

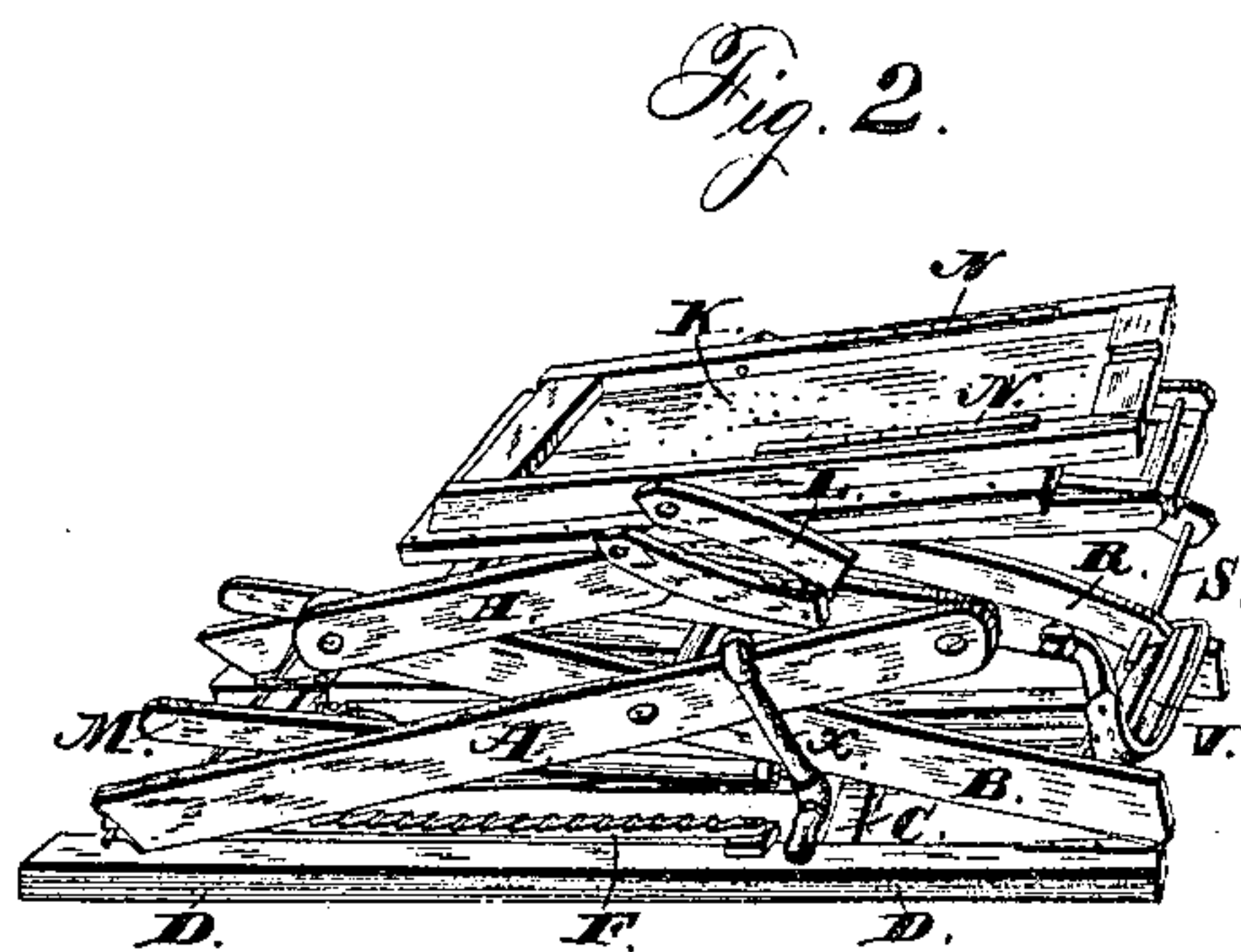
