class described, the combination of a section, a body frame above said section, a bracket provided with a depending extension fastened to said body frame, a primary casing extending through a portion of said section, said primary casing provided with a sleeve in its lower end and with slots in its upper end, said slotted portions producing bent down wings, said wings provided with horizontal flanges against said section, fastening means extending through said flanges and a portion of said section, securing the parts together, an auxiliary casing provided with slotted sides and positioned in said primary casing, a collar around the upper end of said auxiliary casing, a bolt extending through said collar, auxiliary casing and depending extension of said bracket, a cotter pin extending through the lower end of said primary casing and sleeve and said slot of said auxiliary casing, a coil spring in said auxiliary casing with its upper end against said cotter pin, said
coil spring having its lower end around a bolt, and said last mentioned bolt extending through said auxiliary casing, and a coil spring around said auxiliary casing with its lower end engaging said sleeve and its upper end engaging said collar.

9. In an apparatus of the class described, the combination of a section, a body frame hinged at one end upon said section and provided at its other end with a limiting device, said limiting device comprising flexible members having their ends fastened to said section and body frame, a coil spring between said flexible members and provided at its ends with loops, and said flexible members extending through said loops.

10. In an apparatus of the class described, the combination of a section, a body frame above said section, cleats having slots in their sides secured to said body frame, tracks in said slots and fastened to the inner face of said section, and means on said section and on one of said cleats for fastening said body frame in adjusted positions.

11. In an apparatus of the class described, the combination of a section, a body frame above and slidably mounted on said section, said body frame provided with a cleat, a rack plate fastened to the under face of said cleat, said rack plate provided with openings, said rack plate provided at each opening with a depending tongue, and a pivotally mounted catch carried by said section and adapted to extend into said openings against said tongues.

12. In an apparatus of the class described, the combination of a section provided with a depending rounded tit, a leg against said tit, an L-shape hinge plate pivotally fastened to said section and fixedly secured to said leg, said plate provided with an outstanding reinforcing web, and said leg adapted to pass around the outer edge of said tit when moved from an open to a closed or folded position.

In testimony whereof I hereunto affix my signature.

CARL JAKE MEMMINGER.