July 31, 1956 J. C. THOMPSON 2,756,744

CHIROPRACTIC HEADREST WITH MAGNETIC RETAINING MEANS

Filed April 5, 1955

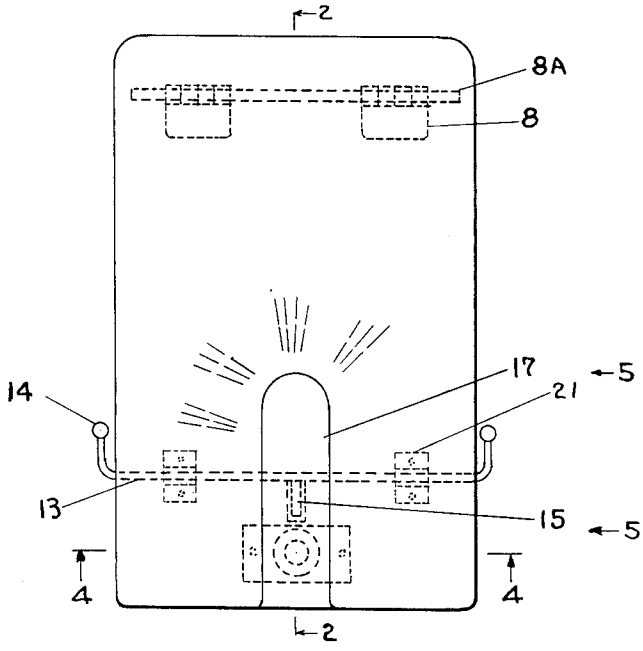


FIG. 1.

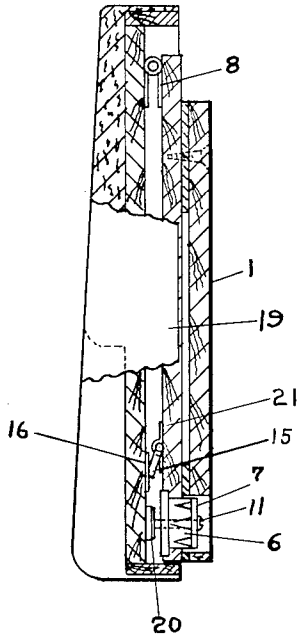


FIG. 2.

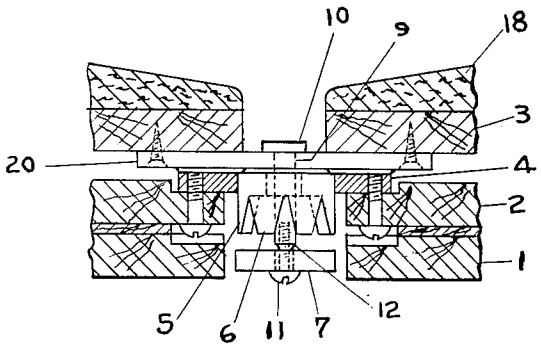


FIG. 3.

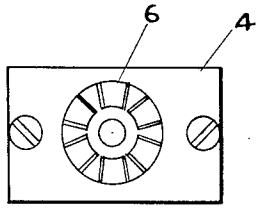


FIG. 4.

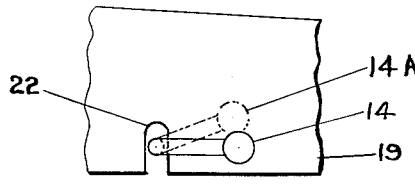


FIG. 5.

Joseph Clay Thompson, INVENTOR.

BY Burke Bush

His Attorneys,

United States Patent Office

2,756,744

Patented July 31, 1956

2,756,744

CHIROPRACTIC HEADREST WITH MAGNETIC RETAINING MEANS

Joseph Clay Thompson, Davenport, Iowa

Application April 5, 1955, Serial No. 499,287

2 Claims. (Cl. 128—69)

My invention relates to an improvement in headrests for the use of the chiropractic profession.