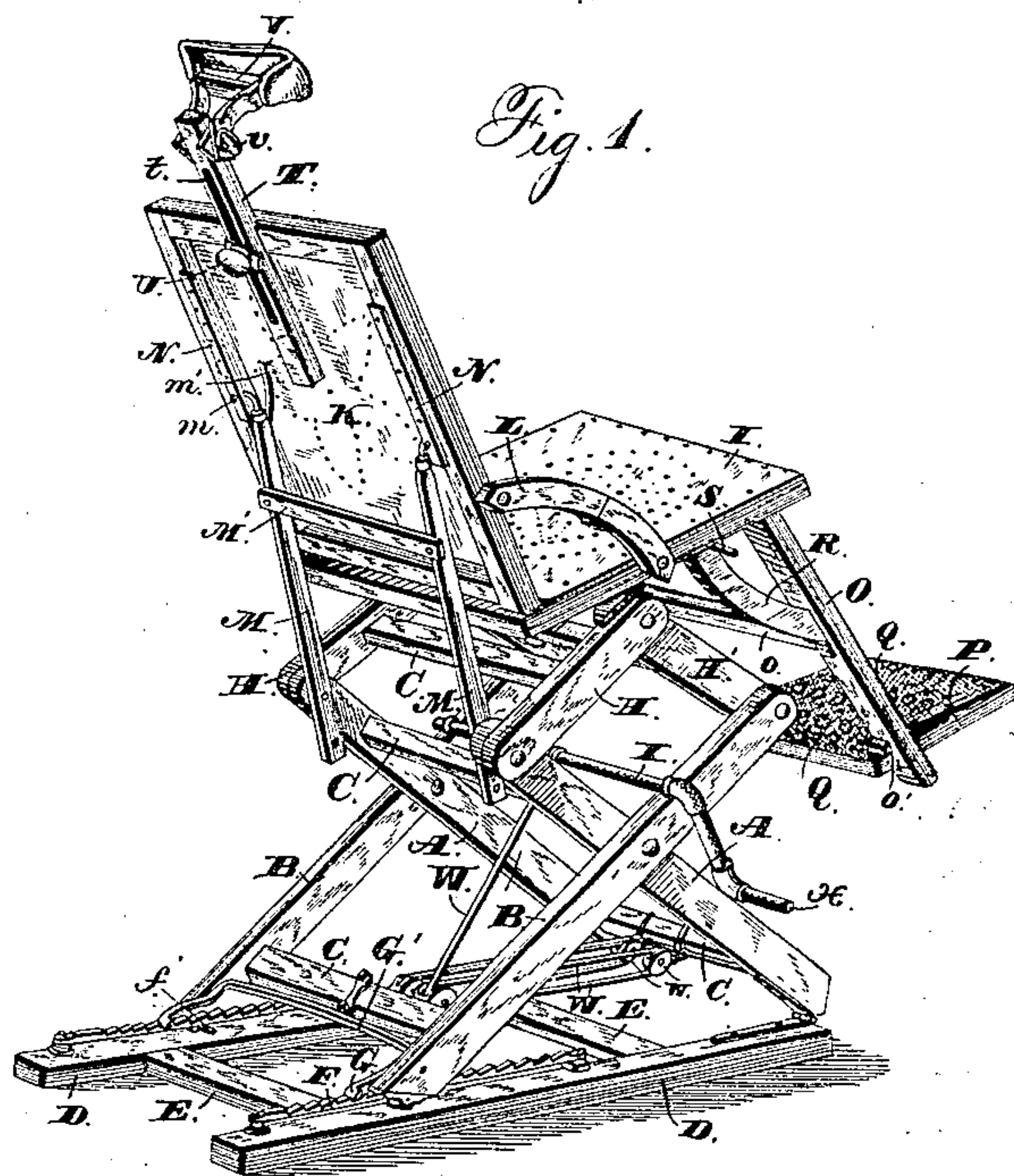
(No Model.)

