D. W. Perkins,

Dentists' Chair,

No. 13,396, Patented Aug. 7, 1855.

Fig. 1.

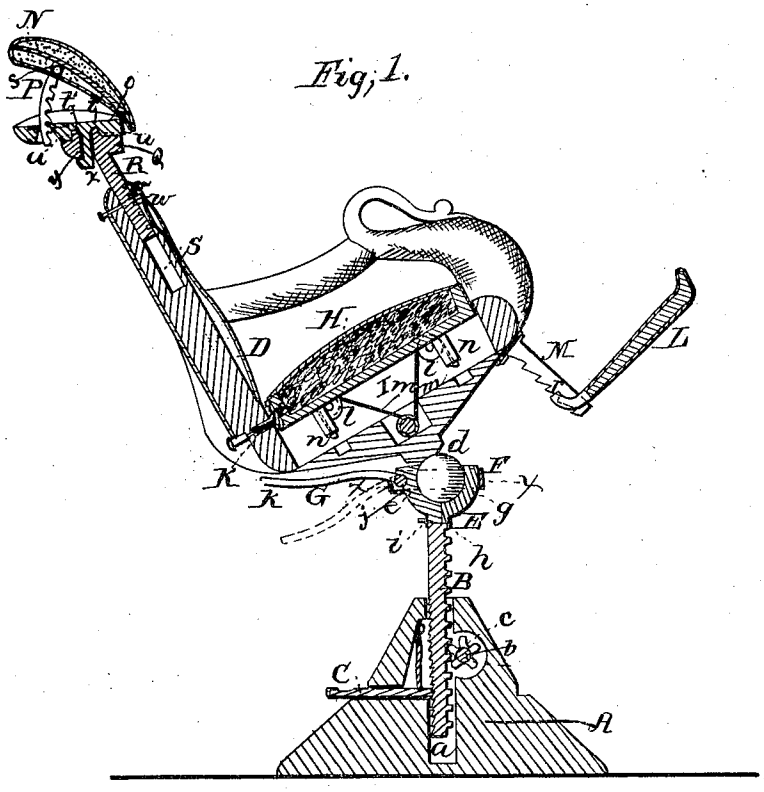
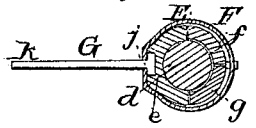


Fig. 2.



UNITED STATES PATENT OFFICE.

D. W. PERKINS, OF ROME, NEW YORK.

DENTAL CHAIR.

Specification of Letters Patent No. 13,396, dated August 7, 1855.

To all whom it may concern:

Be it known that I, D. W. PERKINS, of Rome, in the county of Oneida and State of New York, have invented a new and Improved Adjustable Chair for Dental and other Purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my improved chair, the plane of section being through the center. Fig. 2, is a horizontal section of the ball and socket joint, (*x*) (*x*) Fig. 1, showing the plane of section.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved adjustable chair for dental and other purposes, and consists in the peculiar construction of the chair as will be fully shown and described hereafter, whereby the body of the chair may be raised or lowered and turned in any direction required, and the head rest and foot piece also adjusted as may be required.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, Fig. 1, represents the base or pedestal of the chair having a vertical opening (*a*) within it in which a rack B, is fitted. Through the base A, a small shaft (*b*) passes, said shaft having a pinion (*c*) upon it which pinion gears into the rack B.

C, is a spring catch by which the rack is supported at any desired height.

D, represents the body of the chair, to the under part of which, or at the center of its bottom, there is secured a ball (*d*). This ball (*d*) is fitted within a socket E, see Figs. 1 and 2, at the upper end of the rack B. The socket is formed of three parts (*e*) (*f*) (*g*), the part (*e*) being permanently secured to the rack, and the parts (*f*) (*g*) being made detached from the rack and secured thereto by a band (*h*) and set screw (*i*) see Fig. 1.

F, is a band which encompasses the three parts (*e*) (*f*) (*g*) of the socket, and G, is a clamp formed by having an eccentric hub (*j*) attached to the end of a lever (*k*). This hub (*j*) is fitted between the part (*e*) of the socket and the band F, and by depressing the outer end of the lever (*k*) the hub (*j*) binds the three parts (*e*) (*f*) (*g*) of the socket snugly around the ball (*d*).

