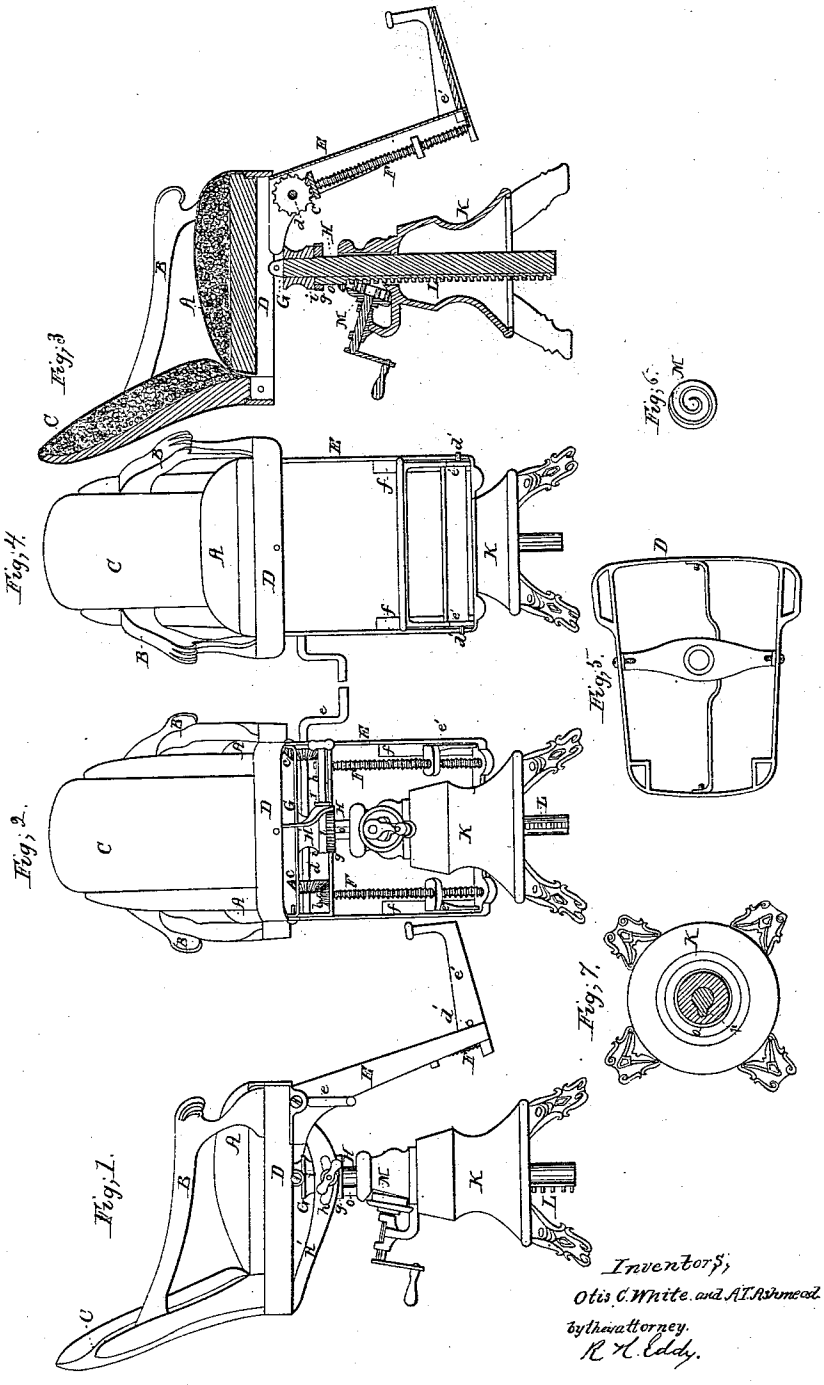
White & Ashmead.

Dentists' Chair,

No. 82,776. Patented Oct. 6, 1868.



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UNITED STATES PATENT OFFICE.

OTIS C. WHITE, OF HOPKINTON, MASSACHUSETTS, AND AUSTIN T. ASHMEAD, OF HARTFORD, CONNECTICUT.