2 Sheets—Sheet 1

W. G. BROWNE.
FOLDING DENTAL CHAIR.

No. 271,596.

Patented Feb. 6, 1883.



Witnesses.

Jas. E. Hutchinson.
Henry L. Hazard.

Inventor.

W. G. Browne, by
Geo. S. Prindle, his Atty

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Fig. 3.

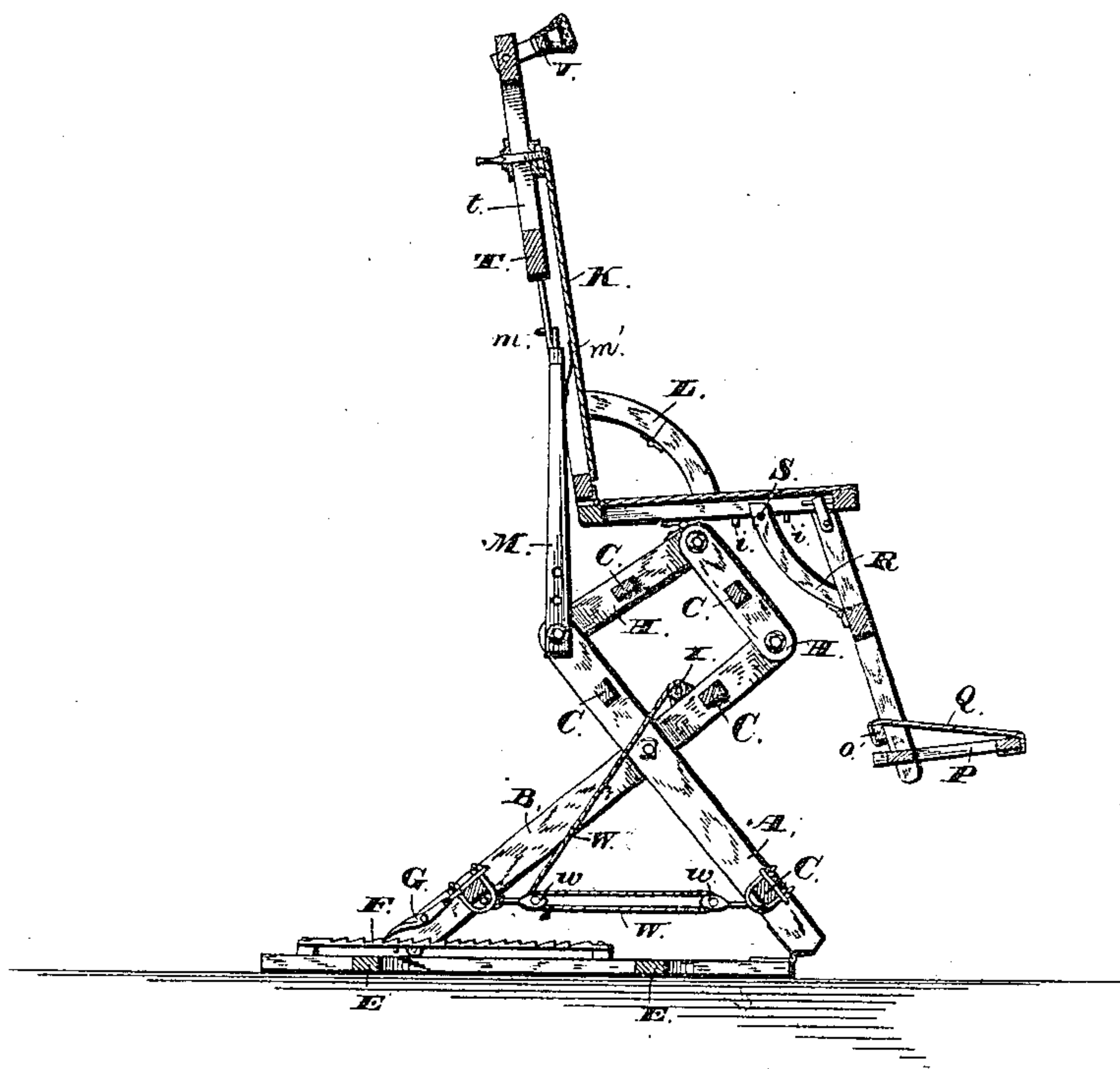
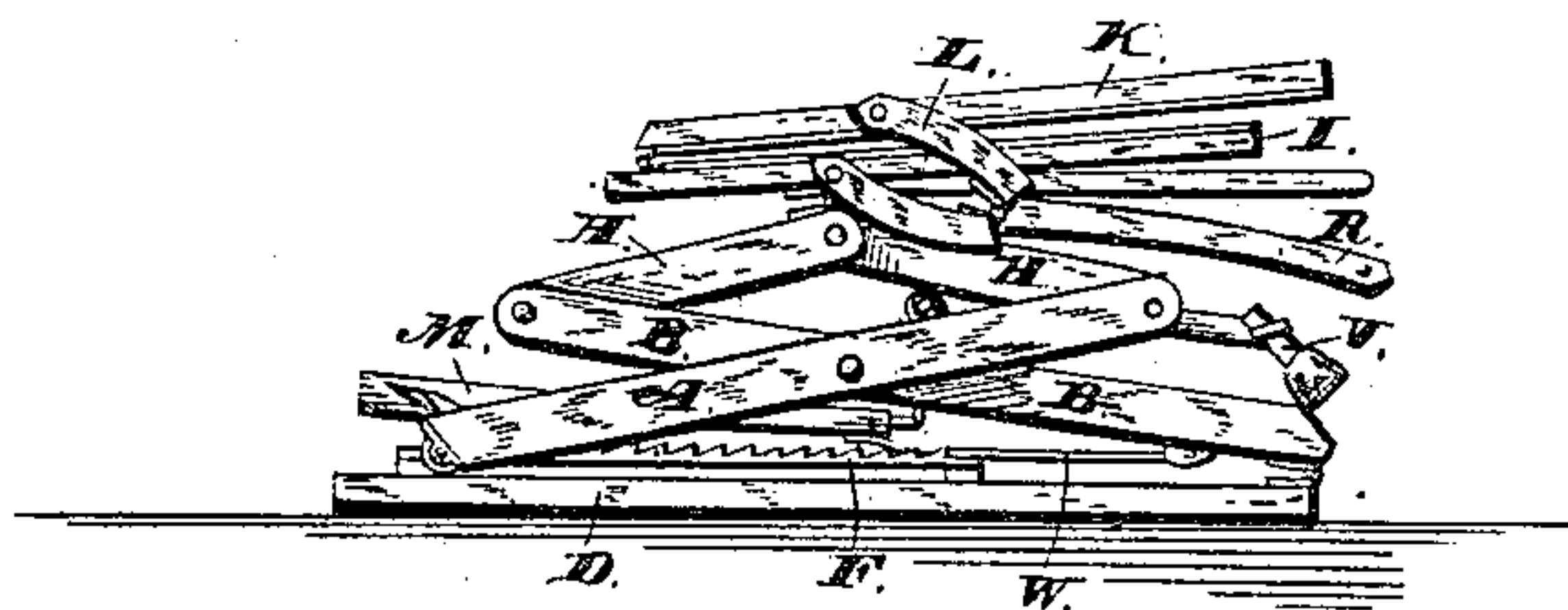


