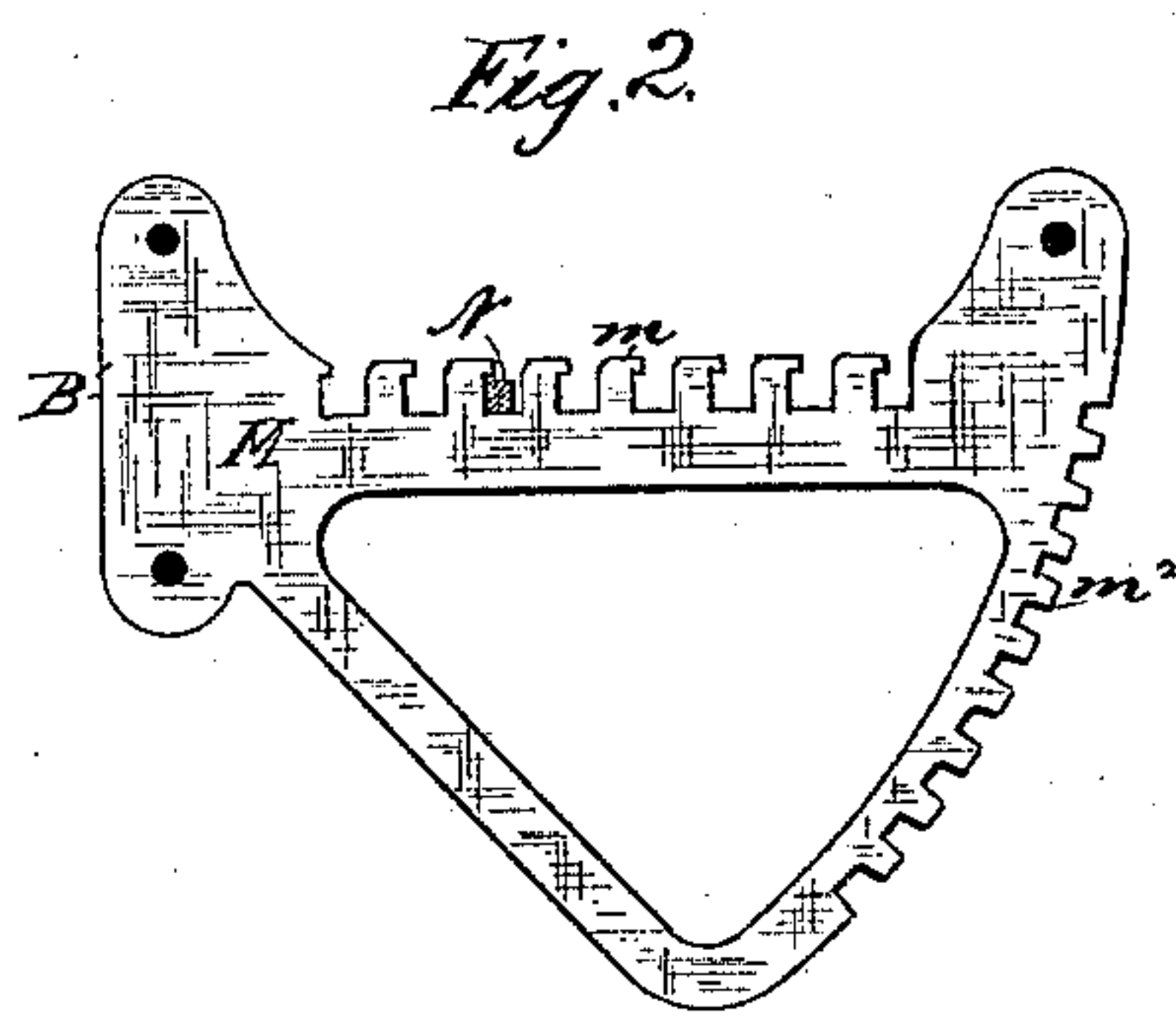
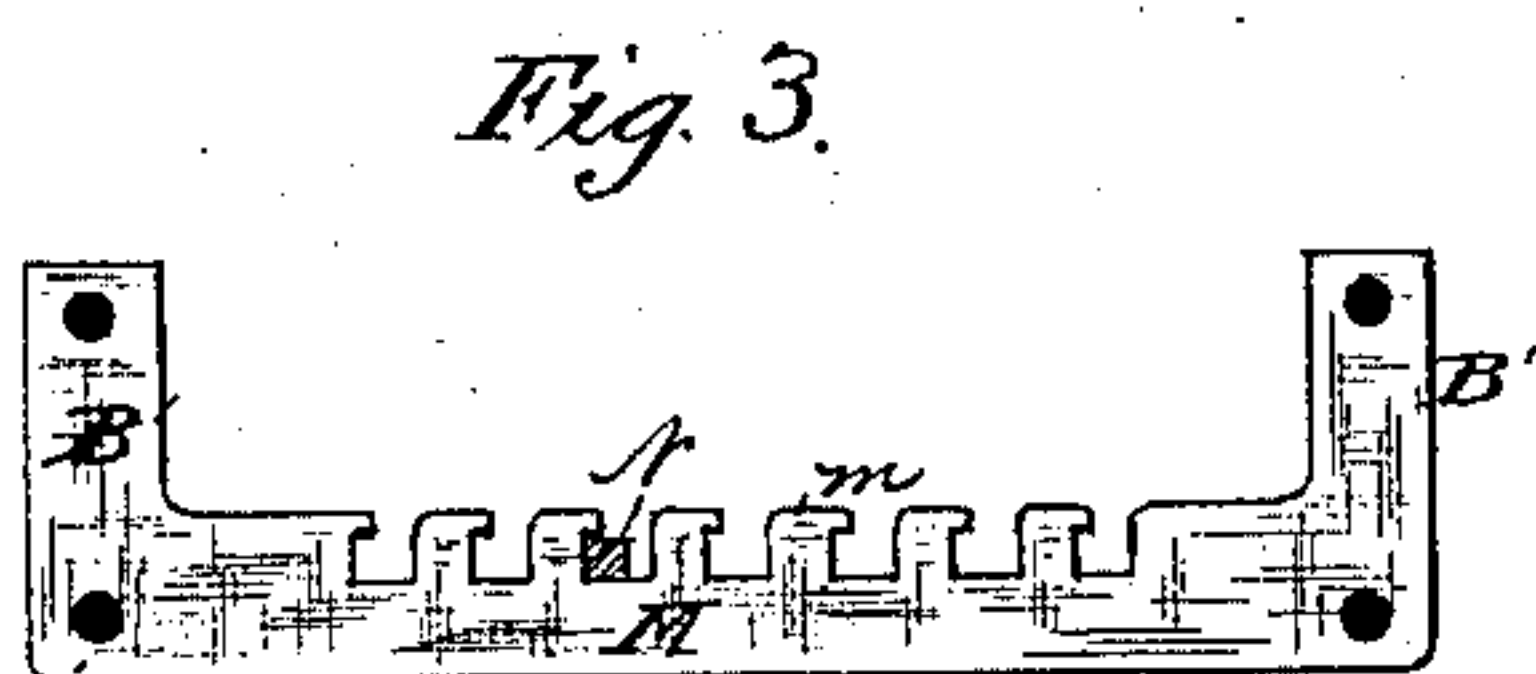
