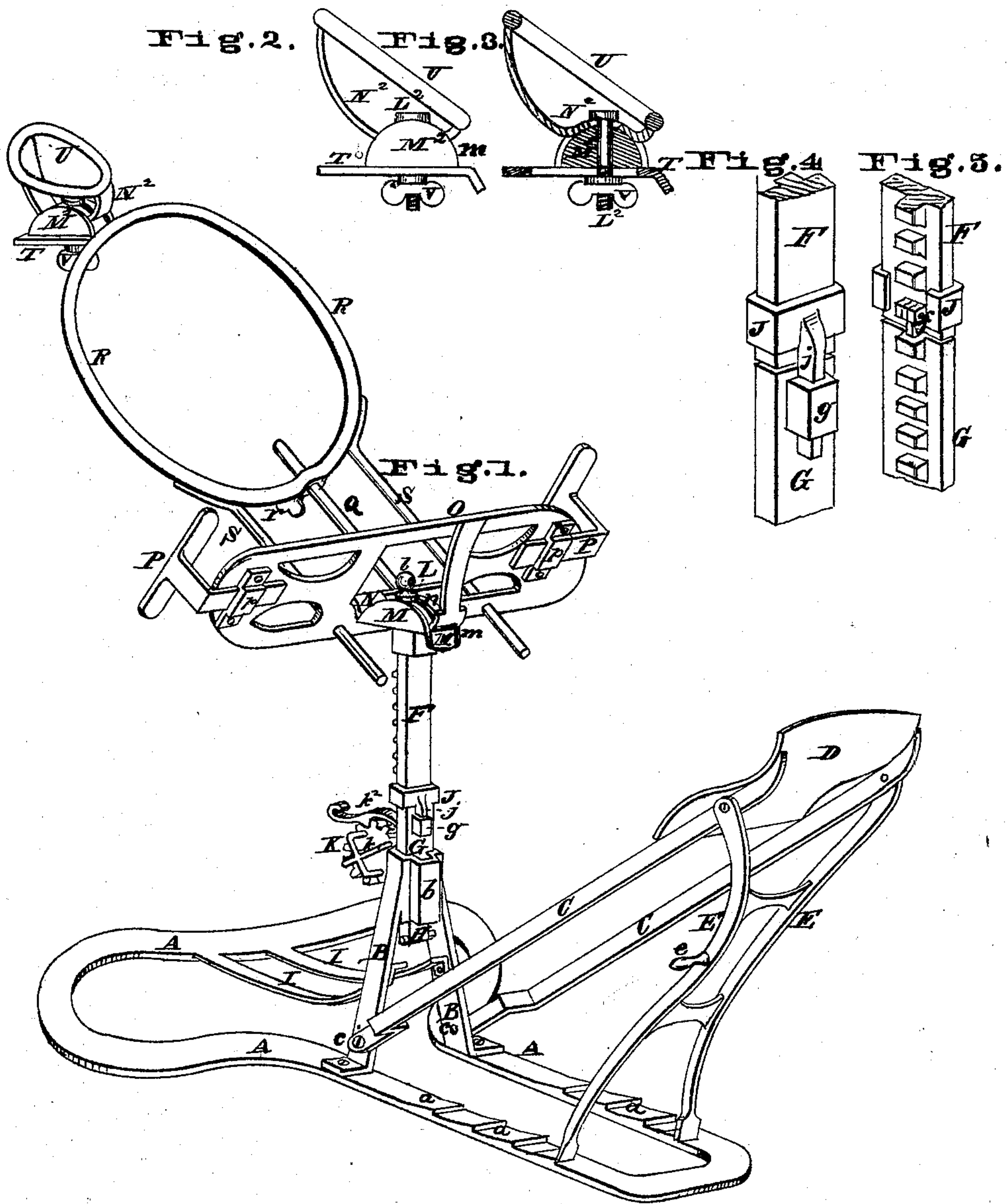


A. W. MORRISON.

Improvement in Dentists' Chairs.

No. 130,525.

Patented Aug. 13, 1872.



ATTEST,
Jas. L. Ewin
Walter Allen

INVENTOR,
Alexander W. Morrison
By *Freight* *Attys.*

UNITED STATES PATENT OFFICE.

ALEXANDER W. MORRISON, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN DENTISTS' CHAIRS.

Specification forming part of Letters Patent No. 130,525, dated August 13, 1872.

Specification describing a certain Improved Dentists' Chair, invented by ALEXANDER W. MORRISON, of the city and county of St. Louis and State of Missouri.