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WALKER G. BROWNE, OF ATLANTA, GEORGIA.

FOLDING DENTAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 271,596, dated February 6, 1883.

Application filed July 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, WALKER G. BROWNE, of Atlanta, in the county of Fulton, and in the State of Georgia, have invented certain new and useful Improvements in Folding Dental Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved chair as arranged for use. Fig. 2 is a like view of the same arranged for storage. Fig. 3 is a vertical central section of said chair upon a line passing from front to rear, when arranged as seen in Fig. 1; and Fig. 4 is a side elevation of the same when arranged as seen in Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to furnish a cheap, convenient, and efficient chair for dental purposes, which may be easily stored and transported; and to this end it consists, principally, in a folding dental chair hinged to and supported upon a base, and adapted to be raised or lowered with relation thereto by means substantially as hereinafter specified.

It consists, further, in the construction of the lower portion of the chair and its combination with the base and with adjusting mechanism, substantially as and for the purpose hereinafter shown.

It consists, farther, in the construction of the body of the chair and its combination with the lower supporting portion of the same, substantially as and for the purpose hereinafter set forth.

It consists, further, in the means employed for adjusting to and securing in position the tilting body, substantially as and for the purpose hereinafter shown and described.

It consists, further, in the construction of the foot-rest and its combination with the seat, substantially as and for the purpose hereinafter specified.

It consists, finally, in the chair constructed and combined to operate in the manner and for the purpose substantially as hereinafter set forth.

In the annexed drawings, A and B repre-

sent two bars, having substantially the same length, which are pivoted together at or near their longitudinal centers, and are combined with a similar pair of bars by means of cross-bars C, that extend between corresponding bars, A and B, at points near their lower ends. The parts thus combined are supported by or upon a base composed of two side bars, D, that are arranged in parallel lines, and connected together by cross-bars E, the lateral positions of said bars D corresponding to the relative positions of the pairs of pivoted bars A and B. The lower end of each bar A is hinged to or upon the front end of one of the base-bars D, while the lower end of each bar B rests upon the rear portion of said base-bar, where it is held in position by means of a ratchet-bar, F, that is secured upon the upper side of the latter, and is engaged by a pawl, G, that is pivoted upon one side of said bar B. The pawls G are connected together by means of a cross-bar, G', that extends between their upper ends, by which means said pawls may be simultaneously moved into or out of engagement with the ratchet-bars F.

In order that the bars B may be prevented from becoming disengaged from the base, the ratchet-bars F are raised slightly above the latter, and are so arranged that said bars B are upon the outside of the same, after which a pin, *f*, is passed through each bar B and beneath the adjacent ratchet-bar, such arrangement permitting perfect freedom of motion in the desired direction while preventing displacement of parts.

To the upper end of each bar A is pivoted one end of a short bar, H, the opposite end of which is pivoted upon one end of a similar bar, H', that has its opposite end pivoted upon the upper end of the bar B of that side, the construction being known as a "lazy-tongs."

The parts combined constitute the base of my chair, and upon the same is supported a seat, I, and back K, which are hinged together at their intersecting edges, and are held in relative position for use by means of two arms or braces, L, one of which is pivoted at its ends to or upon the side edges of said parts, as shown in Fig. 1. The seat I is hinged to or upon the upper end of the bar H, at each side, and is capable of being tilted thereon at any

desired angle. Said seat is secured in place, when adjusted thereto, by means of two bars, M, one of which is pivoted at its lower end upon the pivotal bolt which unites the bars B and H, and at its upper end is provided with a rearwardly-projecting stud, *m*, that when placed in rear of a plate, N, that is provided with holes *n* and secured upon the back K, may be moved rearward and caused to engage with any one of said holes.

A spring, *m'*, secured upon the upper end of each bar M, and operating to press the latter rearward, insures the engagement of the stud *m* with the plate N. For convenience of manipulation, the said bars M are connected together by means of a cross-bar, M', which enables the same to be simultaneously moved out of or into engagement. If, now, the bars M are disengaged from the plate N, by pressing the upper ends of the former forward, the back K and seat I may be tilted forward or back to the desired position, after which, by releasing said bars, they will automatically engage with said plates and lock said seat and back in position.

A foot-rest is provided, consisting of two bars, O, connected together by a cross-bar, *o*, and having their upper ends pivoted upon the lower side of the front of the seat I, a square frame, P, pivoted at its rear edge between the lower ends of said bars, and a strip of flexible material, Q, having its front edge secured to or upon the front edge of said frame and its rear edge attached to a cross-bar, *o'*, that extends across said bars at a point above the pivotal connection of said frame. The foot-rest is held in position by means of two braces, R, one of which is pivoted at one end upon each bar O, near its center, and from thence extends in a curve upward beneath the seat I, where its upper end is connected with the upper end of the opposite brace by means of a rod, S. A number of studs, *i*, secured within and projecting downward from each side rail of said seat, furnish stops with which said rod engages, and receiving the backward thrust of the latter, and said braces prevent the farther backward swing of said foot-rest. To adjust the foot-rest to place, the rod S is moved downward out of engagement with the studs *i*, said rest swung forward or rearward, and said rod moved upward into engagement again.