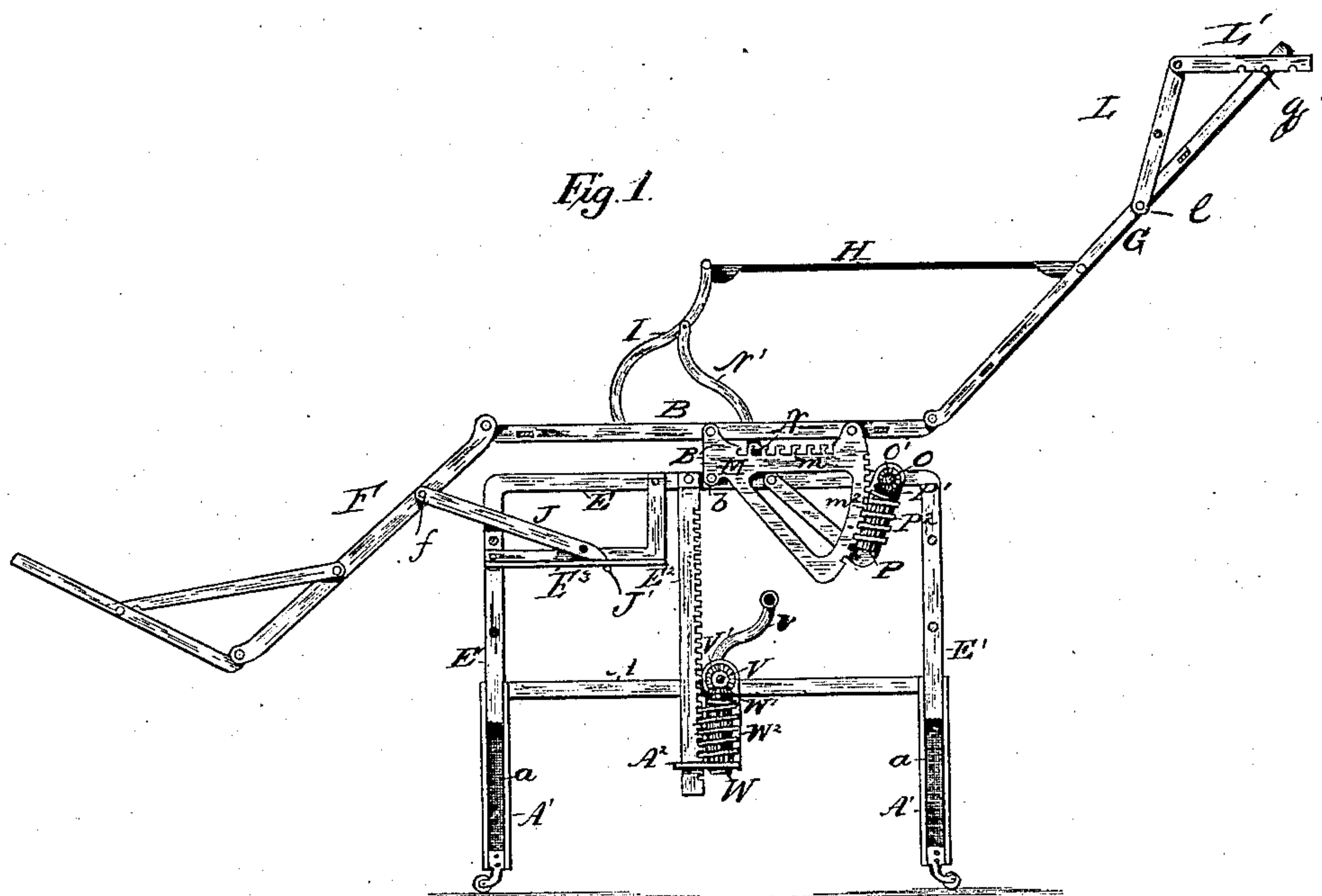