The objects of my invention are to provide an improved adjustable headrest for use with patients requiring a chiropractic adjustment in the cervical region of the spine and more particularly of the atlas and axis vertebrae; to provide a headrest to support a patient's head and neck laterally preparatory to adjustment and in which the top plate will move a short distance downwardly when the adjusting force is applied to the patient's neck; to provide a headrest having upper and lower boards or plates hinged together at one end and having a permanent magnet secured at the opposite end of one of them of sufficient strength to hold the plates in open position while the patient's head is resting upon the upper plate, but which will be disengaged by the thrust administered to the neck of the patient; to provide such an apparatus in which the upper plate will remain in closed contact with the lower plate when so placed until raised to its open position either manually or by mechanical means; to provide such an apparatus equipped with a permanent magnet which can exercise a limited force to aid in raising the upper plate to its open position without being able to raise it alone; to provide magnetic means mounted upon the lower plate and coacting means carried by the upper plate adapted to automatically hold the plates in open position until overcome by an adjustment force applied to the patient; to provide a simple lever to raise the upper plate to open position when desired, which movement may be aided to some extent by partial force of magnetic attraction.

My invention is illustrated in the accompanying drawings, in which;

Figure 1 is a top or plan view of my headrest;

Figure 2 is a sectional elevation thereof on the line 2—2 of Figure 1 with part of the upholstery and side plate broken away to disclose the upper and lower boards or plates and their connections with the upper plate in its raised or open position;

Figure 3 is a sectional elevation on the line 4—4 of Figure 1 but showing the magnet and keeper in full lines;

Figure 4 is a detail of the bottom of the magnet and the plate in which it is mounted; and

Figure 5 is a detail of shaft **13** and arm **14**.

Similar numerals refer to similar parts throughout the several views.

I refer to the upper end of Figure 1 as the outer end of the headrest and to the lower end of Figure 1 as the inner end of the headrest.

I refer to the board or plate **3** as the upper plate and to the other plate or board **2** as the lower plate or base. The lower plate may rest upon a table, bench or support **1** of suitable height.

My invention includes an upper plate **3** and lower plate **2** hinged together at their outer end by hinges **8** having a common shaft or pivot **8A** upon which the upper plate may rotate for a short distance to separate the front ends of the plates for a space of approximately one-quarter to

five-eighths of an inch, but which opening may be increased or diminished by adjustment within certain limits.

The lower plate **2** is slightly smaller than the upper plate **3** and the upper plate has mounted thereon an upholstered housing having side bars **19** extending downwardly on both sides of the base for a limited distance as shown in Figure 2, permitting a short downward movement of the front end of the top plate relative to the base from open to closed position.

Near the front end of the base plate **2** a plate **4** of non-magnetic metal or other material, is mounted having a circular opening formed therein in which a magnet **6** is rigidly mounted.

My preferred form of magnet consists of a round body of Alnico, but may be of any other metal or alloy which is subject to be permanently magnetized and will have sufficient power for the purposes stated. This magnet **6** has a plurality of poles, preferably about six, formed integral therewith and tapering downwardly therefrom with their lower ends smooth and level.

In order to establish the magnetic circuit I provide a keeper **7** which is a round flat plate of cast iron or other metal or alloy subject to magnetic attraction.

This keeper **7** is mounted upon and secured to the lower end of a non-magnetic bar or post **9** the upper end of which is rigidly united to a metal plate **20** bolted or otherwise secured to the upper plate. The post **9** extends downwardly from the upper plate and is arranged to pass through a central opening formed in the body of the magnet **6**. This post is formed of brass, aluminum, or other metal not subject to magnetic attraction and the upper end of this post is rigidly united to a metal plate **20** fastened to the upper plate with a lock-nut **10**. The lower end of the post extends downwardly below the poles of the magnet and has adjustably attached thereto the keeper **7** by a set screw **11** or other suitable means.

The lower end of the post **9** is somewhat conical or tapered at **12** and has a central bore threaded to receive the set screw **11** extending through a countersunk opening in the keeper whereby the keeper may tilt in any direction necessary to fit closely and uniformly upon all of the poles of the magnet.

The inner end of the top plate may be raised manually or otherwise and when raised, will carry the keeper into contact with the poles of the magnet as in Figure 2 and the magnetic force thereof will hold the upper plate in raised position with the head and neck of the patient resting thereon.