IMPROVED DENTIST'S CHAIR.

Specification forming part of Letters Patent No. **82,776**, dated October 6, 1868.

To all whom it may concern:

Be it known that we, OTIS C. WHITE, of Hopkinton, of the county of Middlesex and State of Massachusetts, and AUSTIN T. ASHMEAD, of the city and county of Hartford, of the State of Connecticut, have invented an Improved Chair for the Use of Dentists; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, Fig. 2 a rear elevation, Fig. 3 a vertical and longitudinal section, and Fig. 4 a front view, of it.

In such drawings, A denotes the seat, B B the arms, and C the back, of the chair, the whole being supported by a metallic frame, D, formed as represented in top view in Fig. 5, it being provided with mortises *a a a a* at its corners, to receive the posts of the arms and back. Another frame, E, is extended obliquely downward from the frame D, and serves to support two screws, F F, by which a foot-rest is supported and adjusted in altitude or vertical position. These screws are provided with bevel-gears *b b*, to engage with other bevel-gears, *c c*, fixed on a horizontal shaft, *d*, provided with a crank, *e*, and arranged in the upper part of the frame E, in manner as represented.

The foot-rest, formed as shown in the drawings, is supported against the side bars of the frame E by two studs, *d' d'*, and it has two arms, *e' e'*, to extend through slots *f f* of the frame E and upward, so as to receive the elevating-screws, the whole being as represented. In this way the foot-rest is supported to great advantage, both by the said screws and the frame E.

By turning the crank *e*, the foot-rest may be either varied or depressed, as circumstances may require.

The seat-frame D is supported on a bar, G, which swivels or turns horizontally on the upper part of a vertical spindle, H, and rests on a friction head or collar, *g*, fixed on the spindle. The frame D is jointed to the ends of the bar G, so as to be capable of being turned in a vertical plane. Furthermore, an arched and slotted bar, H', projects down from the frame D and against the collar *g*, in manner as represented. A clamp-screw, I, goes through the slot *h* of the bar H, and screws into the bearing-head *i* of the bar G, the same being so as to enable the bar G to be forced laterally against the periphery of the collar *g*, which is to be milled or formed with a series of teeth, extending from and around it.

The spindle H slides vertically in a foot-stand, K, and is provided with a rack, L, to engage with a rotary scroll-cam, as represented in Fig. 6.

By revolving the scroll-cam the spindle may be either raised or depressed, so as to effect the proper vertical adjustment of the chair-seat.

The rack constitutes part of a spline or rib, *o*, which enters a corresponding groove, *p*, made in the foot-stand, the same being as shown in Fig. 7, which is a horizontal section of the stud. The spline, or "feather," as it is sometimes termed, with its groove, operates to prevent the spindle from revolving independently of the stand.

From the above it will be readily observed that the chair-seat admits of being turned and adjusted in vertical and horizontal planes with great facility, and that it and the foot-rest also may be adjusted in altitude; also, that the foot-rest may be adjusted with reference to its vertical distance from the chair-seat, or the floor on which the chair may rest.

The advantage of the friction head or collar *g*, when employed with the spindle and the arched and swivel bars, in manner as described, is that it enables the clamp-screw to clamp the seat after any horizontal or any vertical rotary movement of it.

In this chair, we claim as our invention the following—that is to say:

1. The combination and arrangement of the slotted arched bar H', the swivel-bar G, the clamp-screw I, and the friction-collar *g*, applied to the spindle and the seat-frame, as specified.

2. The arrangement of the metallic seat-frame D, (made with the foot and arm holes,

as described,) the foot-rest-supporting frame E, and the elevating-screws and their operative shaft and gears, as explained.

3. The combination, applied to the stand and the seat-frame, for effecting the adjustment of the latter in vertical and horizontal planes, as set forth, such consisting of the spindle, the feather-connection, the rack, the scroll-cam, (with its cranked shaft,) the collar *g*, the clamp-screw I, the arched bar H′, and the swivel-bar G, arranged as specified and represented.

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