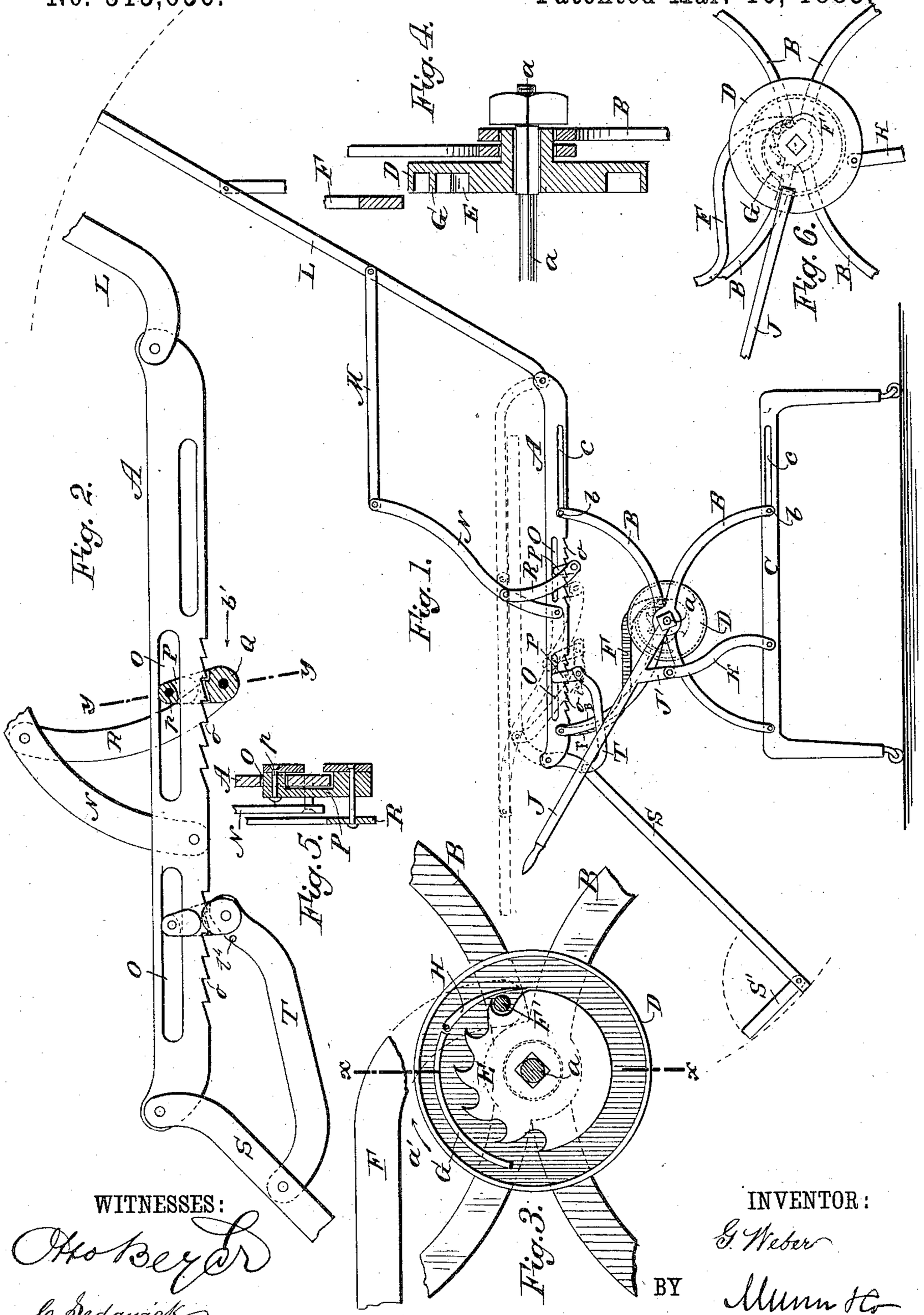
(No Model.)

G. WEBER.

SURGICAL CHAIR.

No. 313,636. Patented Mar. 10, 1885.



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SURGICAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 313,636, dated March 10, 1885.

Application filed February 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WEBER, of Brooklyn, Kings county, New York, have invented a new and Improved Surgical Chair, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved surgical chair, which can be readily adjusted in height and locked in position, and the leg and back rests of which chair can also be easily adjusted and locked in place.

The invention consists in the combination, with a chair seat and base, of crossed pivoted legs, a segmental rack held on the pivot of the legs, and of a pawl pivoted to the seat and resting on the rack.

