

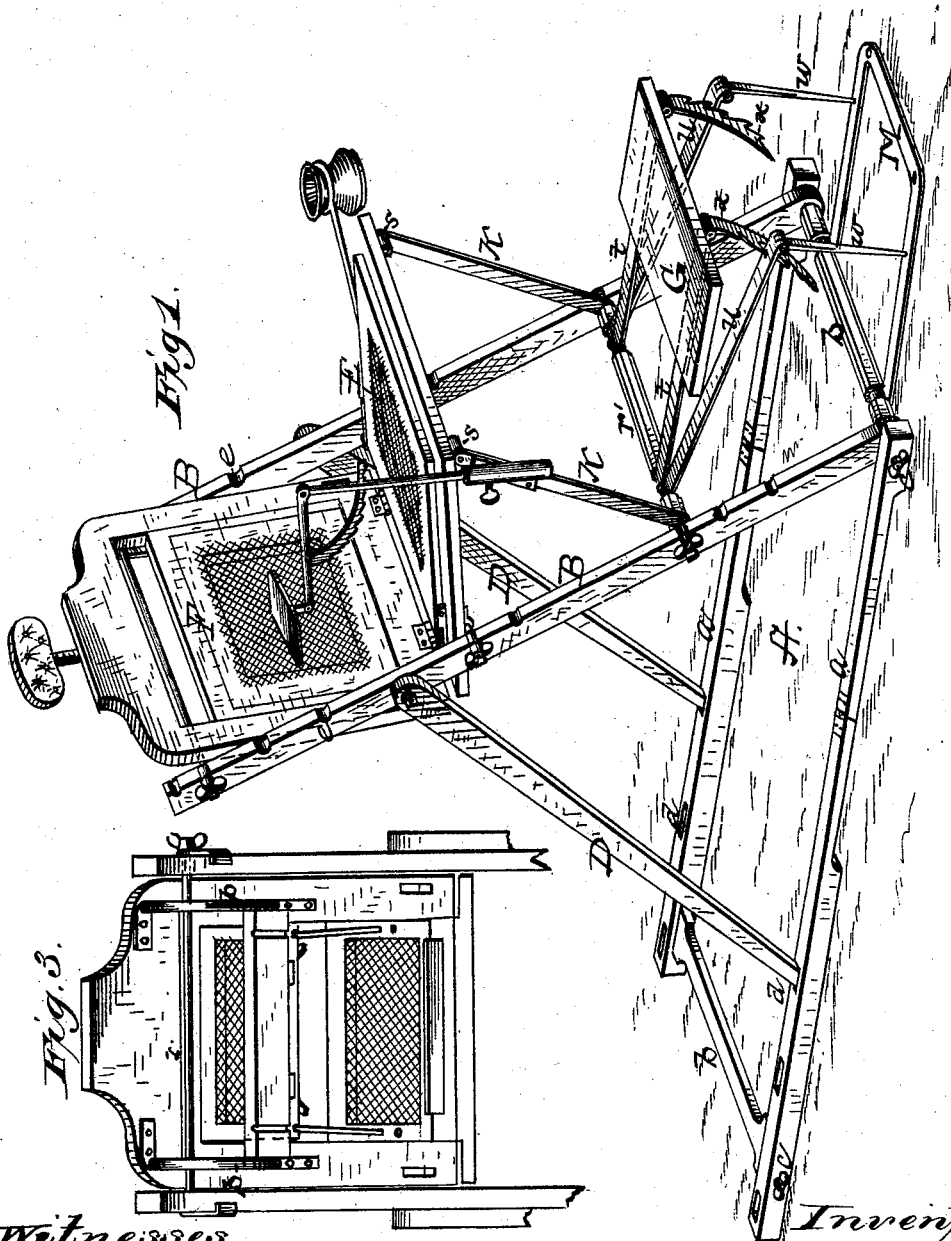
(No Model.)

2 Sheets—Sheet 1.

A. W. ROSS.
DENTAL CHAIR.

No. 244,487.

Patented July 19, 1881.



