

(No Model.)

2 Sheets—Sheet 1.

J. I. PEYTON.
DENTAL CHAIR.

No. 538,465.

Patented Apr. 30, 1895.

FIG. 5.

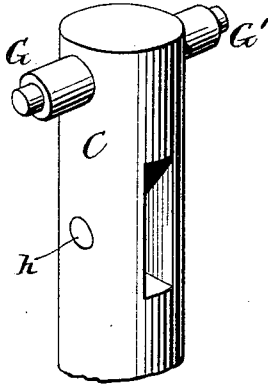


FIG. 6.

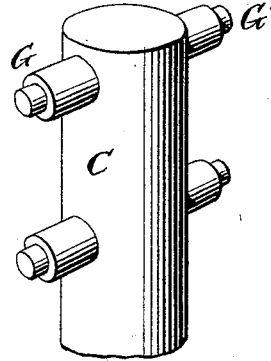


FIG. 2.

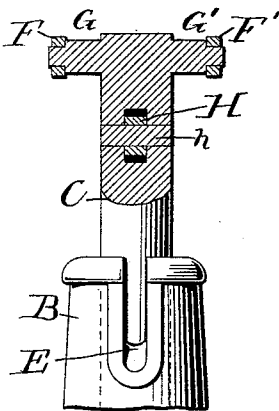


FIG. 1.

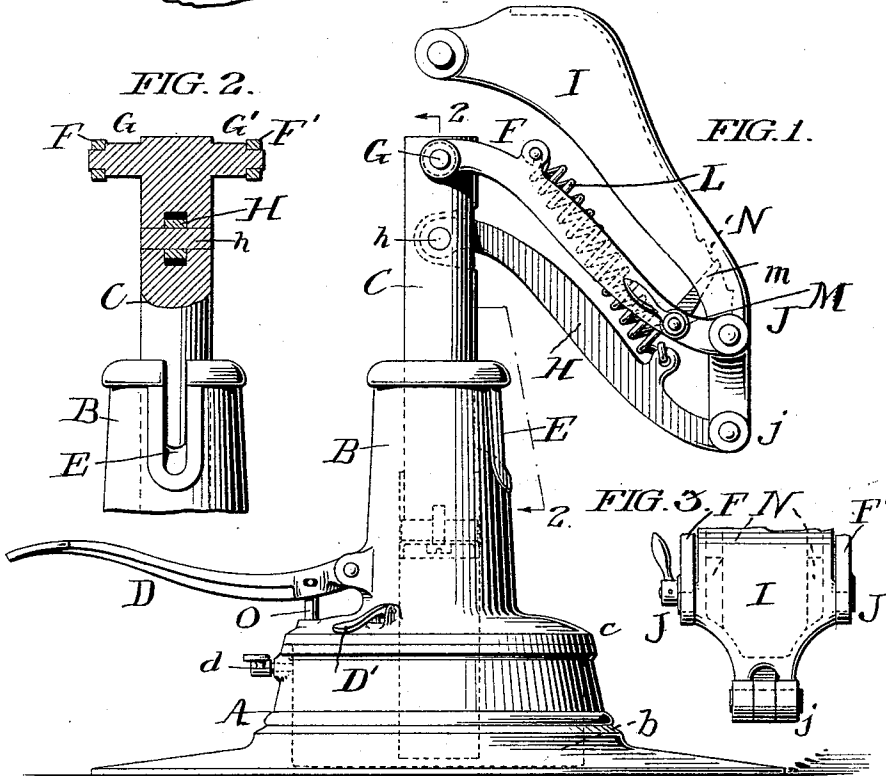


FIG. 3.

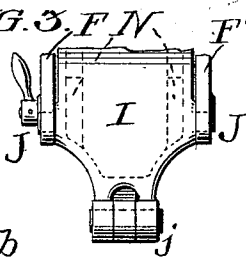
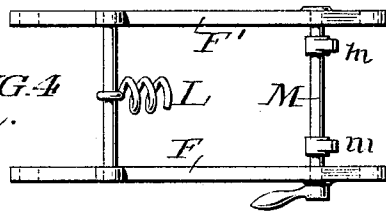


FIG. 4.