(No Model.)

F. BOHSERT.
SURGICAL CHAIR.

No. 290,841.

Patented Dec. 25, 1883.



Witnesses:
B. C. Stafford.
H. A. Johnston.

Inventor:
Frederick Bohsert
by his attorney
Thomas D. Nelson.

UNITED STATES PATENT OFFICE.

FREDERICK BOHSERT, OF NEW YORK, N. Y.

SURGICAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 290,841, dated December 25, 1883.

Application filed March 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BOHSERT, of New York city, in the county and State of New York, have invented certain new and
5 useful Improvements in Surgical Chairs, of which the following is a specification.

The invention relates to improved means for raising and lowering the entire chair, to improved means for holding the head at adjustable elevations, and for the back and the feet at different angles, with facilities for instant and wide changes of adjustment, and to improvements in the construction of certain details. The invention allows the use therewith of
15 many other adjustable parts and devices. All the proper surfaces may be upholstered in any ordinary or suitable manner. It will be understood that the chair is only shown in its frame-work and operating mechanism, the
20 cushions and padding and upholstery being omitted.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the in-
25 vention.

Figure 1 is a central vertical section, showing the entire chair with the entire effective parts of the chair elevated nearly to their highest extent. Fig. 2 shows on a larger scale
30 one of the parts detached. Fig. 3 represents a modification.

Similar letters of reference indicate corresponding parts in all the figures.

A is the bottom frame-work, certain portions being indicated, when necessary, by additional marks of reference, as A'. This frame-work is provided with casters, resting on the floor, allowing the chair to be moved and turned as required. As this part retains a
40 uniform level, I will designate it as a "fixed" part in contradistinction to others which are movable thereon.

E is a framing mounted on and partially within the fixed framing A, and capable of being raised and lowered thereon. The straight upright portions—one at each corner—will be designated by additional marks of reference, as E'. They are of dovetail section and guided in grooves *a* in the inner faces of the corre-
50 sponding upright portions, A'. Stout rack-bars E² extend down from the frame E—one on

each side—and play through guides A² on the framing A. Two upright shafts, W W, are mounted in bearings in the fixed framing A. I provide each with beveled-gear wheels W', 55 and with stout screw-threads W². The latter engage with the teeth of the rack-bars E² E². A transverse shaft, V, extends across the framing A, and is supported in bearings therein, each end being overhung and squared to receive a crank, *v*, by which it may be strongly
60 turned. This shaft is provided with two beveled-gear wheels, V', which engage with the beveled-gear wheels W'. As the shaft V is turned by the crank in one direction or the
65 other, the action of the screw-threads W² on the rack-bars E² raises or lowers the frame E and its connections.

