July 20, 1954 J. C. THOMPSON 2,684,064

ADJUSTABLE HEADREST

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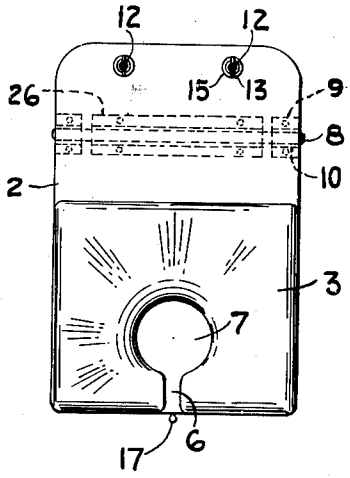

FIG. 1

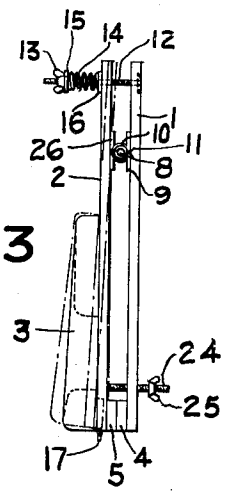

FIG. 3

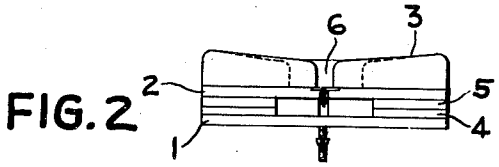

FIG. 2

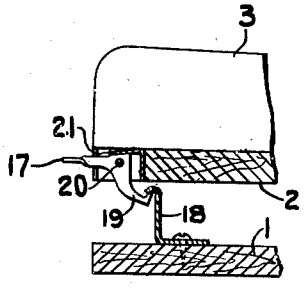

FIG. 4

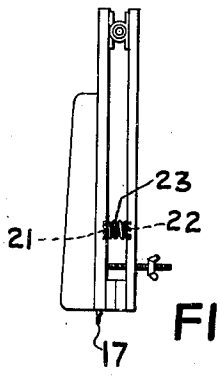

FIG. 5

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ADJUSTABLE HEADREST

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4 Claims. (Cl. 128—69)

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My invention relates to a headrest to be used in connection with chiropractic tables or benches in administering chiropractic adjustment to the cervical region of the spine, including particularly the atlas and axis vertebrae.

The objects of my invention are to provide a process and apparatus which will render such cervical adjustments painless or nearly painless and improve the effect of the adjustment by increasing the amount of force applied to the subluxed vertebrae and improve the recoil action of the patient; to provide an improved form of headrest which can be useful as an integral part of a chiropractic table or used separately and applied upon any of the forms of chiropractic tables or supports in common use and in the absence of the table, may be used with a chair or any other practical means of support; to provide a form of headrest with adjustable means for allowing a limited travel of a portion thereof with means for checking such travel at a predetermined point and means for locking the headrest automatically in its adjusted position; also to provide manually operable means to release the headrest from its locked position and means to return it to its normal position when released; to provide a headrest with upper and lower supports pivotally supported or hinged together united with adjustable resilient means to hold them in open position and latching means to retain them in closed position.

Other objects will appear from the specification.

I attain these objects by the means illustrated in the accompanying drawings, in which,

Figure 1 is a plan view of my headrest;

Figure 2 is an elevation of the inner end of the headrest;

Figure 3 is a side elevation of Figure 1;

Figure 4 is an enlarged sectional detail of the latching means;

Figure 5 is a side elevation of an alternate form of the hinged boards and the compression springs acting upon them.

Similar numerals refer to similar parts throughout the several views.

The essence of the process accomplished by the use of my apparatus consists of the steps which increase the striking force of the adjustment by putting the head of the patient and the hand of the adjuster in motion for a limited distance, then stopping the head and the head support upon which it rests automatically. By this means a certain momentum of the head and the hand of the operator are produced which increases the amount of force resulting to the axis or atlas over what it would be if the head had been supported in stationary position or if it was not stopped in its descent before the pressure of the hand was removed.

Likewise, the springs increase the resistance of the head to the downward movement of the hand of the operator and to some extent cushion the force applied thereby.

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Another important element in the use of my machine and process is the fact that, as proven by actual use, it will relieve a patient undergoing a cervical adjustment, of a very large part, if not all, of the pain ordinarily produced by an adjustment in the cervical region for the purpose of overcoming a subluxation of the atlas or axis.

My apparatus comprises a pair of boards or plates 1 and 2 of suitable size to form a headrest, hinged together near the middle thereof by a shaft 8 which extends through co-acting tubular bearings 10 welded to flat pieces 9 secured to the board 1 and 2 by screws or other suitable means.

At the outer ends of the boards, bolts 12 are secured in the board 1 extending upwardly through suitable openings in the correspond end of the board 2. These bolts are threaded and wing nuts 13 mounted upon the upper end thereof with washers 15 and 16 mounted upon the bolts 12 which form rests for the ends of compression springs 14 mounted upon the bolts between the washers.

At the opposite or inner end of the boards 1 and 2 stops 4 and 5 are mounted spaced apart when in open position and in close contact when in closed position as shown. In Figure 3 the board 2 is shown in dash-dot lines in open position.

A bolt 24 has its upper end secured in the board 2 and extends downwardly through a suitable opening in the board 1. It has a wing nut 25 threaded thereon by which the space may be varied between the detents or stops 4 and 5 when open. The action of the springs 14 tends to hold the outer ends of the boards 1 and 2 in close proximity and to separate the inner ends thereof with the shaft 8 as a fulcrum, but the spacing of the inner ends when open may be governed by the bolt 24 and wing nut 25 as stated.