WITNESSES:

Edw. T. Simpson, Jr.
John C. Driles

INVENTOR

J. I. Peyton.

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2 Sheets—Sheet 2.

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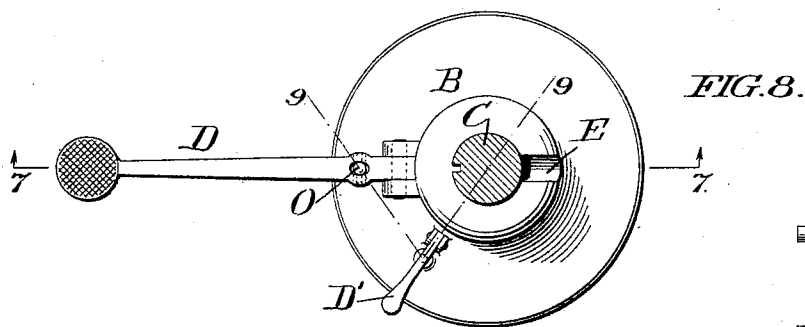


FIG. 8.

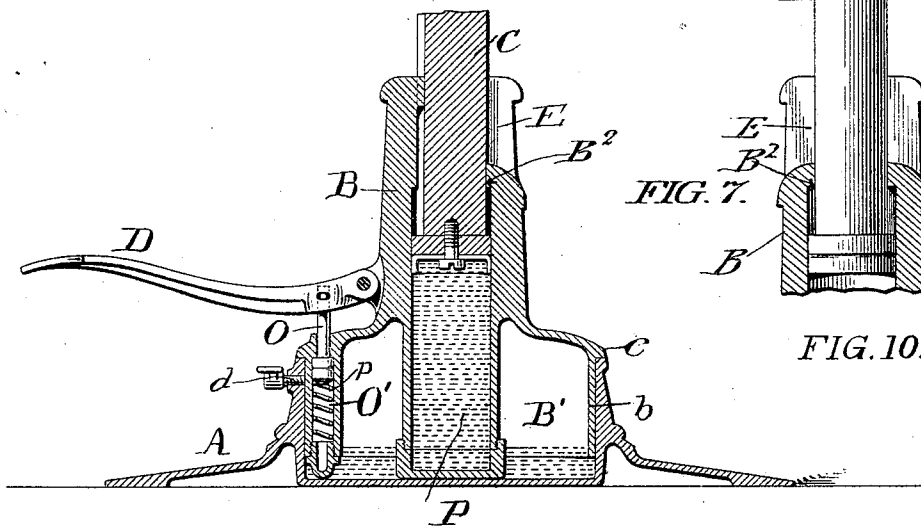


FIG. 9.

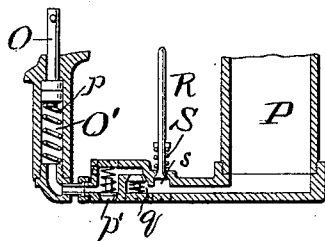


FIG. 10.

WITNESSES:

Edw. T. Simpson, Jr.
John C. Ariles

INVENTOR

J. I. Peyton

UNITED STATES PATENT OFFICE.

JOSEPH I. PEYTON, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
TO THE S. S. WHITE DENTAL MANUFACTURING COMPANY, OF PHILA-
DELPHIA, PENNSYLVANIA.

DENTAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 538,465, dated April 30, 1895.

Application filed September 4, 1894. Serial No. 522,051. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH I. PEYTON, of the city of Washington, District of Columbia, have invented certain new and useful Improvements in Dental Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements, as hereinafter claimed, in dental chairs of the class in which the chair bodies are adapted to have a wide range of vertical adjustment imparted to them by means of main vertically adjustable supports and supplementary supports carried by and vertically adjustable independently of as well as with the main supports; and my improvements especially pertain to that particular type of this class of chairs shown in United States Letters Patent No. 529,641, dated November 20, 1894.

