Dec. 21, 1937. G. W. SALSMAN 2,103,021

CHIROPRACTIC DEMONSTRATING DEVICE

Filed April 7, 1936

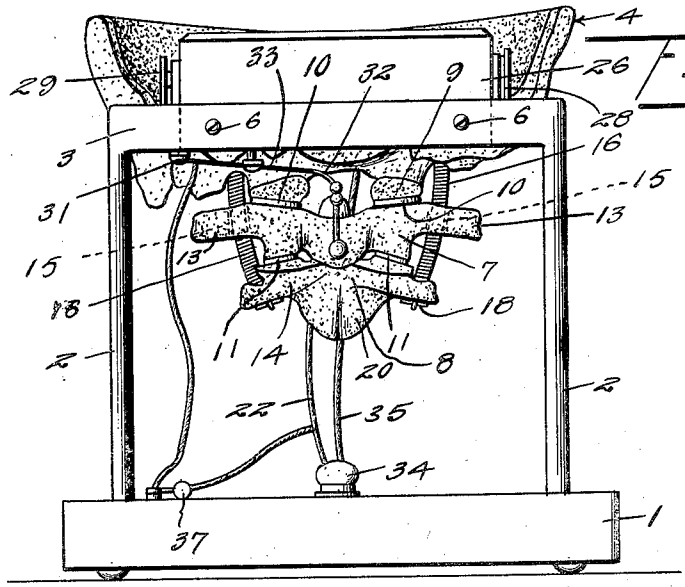


FIG. 1.

FIG. 4.

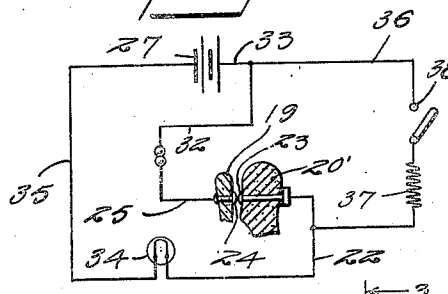
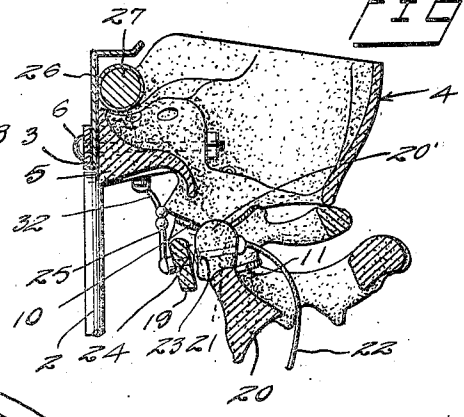


FIG. 3.



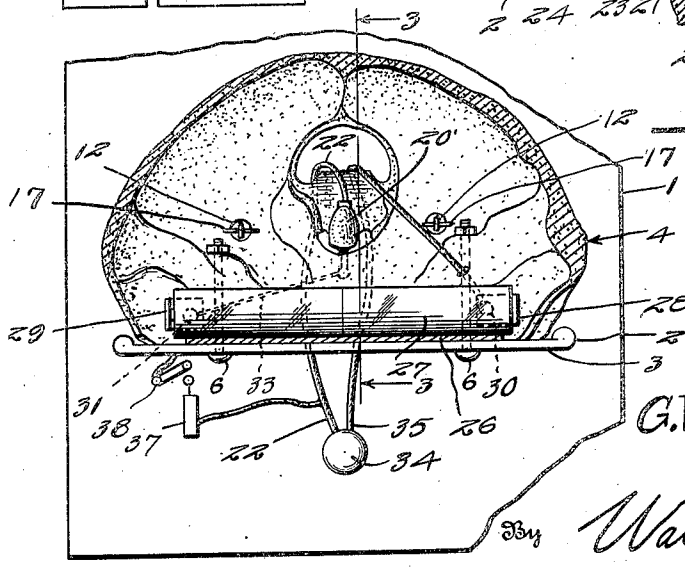


FIG. 2.

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CHIROPRACTIC DEMONSTRATING DEVICE

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3 Claims. (Cl. 35—17)

This invention relates to the class of education and pertains particularly to a means of illustrating chiropractic.

The principal object of the present invention is to provide a structure for illustrating the manner in which chiropractic is employed for correcting subluxated positions of the upper vertebrae of the spinal column whereby pressure is placed on the spinal chord or upon the nerves leading therefrom between those vertebrae.

Another object of the invention is to provide a device for carrying out the above described illustration whereby a normally complete electric circuit including an indicating light which is energized when the vertebrae are in proper relation, is interrupted when the vertebrae are out of proper relation and the light is caused to go out or be dimmed, thus illustrating the manner in which the nerve impulses are shut off or reduced in activity by the maladjustment of the vertebrae.

A still further object of the invention is to provide a compact novel association of electrical circuit making units whereby a certain degree of movement of the vertebrae is permitted without opening the electric circuit but an extreme movement of the vertebrae or a movement of the same in a direction opposed to their normal plane of movement will effect a separation of the contacts and the breaking of the circuit.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view in front elevation of the structure embodying the present invention.

Fig. 2 is a view in top plan of the same.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a diagram of the electric circuit employed.

Referring now more particularly to the drawing, the device preferably includes a suitable supporting structure for the skeletal parts employed, and such a structure is here illustrated as comprising a base having a supporting standard consisting of two upright members 2 and a cross connecting bar or plate 3. The numeral 4 generally designates a portion of the occipital bone of the skull, the forward or anterior portion 5 of which is formed to be secured against one face of the bar 3 by means of the bolts 6 or by any other suitable means. Associated with this portion of the skull bone and occupying the normal positions therebenath, are the first and second cervical vertebrae which are designated respectively by the numerals 7 and 8, the first vertebra being known as the atlas and the second as the axis. The atlas has upon its upper surface two articulating surfaces each of which receives the portion 9 of the occipital bone and between this portion or condyle and the adjacent articulating surface a suitable insert 10 is placed, which facilitates the relative movement between the bones. The adjacent surfaces of the two vertebrae have similar articulating faces between which inserts 11 are placed which, together with the inserts 10, correspond to the synovial membranes normally present in the living skeleton.