A support for the head of the person occupying the chair is furnished by the following means, viz: a bar, T, provided with a longitudinal slot, *t*, is placed upon the rear side of the back K, and is secured thereon by a screw, U, which passes through said slot into said back, the arrangement permitting said bar to be adjusted longitudinally within the limits of the length of its slot. Upon the upper end of the bar T is pivoted a frame, V, which has the shape shown in Fig. 1, and has its front side cushioned or otherwise rendered soft. Said frame or head-rest V is capable of adjustment upon its pivotal bearing, and may be

secured in any desired position by tightening the bolt *v*, which forms said bearings.

In order that the height of the seat may be easily changed while the chair is occupied, a rope, W, and tackle-blocks *w* are attached to and extend between the lower cross-bars, C, and enable the lower ends of the bars B to be moved forward or permitted to move rearward. Said rope extends from said tackle-blocks upward around a shaft, X, that is journaled at some suitable point above the pivotal connection of the bars A and B, and is provided with a crank-handle, *x*, or other suitable means whereby the same may be rotated. To raise the seat, it is only necessary to draw upward upon the rope W, the pawls G being automatically tripped as the bars B advance. To lower said seat, said rope is drawn upward until said pawls can be raised, after which, by slacking said rope, said bars B will move rearward until said seat has been sufficiently lowered, when said pawls are again thrown into engagement.

While the rope and tackle-blocks are preferably employed, it will be obvious that many other well-known means may be substituted therefor without departure from the spirit of my invention.

The chair is rendered capable of being folded by jointing centrally each of the braces L, so as to permit it to fold together by moving said jointed center forward.

The operation of folding is as follows, viz: The bottom portion of the chair is dropped to its lowest point, the foot and head rests and back-braces removed, and the back folded downward upon the seat, after which said foot and head rests and said back-braces are placed within the space beneath the seat and the whole secured together with hooks, cords, or any other well-known equivalents.

The chair thus arranged is compact and easily stored or transported, and when desired for use may be readily set up and adjusted.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The folding dental chair described, in which the pivoted legs are supported by or upon a horizontal base and are combined with mechanism, substantially as described, whereby their lower ends may be drawn toward each other or permitted to spread apart, and when thus adjusted may be locked in position, substantially as and for the purpose specified.

2. In combination with the chair-seat, the two sets of supporting-bars A, B, H, and H', pivoted together, respectively, at or near their longitudinal centers, and connected by cross bars or rungs, the base D E, and elevating and stop mechanism, substantially as described, whereby said chair-seat may be adjusted to and secured in vertical position, substantially as and for the purpose shown.

3. The seat I and back K, hinged together, as shown, and the hinged braces L, which are

hinged at their longitudinal centers and at their opposite ends are pivoted upon said parts, in combination with each other and with the lower supporting portion of the chair, substantially as and for the purpose set forth.

4. As a means for locking in relative position the seat I and back K, and in combination therewith, the bars M, pivoted at their lower ends upon the lower portion of the chair, and having at their upper ends the rearward-projecting studs *m*, the plates N, provided with holes *n* for the reception of said studs, and the springs *m'*, placed between said back K and said studs, and operating to hold the latter with a yielding pressure in engagement with said plates, substantially as and for the purpose shown and described.

5. In combination with the seat I, having the studs *i*, the foot-rest composed of the bars

O, cross-bars *o* and *o'*, frame P, flexible strip Q, braces R, and rod S, substantially as and for the purpose specified.

6. The hereinbefore-described chair, consisting of the bars A, B, H, and H', cross-bars C, base D E, ratchet-bars F, pawls G, seat I, back K, folding braces L, locking-bars M *m*, locking-plate N *n*, rope W, tackle-block *w*, and crank-shaft X, combined with each other and with a head and a foot rest, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of June, 1882.

WALKER G. BROWNE.

Witnesses:

GEO. S. LOWNDES,
B. M. WOOLLEY.