In the practice of the chiropractic profession, subluxations of the spine are adjusted by force applied by the hands of an operator to the region in which the adjustment is required. In the case of cervical adjustments of the atlas or axis, one of the hands of the operator is manually applied to the neck of a patient at the desired point over a lateral process of a vertebra and the other hand placed in contact with the first hand. A sudden pressure or thrust is then exercised by both hands upon the neck of the patient.

When so applied to a patient whose neck and head are resting upon my headrest, the upper plate thereof will be forced downwardly until the upper plate is stopped by contact with the lower plate or by a stop mounted thereon. This movement of the upper plate will carry with it the post **9** and the keeper **7** so that the magnetic circuit will be broken as shown in Figure 3 and the upper plate will remain at rest in its lowered position without any rebound of the upper plate.

In order to reset the plates for another adjustment to the same or to another patient, it is necessary to raise the upper plate to its open position. This may be easily done manually by lifting up the upper plate or the upper plate may be raised by the operation of a lever **15** the free end

of which is adapted to contact and press upwardly the metal plate **16**. The other end of this lever is carried by a transverse shaft **13** journaled in the side bars of the upper plate and having short levers **14** extending at right angles thereto at both ends of the shaft a short distance from the side edges of the plates.

These outer levers may have buttons or thumb pieces formed thereon by which they can be readily moved for the purpose of resetting the upper plate.

I have found that with an Alnico magnet of suitable size selected by me, there will not be sufficient magnetic force to raise the keeper and the upper plate when a patient's head is resting thereon, but when the patient's head and neck have been removed from the upper plate, some magnetic attraction will still exist between the magnet and the keeper even at the distance to which they have been moved by the adjustment, and this limited magnetic attraction will aid to move the upper plate to its open position so that very little pressure will be required upon the thumb lever to raise it.

I have found that an Alnico magnet 1½ inches in diameter and ⅞ inch in height with six tapered poles will be amply sufficient to support the upper plate of my headrest in open position with the head and neck of a patient of average size resting thereon. Obviously, when greater magnetic force is desired, a larger magnet may be utilized.

Likewise, in place of a single magnet as described, a plurality of small bar magnets of Alnico may be mounted in the bottom plate with a keeper carried by a non-magnetic post united to the upper plate whereby they will perform the same function as the magnet I have described.

With some modifications, the magnet and the keeper may be reversed and the magnet mounted upon the upper plate and the keeper and its post fastened to the lower plate to accomplish the same effects.

In Fig. 5 I have shown a portion of the side **19** of the housing of the upper plate with a short slot in the lower edge thereof through which projects one end of the shaft **13** having united thereto an arm or lever **14** in open position as shown, but when the plates are in closed position, the lever will be raised at an angle as shown in dotted lines at **14A**.

Various other modifications may be made in the size,

arrangement, proportions and composition of the parts of my headrest 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. A headrest to support the head and neck of a patient during a chiropractic adjustment of the spine in the cervical region including a fixed base with a corresponding upper plate hinged thereto at their outer ends, with the upper plate being in contact with the base at the inner end when in closed position and spaced approximately one-quarter of an inch therefrom when in open position, a permanent magnet mounted upon the base, a keeper secured upon a non-magnetic post mounted upon the upper plate adapted to adhere to the poles of the magnet when the upper plate is in raised position and to be detected from the magnet when the upper plate is moved downwardly by an adjusting operation upon the neck of the patient.

2. A headrest to support the head and neck of a patient during a chiropractic adjustment of the spine in the cervical region including a fixed base with a corresponding upper plate hinged thereto at their outer ends, with the upper plate being in contact with the base at the inner end when in closed position and spaced approximately one-quarter of an inch therefrom when in open position, a permanent magnet mounted upon the base, a keeper secured upon a non-magnetic post mounted upon the upper plate adapted to adhere to the poles of the magnet when the upper plate is in raised or open position and to be detached from the magnet when the upper plate is moved downwardly by an adjusting operation upon the neck of the patient, a transverse shaft journaled on the base with laterally projecting ends, a short lever keyed upon the shaft with a free end in contact with and adapted to raise the upper plate from its lowest position when the shaft is partially revolved, and a short release lever united to one end of the shaft adapted to partially rotate the shaft when manually actuated.

References Cited in the file of this patent

UNITED STATES PATENTS

2,496,691	Berry	Feb. 7, 1950
2,684,064	Thompson	July 20, 1954