H, Fig. 1, represents the seat which works within a recess I, in the bottom of the chair. At each side of the bottom of the chair, on the inner surfaces of the sides, there are pulleys (*l*), two at each side.

J, is a shaft which passes through the bottom of the chair. Around the pulleys (*l*) (*l*) cords (*m*) pass, one end of the cords being attached to the shaft J, and the opposite ends to projections (*n*) (*n*) on the underside of the seat H, two projections being at each side of the seat.

K, is a spring catch which catches in a rack (*p*) at the back edge of the seat H.

L, represents the foot piece having hooks (*r*) at its back end, one at each side. These hooks work in racks M, M, projecting downward from the front edge of the bottom of the chair.

N, represents the head rest the inner edge of which is hinged to a plate O. Near the outer edge of the rest N, and to its under side there is attached by a pivot (*s*) a segment rack P, the lower part of which works in a slot (*t*) in the plate O. This plate O, has grooves (*t'*) in its under side, and is fitted upon a plate Q, the upper surface of which has ledges or projections (*u*) (*u*) upon it which fit in the grooves in the under side of the plate O, the plate O, being allowed to slide upon the plate Q. The plate Q is attached to the upper end of the bar R, which works in an opening S, in the back of the chair, and the bar has recesses or a sunken rack (*v*) on one side in which a spring catch (*w*) catches. The plate Q has a small guide (*x*) projecting downward from its under surface said guide working in a slot (*y*) in the plate Q.

By means of the ball and socket connection the body of the chair may be turned in any direction, backward, forward or sidewise, or be made to rotate and secured in the desired position by depressing the outer end of the lever (*k*) of the clamp G with the foot, said lever being raised when the body of the chair is to be turned. By depressing the outer end of the lever (*k*) the eccentric hub (*j*) causes the band to bind the parts (*f*) (*g*) snugly against the ball (*d*). By turning the shaft (*b*) in the base or pedestal A, the rack and consequently the chair may be raised or lowered as desired and sup-

ported at the desired height by the spring catch C. The seat also may be elevated or depressed by turning the shaft J, the cords (*m*) which pass over the pulleys (*l*) and are secured to the projections (*u*) attached to the under part of the seat, raising the seat in consequence of being wound upon the shaft as it is turned. The seat is retained at the desired height by the spring catch K. The outer end of the head rest N, may be raised or lowered so as to give the head of the person sitting in the chair the desired inclination, the head rest being supported at the desired point by the segment rack P, the teeth of which catch against the inner edge of the slot (*t*) in the plate O. The head rest may also be moved laterally in consequence of the plate O, being allowed to slide upon the plate Q, and the head rest may be raised bodily upward by means of the sliding bar R, which is sustained at the desired height by the spring catch (*w*) which works in the sunken rack (*v*). The foot piece L, may be raised or lowered in consequence of the hooks (*r*) catching into either of the teeth of the racks M, M.

The within described chair is intended principally for dentists' use, but it may also be used by barbers and others.

The chair constructed as above has all its parts rendered capable of the most perfect adjustment. It may be made to suit either children or adults, and the person occupying it may be placed or situated in the proper position for the operator. The chair has been practically tested and gives perfect satisfaction. The rack B, may in certain cases be dispensed with and a permanent standard employed instead.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—

1. I claim tightening the ball and socket joint so as to secure the body of the chair in the desired position by means of the band F, which encompasses the socket E, the band being operated upon by a clamp G, as shown, whereby the parts (*e*) (*f*) (*g*) of the socket may be pressed or bound snugly around the ball (*d*) substantially as shown and described.

2. I claim attaching the head rest N, to the inner edge of the plate O, by hinges and having the head rest secured at the desired angle of inclination by a segment rack P, the plate O, being allowed to slide laterally upon a plate Q at the upper part of the bar R, which bar works in an opening S, in the back of the chair and is secured at the desired point by the rack (*v*) and spring catch (*w*) for the purpose of rendering the head rest capable of perfect adjustment as set forth.

D. W. PERKINS.

Witnesses:
JNO. T. VAN VLICK,
GEO. SCOTT, Jr.