B is the main body or seat of the chair. In Figs. 1 and 2 short arms B' of the piece M, 70 extending down therefrom on each side, are pivoted to the adjustable framing E at the points *b*.

M M are pieces fixed on and moving with the seat or body B, and adapted to perform im- 75 portant functions. A series of hook-formed teeth, *m*, extending up from the piece M a sufficient distance below the lower edge of B, receive a transverse bar, N, which extends across under the seat, and is connected by links N' to 80 a front lever, I, which is connected by a nearly horizontal arm, H, to the back-framing G. On lifting the bar N by either or both of its links N', and dropping it again into a different space between the hook-shaped teeth *m*, the in- 85 clination of the back G, and consequently the positions of the arms H and front levers, I, may be changed to any required extent. The hook form of the teeth holds the bar N, so that it cannot be displaced by any force ex- 90 erted on the front lever, I, or its connections. Nothing short of an intentional lifting of the links N' will detach these parts from their engagement by the teeth *m*. The rear edge of each piece M forms a toothed segment having 95 teeth *m*². These are engaged by the threads P² of upright threaded shafts or worms P, carried in bearings supported in the framing E, which are each impelled by a beveled-gear wheel, P', engaging with beveled-gear wheels 100 O' on a shaft, O, which extends across the back of the framing E, and is turned at will

by a detachable crank. This may be the same crank *v* before described as applying on the other shaft, *V*. The turning of this shaft operates both the worms *P*, and, acting on the segments *m*², tilts the seat *B* and its connections forward and backward as desired.

L is a frame pivoted to the back-frame *G* at the point *l*. To its upper edge are hinged two notched racks, *L'*, adapted to engage with the upper cross-bar, *g'*, of the back-framing *G*. The head-rest *L* may be shifted so as to stand at various angles with the back-frame *G* by simply lifting the rack *L'*, adjusting the head-rest *L* into the required position, and allowing the rack *L'* to drop again and engage with the top round or cross-piece, *g'*. When this head-rest is not required for use, it may be adjusted into the plane of the back *G* either by lifting the rack *L'* and shifting the frame *L* into the required position and allowing the rack *L'* to hang idly, or when the chair is likely to be used a long time without the head-rest the latter may be shifted over and folded inside the frame *L*. This will bring all these parts nearly into the plane of the back *G* and stow them compactly.

To the front of the seat *B* is pivoted an adjustable leg-frame, *F*, having provisions for supporting the legs and feet of the patient. To it is hinged, by a pivot or a cross-bar, *f*, a frame, *J*, provided with downward projections *J'* at its rear end—one on each side.

To the framing *E* is rigidly attached a horizontal angle-iron, *E*³, in the broad horizontal flange of which is formed a series of holes. The projections *J'* from the frame *J* may engage in any desired holes in the series, and will hold the leg-frame *F* firmly at a corresponding angle. To shift the position of the

leg-frame *F* the frame *J* is lifted so that the projections *J'* are disengaged from the frame *E*³. Then the leg-frame *F* is shifted into the desired position and the frame *J* again dropped, so that the projections *J'* engage in the proper holes in the angle-iron *E*³, and the leg-frame is secured.

Modifications may be made in the forms and proportions of the details. The several parts may be made thicker or more slender than here shown. Wood may be used for some of the portions. I prefer making the whole of iron or steel, and have so represented it.

Parts of the invention can be used without the whole.

I claim as my invention—

1. In an adjustable chair, the pieces *M*, having hook-teeth *m*, arranged in a series, in combination with the transverse bar *N*, links *N'*, the back, the seat *B*, and connecting mechanism constructed and adapted to hold the adjustable back *G* stiffly in both directions, as herein specified.

2. In an adjustable chair, the pieces *M*, provided with the hooked teeth *m* and teeth *m*², combined with the seat *B*, worm *P*², links *N'*, bar *N*, and adjustable back *G*, arm parts *I* and *H*, the supporting-frame, and means for operating the worm, substantially as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 13th day of March, 1883, in the presence of two subscribing witnesses.

FR. BOHSERT.

Witnesses:

ED. H. PIEPENBRING,
W. C. DEY.