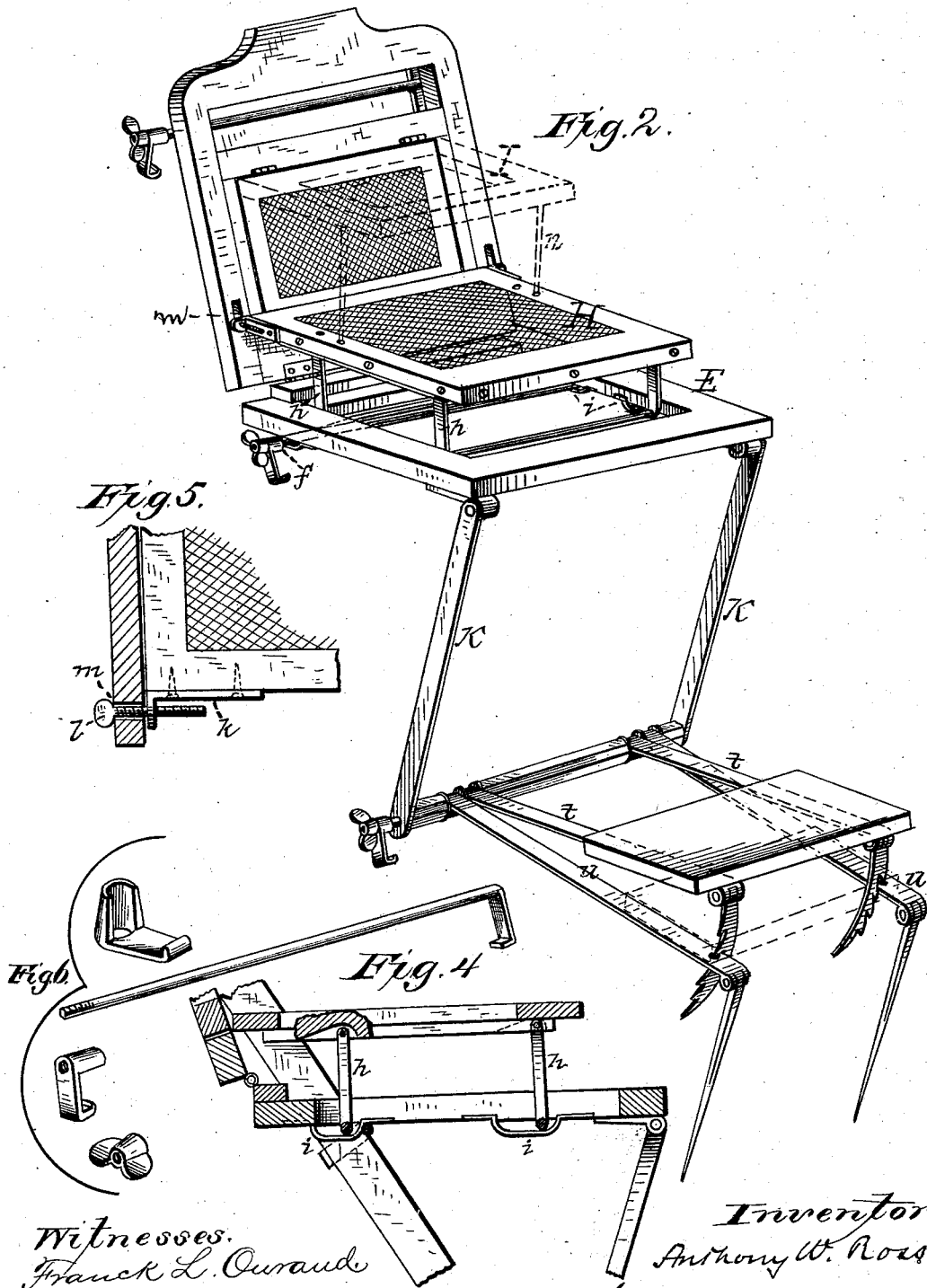
Witnesses
Frank L. Curand
A. S. Kane

Inventor:
Anthony W. Ross
by E. W. Johnson
Attorney.

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 Anthony W. Ross.
 by E. W. Johnson.
 Attorney

UNITED STATES PATENT OFFICE.

ANTHONY W. ROSS, OF FLORENCE, SOUTH CAROLINA.

DENTAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 244,487, dated July 19, 1881.

Application filed February 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY W. ROSS, a citizen of the United States, residing at Florence, in the county of Darlington and State of South Carolina, have invented certain new and useful Improvements in Portable 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to a portable dental chair; and the main object of the improvement is to construct a cheap and substantial chair that can be folded in a compact manner, so that it can be shipped within a small space, or a dentist can carry it with him from place to place without inconvenience and at little expense.

My invention consists in a foundation-frame for a dental chair, composed of two longitudinal pieces provided with a series of notches or their equivalents, and end pieces, in combination with an adjustable chair-frame having supports to engage with the notches of the foundation-frame.