In the accompanying drawings, which show a suitable embodiment of my improvements with parts of the chair—illustration of which is not needed—omitted, Figure 1 is a side elevation of all parts except the chair-body and its attachments, which may be of any suitable construction. Fig. 2 is a view partly in front elevation and partly in vertical section, as indicated by the line 2 of Fig. 1, showing the main elevating and lowering support and portions of its slotted carrier and the parallel arms having jointed connection with said main support. Fig. 3 is a front view showing portions of the parallel arms and chair-body carrier jointed thereto. Fig. 4 is a plan view of the upper parallel arms. Fig. 5 is a view in perspective of the upper portion of the main support, showing the journals and slot for connection of the parallel arms, and Fig. 6 a similar view of a modification. Fig. 7 is a view partly in side elevation and partly in vertical section, as indicated by the line 7 of Fig. 8. Fig. 8 is a plan view of the support-carrier and attachments thereof, with the main raising and lowering support in section. Fig. 9 is a view partly in side elevation and partly in vertical section, in different planes, as indicated by the lines 9 of Fig. 8. Fig. 10 is a

view showing in elevation the main elevating and lowering support modified in accordance with the construction shown by Fig. 6, with the upper portion of the support-carrier in vertical central section to show the opposite slots therein.

A suitable base A is provided with a central bearing in which fits and turns the lower end or base portion *b* of a carrier B in which is supported the main elevating and lowering support C. An annular shoulder *c* of the support-carrier B rests upon the base around the bearing therein in which the carrier turns. The main support C is vertically adjustable in the tubular carrier in suitable way. As shown oil is contained in a reservoir B' in the base A and support carrier B. A foot lever D is connected with a pump piston O working in a pump chamber O' formed in the support carrier. A spring *p* acts to elevate the pump piston and lift the foot lever to its normal or inoperative position. Upon upward movement of the pump piston an inlet valve *p'* opens to admit oil to the pump chamber under the piston head. Upon depression of the foot lever the oil in the pump chamber is forced by connected passages to the carrier cylinder P in which the main raising and lowering support is mounted. As oil is thus forced beneath the main raising and lowering support to elevate it, the valve *q* opens while the inlet valve *p'* closes as will readily be understood. Repeated operations of the foot lever serve to adjust the main support to the height desired. To lower the support a foot-actuated tripping lever D' serves to move downward a rod R to open the outlet valve *s* against the pressure of its spring S which serves to normally hold this valve closed. Escape of the oil from beneath the support C to the reservoir by way of the outlet valve gradually lowers this support.

A clamp screw *d*, adapted to be actuated by the foot, serves to lock the support-carrier B against turning in the base, and to release it so that it may be turned as desired.

The support-carrier B is provided with a front opening or slot E extending from its upper end downwardly a suitable distance,

for a purpose in turn to be explained. This slot or opening terminates at its lower end at a point slightly above that to which the lower end or packed head of the main elevating and lowering support is raised when at the limit of the upward movement which may be imparted to it. To provide suitable means for limiting the upward movement of the main support its carrier is shown as internally shouldered at B². Beneath this annular shoulder B² the carrier is of larger internal diameter than above it and so accommodates the lower end or head of the main support which comes in contact with the shoulder at the completion of the upward movement of the support.

The upper vertically rocking parallel arms F F' (for which a single wide fork-ended arm may obviously be substituted) are jointed to the upper end of the main support C at opposite sides thereof by way of trunnions G G' rigid with the support. At a suitable distance beneath the trunnions G G' the support C is vertically slotted and the lower arm H of the set of parallel arms is jointed in this slot upon a journal or pivot pin *h* so as to be free to rock vertically to the desired extent.