In effecting the assembly of the occipital bone with the vertebrae, the occipital bone has formed therein the two openings 12, and these overlie similar openings formed in the transverse processes 13 and 14 of the atlas and axis vertebrae respectively, which latter openings are indicated by the numerals 15. Passing through these openings 12 and 15 are articulating spring members 16, the upper ends of which are secured in any suitable manner to the body of the skull bone, as by the transverse pins 17 shown in Fig. 2, and by similar means at their lower ends as by the pins 18 which position against the under sides of the transverse processes of the axis bone. These springs operate to firmly retain the several bones in the relation illustrated.

The normal atlas bone has what is known as an anterior arch, which is indicated by the numeral 18, and the axis bone has a similar arch 20 from which extends upwardly a process known as the odontoid process 20' which normally positions against the inner or posterior face of the anterior arch of the atlas and from which it is separated by a synovial membrane, which is not shown in the illustration.

In carrying out the present invention the odontoid process is provided with a transverse metallic pin 21, to the posterior end of which an electric wire 22 is attached, while the anterior end forms an electric contact point 23 for electrical engagement with the contact 24 which passes through the anterior arch of the atlas

and joins the upwardly extending contact arm 25.

Secured to the plate 3 is a housing shield 26, beneath which is disposed an electric battery 27 and at the ends of this battery are the terminal plates 28 and 29 which are in electrical contact with the adjacent battery ends and which are electrically connected with the screws 30 and 31.

Secured to the underside of the skull bone at the anterior side of the atlas is a downwardly extending electrical terminal 32 which is arranged to make electric contact with the terminal 25 when the several bones are in the proper relation, and this terminal 32 is electrically coupled by the wire 33 with the screw 31.

The wire 22 leads from the contact pin 21 to an indicating electric lamp 34 and from the other side of this lamp leads the wire 35 to the terminal 30 which completes the circuit back to the other side of the battery.

Extending as a shunt line across the terminals 23—24 and 25—32 is a current conductor 36 in which is connected a resistance 37 and preferably a switch 38.

The present device is designed for illustrating the theory that the two vertebrae at the base of the skull, the atlas and the axis, regulate the nerve impulses from or to all the other main nerves through the sympathetic nervous system, and that by the proper adjustment of these two vertebrae, proper nerve impulses will be transmitted from the other nerves passing between the vertebrae below the two specifically referred to. In this connection when the vertebrae are in the proper relation with one another and with the skul, the contacts 23—24 and 25—32, will be together thus completing the electric circuit from the battery through the lamp 34 and energizing the latter. The shifting of these two first vertebrae from the normal position, which shifting would normally cause pressure upon the spinal cord and interruption or partial stoppage of the nerve impulses, will open one of the two contact points and thus break the circuit and deenergize the lamp. In order to illustrate how the nerve impulses may be only partly shut off, the switch 38 may be closed so that when either of the contact points is separated the current will flow through the shunt line 36 and the resistance 37 and thus supply only a small amount of energy to the light 34 to dimly illuminate it.

From the foregoing it will be apparent that with the device herein described the teaching of the manner in which chiropractic adjustments will relieve the subluxated conditions of the vertebrae and restore the nervous system to its proper balanced condition, may be easily and clearly accomplished.

What is claimed is:

1. In a device of the character described, an occipital bone, supporting means therefor, an atlas bone in normal relation with the occipital bone, an axis bone in normal relation with the atlas, the said last two bones having openings formed in the transverse processes thereof, spring elements passing through said openings and coupling the bones for articulation, said axis bone normally having the odontoid process in opposed relation with the anterior arch of the atlas, a pair of normally touching electric contacts, one contact being on said arch and the other contact being on said process, a second pair of normally touching contacts, one of the second contacts being electrically connected with the arch carried contact and the other of the second contacts being rigid with the skull bone, and an electric circuit having both of said pairs of contacts, a source of electric potential and an incandescent bulb in series relation therein.

2. In a device of the character described, an occipital bone, supporting means therefor, an atlas bone in normal relation with the occipital bone, an axis bone in normal relation with the atlas, the said bones having openings formed in the transverse processes thereof, spring elements passing through said openings and coupling the bones for articulation, said axis bone normally having the odontoid process in opposed relation with the anterior arch of the atlas, a pair of normally touching electric contacts, one contact being on said arch and the other contact being on said process, a second pair of normally touching contacts, one of the second contacts being electrically connected with the arch carried contact and the other of the second contacts being rigid with the skull bone, an electric circuit having both of said pairs of contacts, a source of electric potential and an incandescent bulb in series relation therein, and a shunt electric current conductor connected across both pairs of contacts and including a resistance therein whereby separation of either of the pairs of contacts will reduce the current flow through said bulb.

3. In a chiropractic demonstrating device, a pair of vertebrae arranged in normal relation, a pair of electric contacts, one being carried by each vertebra, an electric circuit including an incandescent lamp, a source of electrical potential and said contacts, said contacts being electrically connected and said lamp being illuminated when the said vertebrae are normally related, and a shunt circuit bridging said contacts and including a resistance element whereby the effects of a displacement of a vertebra will be illustrated when the vertebrae are shifted to separate said contacts, by a reduction in the illumination of the lamp.

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