My invention also consists in inclined pieces pivoted to the forward end of the foundation-frame and provided with a series of recesses or sockets, or their equivalents, in combination with the adjustable seat and foot-rest.

My invention also consists in the combination of the inclined pieces having a series of recesses or their equivalents, the chair-seat, chair-back, foot-rest, and rods provided with clamping-jaws and fastening-nuts.

My invention also consists in the chair-seat, back, and foot rest or stool, all connected together by coupling-joints, whereby the parts can be adjusted relatively to each other.

My invention also consists in the chair-back provided with a hinged seat for small children and devices for supporting the same.

My invention also consists in a seat-frame provided with a seat that is capable of being elevated, and with devices for supporting the same in the elevated position.

My invention also consists in a hinged foot rest or stool provided with adjusting and supporting devices.

My invention also consists in the novel construction and combinations of parts, as will be hereinafter more fully described and specifically claimed.

Figure 1 is a perspective view of the dental chair. Fig. 2 is a perspective view of the back, seat, foot-stool, and the connections. Fig. 3 is a rear view of the back. Fig. 4 is a sectional view, showing the method of uniting the seat to the seat-frame. Figs. 5 and 6 are detail views.

In the annexed drawings, forming a part of this specification, the letter A represents the foundation-frame of the chair. This frame is composed of the side or longitudinal bars, *a a*, and end bars, *b b*, fastened together by transverse bolts passing under the end bars and through the side bars, where they are secured at one end by thumb-nuts *c c*. The rear ends of the side bars on the upper surfaces are formed with a series of notches or depressions, *d*, for the purpose hereinafter stated.

The letter B (see Fig. 1) represents the inclined side pieces, pivoted to or having their axis on the front bolt of the foundation-frame. These inclined pieces are formed with notches or ratchets *e*, or their equivalents, and provided with the pivoted supports or props D, which engage at their lower ends with the notches *d* in the side bars of the foundation-frame. These inclined pieces and supports constitute the chair-frame proper.

The letters E, F, and G represent the seat-frame, back-frame, and foot rest or stool, respectively, and they are connected together by hinge-connections, as will hereinafter be described. The rear end of the seat-frame E (see Fig. 2) is provided with a transverse rod, *f*, having fixed bearings, and forms the pivotal support for the seat-frame in obtaining the desired inclination for the seat. This seat-frame is provided with a seat, H, capable of being elevated and sustained in the raised position by means of folding rods and sockets, and bolts engaging with the back.

The arms of the folding rods *h* are pivoted at their upper ends to the under side of the seat in any suitable manner, and the rods proper move in slotted brackets *i* attached to the under side of the seat-frame, as seen in Fig. 4 of the drawings.

To the rear end, on opposite sides of the

seat-frame, are attached bracket-arms *k*, laterally extended, with adjusting-screws *l* to engage with the slots *m* in the frame of the back. These adjusting-screws are passed through the slots of the back and screwed home after the rods *k* and their arms are properly adjusted to sustain the seat in the elevated position, which operation locks the seat to the back.

The back, as before stated, is hinged to the seat-frame substantially in the manner as indicated in Fig. 1, and this back is provided with a seat, I, for small children, the position of which for use is shown by dotted lines in Fig. 2 of the drawings. The child's seat I is hinged at its upper end to the back-frame, and is provided with two pivoted supporting-rods, *n*, the lower ends of which engage with formed recesses in the seat H to sustain the seat in the proper position during the operation.

When the small seat I is not in use it is thrown back into its normal position and the pivoted rods *n* locked into position by means of turn-buttons. This back is also provided at its rear side with slotted brackets *p*, or their equivalent, fitting over the holding-rod *r*; and the object of the same is to permit of the adjustment of the back to the seat and the use of the small seat located or formed in the back.

To the forward end of the seat-frame (see Figs. 1 and 2) are secured eyes *s*, to which are pivoted the pendent arms or links K, carrying at their lower ends the transverse holding-rod *r'*, and to this rod are suitably journaled the horizontal bars *t* and *u*, separated by washers, constituting the frame for the foot rest or stool and the support for the same.

Attached to the outer end of the horizontal bars *t* is a foot-board, G, in any suitable manner, preferably by passing wood-screws through the bars into the wood.

To the outer ends of the horizontal bars *u* are pivoted the pendants *w*, which engage at their lower ends with depressions or indentations in the side bars of the frame M, which is attached to the front rod of the foundation-frame, as seen in Fig. 1 of the drawings.