The first part of my invention consists in the construction of the adjustable post or rack-bar, upon which the seat is supported. The upper section of the bar is jointed to the lower section, so as to allow the latter to be extended in a horizontal direction when not in use to allow the lower end of the upper section to descend nearly or quite to the level of the floor. The second part of the invention relates to the universal-joint rests of the seat and head rest. These are composed of grooved segmental blocks, slotted curved plates, and pivot clamping screws or bolts. The former serve to allow any desired degree of inclination in a longitudinal plane, while they afford unyielding support latterly. The clamping-bolts form vertical pivots and retain the parts as adjusted. The clamping-bolt of the seat-rest attaches the same to the upper end of the adjustable post or rack-bar. The head-rest is attached to a slotted horizontal arm, on which it may be adjusted backward or forward, as required. The third part of my invention relates to the means provided for rendering the back vertically adjustable upon the seat; this consists in a standard arising from the back of the seat and passing through the frame of the back, and the back being held to any desired adjustment by a set-screw. Two guide-rods extend downward from the back and pass through holes in the seat. The universal adjusting-rest for the head-rest is substantially similar to that for the seat, but has, in addition, a means of adjustment backward and forward.

Figure 1 is a perspective view of the chair-frame, which may be upholstered in any style. Fig. 2 is a side elevation of the head-rest, enlarged. Fig. 3 is a longitudinal section of the head-rest, enlarged. Figs. 4 and 5 are enlarged perspective views of portions of the rack-bar.

A is the base, supporting the stand B. Pivoted to the stand at *c* are arms or levers C, supporting at their ends a foot-rest, D. E are pawl-legs, engaging at their lower ends ratchets *a*, and by the movement of the lower ends of these legs upon the ratchets the seat is ele-

vated and depressed. *e* is a handle, by which the legs are moved. *b* is a socket at the top of the frame B, in which slides the rack upon which the seat is supported. This rack has an upper section, F, jointed at *f* to a lower section, G. At the lower end of the section G are horizontal pins H, which come in contact with the guide-bars I when the rack is lowered. The guide-bars carry the lower end of the lower section G backward, flexing the hinge *f*, and allowing the descent of the upper section until its lower end nearly or quite reaches the floor. J is a sleeve, which slides upon the section F, and which has a horn, *j*, that enters a socket, *g*, in the section G as the chair is raised, so that the hinge *f* is exposed above the socket *b* of the stand. When this is in the socket *g* the joint *f* is kept rigid. As the chair is again lowered, the sleeve or sliding collar J is arrested by the top *b* of the frame B, and the socket *g* is carried off the horn *j* so as to allow the hinge *f* to bend. The rack F G H is raised or lowered by turning a spur-wheel, K, having upon its side a number of pins or spider frame, *k*, to which a lever may be applied to turn the wheel. *k*² is a pawl, which prevents the wheel K being turned by the weight of the chair, and thus sustains the latter. At the top of the rack is a vertical screw-threaded socket that receives a clamping-bolt, L, that passes vertically through the segmental block M, which, when the bolt is slackened up, may be turned on the head of the rack. The lower side of the segmental block is straight, and its upper side is curved in a semicircle, and has upon each side an upwardly-extending flange, *m*, forming a groove, in which lies a curved plate, N, attached by its ends to the seat-bottom frame O. The curved plate N has a longitudinal slot, *n*, through which passes the bolt L, which has a head, *l*, bearing upon the plate. When the bolt L is slackened up the plate can be slipped upon the segmental block in an endwise direction, enabling the adjustment of the chair to any desired inclination. The bolt L is turned by a lever or key that is introduced beneath the seat. Beneath the seat are staples or keepers *p*, in which slide the arms P, which are thus made adjustable to suit the size of the operator. Extending upward from the rear end of the seat is a standard, Q, which passes

through the back frame R; and *r* is a set-screw, by which the back can be fixed to any desired elevation in relation to the seat. S are guide-bars, passing through holes in the seat, and serving to steady the back. Extending backward from the top of the back is a slotted arm, T, upon which rests a segmental block, M², similar to M, and the head-rest frame U is attached to a plate, N², similar to N, and held by a bolt, L², having a thumb-nut, V, by which it is tightened. The head-rest U thus has a turning and canting adjustment like the seat, and also a forward and backward adjustment on the arm T.

I claim—

1. The jointed rack F G, having pins H, in combination with the guide-bars I, as and for the purpose described.

2. The rods or stems S S projecting from

the back-frame R, and occupying sockets in the seat-frame O, in combination with the rod Q projecting from the seat-frame, and with the socket therefor, and the locking-screw *r*, arranged substantially as shown and described for supporting the back and adjusting the same as to height.

3. The grooved segmental blocks M M², slotted curved plates N N², and bolts L L², constructed and combined with the seat-frame O and with the head-rest U, as herein shown and described, for the purpose specified.

In testimony of which invention I have hereunto set my hand.

ALEXANDER W. MORRISON.

Witnesses:

SAML. KNIGHT,
CHARLES PICCINI.