In order to hold the boards 1 and 2 when the detents 4 and 5 are in contact, I provide a detent hook 18 mounted upon the board 1 with a trigger 19 mounted upon a pivot 20 in a suitable housing rigidly secured to the board 2 and the trigger has one end 17 extending outwardly therefrom and its inner end arranged to engage the hook 18 when the detents 4 and 5 are in contact. The inner end of the trigger 19 is arranged to pass the hook 18 in its descent, but has a spring 21 provided to hold it in the engaged position shown except when manually released. In Figure 5 I have shown a modification of my headrest in which the hinge connection to the upper and lower sections is located at the outer end of the section with the cushioning spring 23 located near the opposite ends of the sections and between the sections. The ends of the spring 23 rest in cups or hollows 21 and 22 cut in the adjacent faces of the plate or board sections, with the trigger 19 and the detents 4 and 5 in the same relative position as in Figure 3.

In Figure 5 the detents are shown in their

closed position and locked together with the trigger as shown in Figure 4.

In the claims I use the terms "hinge" and "hinged" to indicate a pivotal connection between the plates 1 and 2 which is preferably in the form of a piano hinge with a relatively small hinge pivot, but may be formed with a larger pivot rod passing through openings in brackets of any kind united to the plates 1 and 2 and the hinges may be located either at the outer ends of the plates as shown in Figure 5 or at a point intermediate the outer ends of the plates and the padded section of the headrest as shown in Figures 1 and 3.

In the use of my apparatus, the patient is placed in a reclining position upon one side with one ear extending downwardly into the channel 6. The adjoining portions of the pad 3 contact the mastoid and zygomatic regions and the adjustment is manually performed in the usual wellknown way of the profession by applying downward force upon the proper portion of the neck. This downward force carries the head and neck with the pad 3 downwardly until stopped by contact of the detents 4 and 5.

When the downward movement of the head and neck is stopped, the force applied by the hand of the operator, being somewhat increased by the momentum arising from the downward motion thereof, exerts the desired pressure upon the vertebra, being the atlas or axis, to which it is applied, and produces the desired movement thereof.

At the same time the latch or catch becomes engaged with the hook 13 and prevents any recurrent upward movement of the head or neck so that the desired recoil of the vertebra acted upon is free to take place without interference.

The plates 1 and 2 may be of wood or sheet metal or any other suitable material available to the maker, and the padded portion may be made integral with the upper board or made separately and attached to the upper board by any suitable means. The padded portion is preferably covered with leather, cloth, plastic or any suitable form of fabric.

The lower board may be built in as a part of a chiropractic table or my rest may be made entirely separate from any table whereby it may be applied to and used with various forms of tables or similar apparatus.

In the claims I refer to the lower portion of Figure 1 as the inner end of the headrest and to the opposite end of Figure 1 as the outer end.

Various modifications may be made in the size, proportions and arrangement of the parts without departing from the spirit of my invention as expressed in the claims and I do not limit my claims to the precise forms shown in the drawings.

I claim:

1. An adjustable headrest for use in administering chiropractic adjustments, including a reciprocating upper and a stationary lower board hinged together with the hinge shaft or pivot being adapted to act as a fulcrum upon which the upper plate may rock longitudinally, a padded headrest section mounted upon the upper board and having a central opening therein and a channel adapted to receive one ear of a patient at the inner end of the headrest, compression springs adjustably secured to the upper and lower boards near the outer end thereof adapted to hold the inner ends of the boards

apart when not restrained, opposite detents mounted upon the adjacent faces of the boards near the inner ends thereof adapted to stop the movement of the upper board when its detents contact detents on the lower board, and a catch mounted upon the lower board with a latch and trigger pivotally mounted upon the upper board whereby the latch may engage the catch and rigidly secure the boards in closed position until manually released.

2. A headrest as described in claim 1, and a bolt united to the upper board near its inner end extending downwardly through a suitable opening in the lower board with a wing nut threaded upon the lower end thereof whereby the space between the upper ends of the boards may be manually adjusted against the opposing pressure of the compression springs.

3. A headrest for use in administering chiropractic adjustments, including upper and lower corresponding boards or plates hinged together intermediate their ends, the hinge shaft or pivot being adapted to act as a fulcrum upon which the upper plate may rock while the lower plate remains stationary and a padded headrest section mounted upon the upper plate having a channel therein adapted to receive one ear of the patient lying on one side on the table and headrest, compression springs adjustably mounted upon the boards near the outer ends thereof adapted to hold the inner ends of the boards apart for a predetermined distance when not restrained and stops mounted upon the adjacent faces of the plates at the inner ends thereof adapted to stop downward movement of the upper board when its stops come into contact with the stops on the lower board, and a hook detent mounted upon the lower board with latching means mounted upon the upper board whereby the latch may engage the hook detent and rigidly secure the plates in closed position until manually released.

4. A headrest for use in administering chiropractic adjustments, including upper and lower corresponding boards or plates hinged together intermediate their ends, the hinge shaft or pivot being adapted to act as a fulcrum upon which the upper plate may rock while the lower plate remains stationary and a padded headrest section mounted upon the upper plate having a channel therein adapted to receive one ear of the patient lying on one side on the table and headrest, compression springs adjustably mounted upon the boards or plates near the inner ends thereof adapted to hold the inner ends of the boards apart for a predetermined distance when not restrained, stops mounted upon the adjacent faces of the plates at the inner ends thereof adapted to stop downward movement of the upper board when its stops come into contact with the stops on the lower board, a hook detent mounted upon the lower board with latching means mounted upon the upper board whereby the latch may engage the hook detent and rigidly secure the plates in closed position until manually released, and means united to the latch by which it may be manually released.

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