To the forward end of the horizontal bars *t* are pivoted arms *x*, having side projections or fingers to engage with the notches or depressions in the horizontal bars *u*, the object of which is to secure a proper adjustment of the foot-stool to the main seat.

To one of the side arms K (see Fig. 1) is attached, in any suitable manner, a tube with a set-screw, into which is passed a rod with a hinged arm, carrying a tray for the instruments. This device is also provided with adjusting means for raising or lowering the tray to suit the convenience of the operator. The other side of the seat-frame is provided with an arm supporting a spittoon.

No claim is made in this application for the bracket and spittoon-holder, as above described.

The parts constituting the dental chair are put together substantially in the manner as

herein shown and described, bolts having fixed and movable clamping-jaws and thumb-screws, as shown in Fig. 6, being employed.

To raise the seat as circumstances may arise, the front edge of the seat is elevated about one inch; then pull it forward about two inches; then raise the seat in the arc of a circle, slightly lifting to prevent the rods from sliding to the rear ends of the slots, then entering the adjusting-screws in the slots in the back, and finally adjusting the screws so as to secure the back, and leaving the head crosswise to prevent the withdrawal of the same.

To lower the seat in its normal condition in the seat-frame, the thumb-screws are turned in a line with the slots, then lower the seat, and finally push the back into its place.

The foot-stool, which can be elevated from two to nine inches, is carried out by adjusting the finger-arms so that the finger of the arms will rest in the depressions formed in the side bars of the supporting-frame.

To adjust the seat in the back for the use of children has heretofore been herein described, and the operation need not now be repeated.

It is obvious that the parts may be cushioned and upholstered to suit the taste and fancy of the purchasers.

I wish it distinctly understood that I do not wish to confine myself to the specific mechanical construction herein described and shown, as they may be varied and modified in some degree without departing from the spirit of my invention; and, also, the side bars of the foundation-frames and the inclined bars of the chair-frame may be hinged at their middle portion, so as to fold, and in fact I prefer to construct them in this manner.

The advantage of this dental chair, constructed in the manner as hereinbefore described, is that the parts composing it can be folded into a close and compact form, so that they can be carried in a buggy or any other conveyance; also, it will enable a traveling dentist to carry it with him from place to place without inconvenience and with little expense.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a portable dental-chair, the inclined pieces pivoted to the forward end of the foundation-frame, and provided with pivoted supports and a series of recesses or sockets, in combination with a seat and a foot rest or stool coupled together and attached to the same, substantially as described.

2. In a portable dental chair, the combination of the foundation-frame, the inclined pieces having a series of recesses and supporting-bars, D, the chair-seat, chair-back, and foot-rest coupled together and supported in position by means of transverse fastening-rods, substantially as described.

3. In a portable dental chair, the combination of the foundation-frame, having a series of notches, the inclined chair-frame, having pivoted props or supports engaging with the

notches of the foundation-frame to secure inclinations, the chair-seat, the chair-back, foot-rest, and fastening-rods, substantially as described.

5 4. In a portable dental chair, the combination of a foundation-frame, A, pivoted inclined pieces B, with a series of notches, chair-seat E, back F, and foot-rest G, with supporting-legs, the said parts being organized and operating in the manner substantially as described.

10 5. In a portable dental chair, the foundation-frame A, constructed substantially as hereinbefore described, provided with the additional frame M, affording a steady support for the legs of the foot-rest of the chair, in combination with the inclined pieces, their supports, the foot-rest, and its support, substantially as shown.

15 6. In a portable dental chair, a chair-seat, H, and a foot-rest, G, connected or coupled together by means of the pivoted rods K K, in combination with the adjustable transverse coupling-rods, side pieces, B B, and props D D, substantially as shown.

7. In a portable dental chair, the combination, with a chair-seat, H, of a foot-rest, G, coupled to the said seat and provided with pivoted rack-bars *x*, pivoted bars *u*, and supports *w*, substantially as shown.

8. In a dental chair, the combination, with a chair-seat frame, E, with loops *i*, of a vertically-adjustable seat, H, and supporting and folding arms *h*, pivoted to the sides of the seat and loosely pivoted in said loops *i*, substantially as described.

9. In a dental chair, the combination of a chair-back formed with the side slats, *m m*, and a chair-seat, H, and seat-frame E, vertically adjustable, provided with side screw-bolts, *l*, and the supporting and folding arms *h*, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ANTHONY W. ROSS.

Witnesses:

JEROME P. CHASE,
C. E. CHICHESTER.