A chair-body carrier I is jointed at J J to the outer ends of the arms F F', and at *j* to the outer end of the arm H, the distance between the pivotal point *j* and the horizontal plane of the jointing pivots J J corresponding with the distance between the horizontal plane of the trunnions G G', and the pivot *h* by which the upper and lower parallel arms are respectively directly and independently connected at their inner ends with the main raising and lowering support.

A suitable chair body is to be mounted at the upper end of the chair body carrier I. Illustration of this chair body is not here needed.

A spring L serving to approximately counterbalance the weight of the chair body, is connected at its opposite ends with the upper and lower arms of the set of parallel arms; and the parallel arms are secured in any position to which they may be adjusted by rocking them, by means of pawls *m m* on a rock-shaft M which is provided with an actuating handle, and mounted in the arms F F', the pawls being adapted for engagement with the teeth of detent racks N N of the chair body carrier, substantially as in the before mentioned patent.

Figs. 6 and 10 show a slight modification by which the pivotal connection between the main elevating and lowering support and the lower arm (or a pair of lower arms) of the set of parallel arms is made by trunnions similar to those by which the upper parallel arms are jointed to their support directly and independently of the lower arm or arms. In accordance with this modification the tubular support-carrier is provided with two vertically extending slots or openings, one at each side, for the lower arm trunnions, instead of

the single front opening or slot E which is provided when the lower parallel arm is pivoted in the slot of the main support C.

From the above description it will be understood that the chair body carrier may be adjusted independently of the main support C by raising or lowering the parallel arms by rocking them; that these arms may be locked in any position to which they may be adjusted, and that the parallel arms partake of the vertical adjustments of the main support; and it will be seen that with the main support at or near its lowermost position of adjustment and with the parallel arms rocked downward, the lower parallel arm occupies the front opening or slot in the support-carrier, or the lower trunnions occupy the side openings or slots in this carrier, according to which of the two constructions described is employed. By the provision of the slotted support carrier in connection with the main support and parallel arms pivoted directly to this support the chair body may be adjusted to as low a position as desired and is given a very wide range of vertical adjustment corresponding with that imparted in accordance with the construction shown in the before-mentioned patent. As the main support when elevated to its highest position has necessarily to project at its lower end into its carrier a distance far enough to steadily support it—this distance slightly exceeding the length of the slot or opening E—there is no danger of escape of oil by way of this slot as the main support is never elevated sufficiently high to expose the slot beneath its lower end.

I claim as my invention—

1. The combination, in a dental chair, of the support carrier slotted at its upper end, the main support vertically adjustable in said carrier, the upper and lower parallel arms having respectively direct and independent pivotal connection with the main support at and beneath its upper end, the chair-body carrier pivoted to the outer ends of the parallel arms, and means for securing the parallel arms in the position to which they may be adjusted by rocking them, substantially as set forth.

2. The combination, in a dental chair, of the support carrier slotted at its upper end, the main support vertically adjustable in said carrier, the upper and lower parallel arms, means by which these arms are jointed respectively to the upper end of the main support at opposite sides thereof and in a slot therein beneath its upper end, the chair body carrier pivoted to the outer ends of the parallel arms, and means for securing the parallel arms in the position to which they may be adjusted by rocking them, substantially as set forth.

3. The combination, in a dental chair, of the support carrier slotted at its upper end, the main support vertically adjustable in said carrier, means for arresting upward move-

ment of the main support before the lower
end reaches the slotted portion of the carrier,
the upper and lower parallel arms having re-
spectively direct and independent pivotal
5 connection with the main support at and be-
neath its upper end, the chair-body carrier
pivoted to the outer ends of the parallel arms,
and means for securing the parallel arms in

the position to which they may be adjusted
by rocking them, substantially as set forth. 10
In testimony whereof I affix my signature
in presence of two witnesses.

JOSEPH I. PEYTON.

Witnesses:

CLARENCE F. NORMENT,
JACOB N. BELT.