The invention also consists in a clip hung by a pivot or wedge passing into a longitudinal slot in the seat side bar, which clip is provided at its lower end with a catch adapted to engage with a rack on the bottom edge of the seat side bar. The lower end of the clip is pivoted to a brace-bar pivoted to a leg-rest, back-rest, or arm-rest for holding the said rest in place.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved surgical chair. Fig. 2 is an enlarged side view of parts of the same, other parts being shown in section. Fig. 3 is an enlarged detail side view of the locking device, the face-plate being removed. Fig. 4 is a cross-sectional view of the same on the line *x x*, Fig. 3. Fig. 5 is a cross-sectional view on the line *y y*, Fig. 2. Fig. 6 is a side view of a modification of the mechanism for raising the chair and locking it in place.

At each side of the chair the seat A is supported by two crossed legs, B, pivoted to each at their intersection by a pivot, *a*, or cross-rod, the said legs being pivoted to the seat-frame A and to the base-frame C. The inner ends of the legs—that is, the upper end of one leg and the lower end of the other—are provided with pins *b*, which project into the longitudinal slots *c* in the end of frame A and base C.

On each end of the cross-rod *a* is secured a disk, D, on the inner surface of which a curved rack, E, is formed, on the edge of which a pin, F′, rests, which is secured in the free end of a pawl-lever, F, pivoted to the front of the corresponding side of the seat-frame.

Above part of the ratchet-plate E a segmental track-piece, G, is arranged such a distance from the edge of the rack that the pin F′ can pass between the track-piece and the edge of the track-plate. The track-piece is provided at one end with a tapering pivoted switch-tongue, H, the free end of which rests on the edge of the rack-plate E. A lever, J, is pivoted on the cross-rod *a*, and a short distance from the pivot it is provided with a downwardly-projecting arm, J′, pivoted to the upper end of a bar or rod, K, pivoted to the base-frame C. If desired, the lever J can be secured on the disk D, and the disk D pivoted at its rim to the bar or rod K, as shown in Fig. 6. The hinged back-rest L is provided at each end with an arm-rest formed of the bars M, pivoted to the back-rest side bars and to the upper ends of bars N, pivoted to the seat-frame side bars. Each seat-frame side bar is provided with a longitudinal slot, O, under which a rack, *o*, is formed in the bottom edge of the seat-frame side bar. A clip-plate, P, is provided with a wedge-piece, *p*, at its upper end, which wedge-piece extends into the slot O, and on the lower end of the clip-plate a catch, Q, is formed, which is adapted to engage with the teeth of the rack *o*. A connecting piece or brace, R, has its upper end pivoted to the bar N and its lower end to the lower end of the clip P. The leg-rest S is pivoted to the end of the seat-frame, and is provided at its lower end with a pivoted foot-rest. Each side bar of the leg-rest is connected by a pivoted bar, T, with a clip-plate, P, arranged and constructed in the manner described.

The chair is adjusted in the following manner: If the seat is to be raised, the outer end of the lever J is depressed, thereby moving the cross-rod *a* upward and toward the front to the position shown in Fig. 1. The tendency of the legs B will be to collapse and cause the seat to be depressed unless a locking means is employed. The pin F′ on the end of

the pawl-lever F slides over the edge of the ratchet-plate E as the seat is being raised, and necessarily catches on the several teeth of the same, and if the lever J is released the seat is locked in place.

To lock the seat in its highest position the pin F′ is caused to engage the right-hand notch, as shown in Figs. 1, 3, and 6. If the seat were now lowered, the rod *a* would be moved farther downward and backward from the pin F′, and it could be made to engage with any one of the several notches on ratchet-plate E. Of course when the lever J is depressed in the act of raising the seat the rear parts of legs B slide forward, thus bringing the rod *a* upward and toward the front, as above described. The seat can thus be locked at any desired elevation. If the seat is to be lowered, the lever J is depressed until the pin F′ arrives at the end of the ratchet-teeth, when the seat will be raised as high as possible. The pin F′ raises the switch-tongue H and passes to the upper surface of the same, and, if the lever J is released, slides over the track-plate G in the inverse direction of the arrow *a′*, the lever J swinging upward and the cross-rod *a* and the seat moving downward. If the seat is raised as high as possible, the pin F′ slips from under the tongue H and raises it, and then slides back over the curved track-plate G, whereby the chair will be lowered. If the chair is to be lowered when partly raised, the pawl-lever F is raised to disengage the pin F′ from the teeth of the rack-plate E, thus permitting the seat to descend. If the back-rest is moved forward, the locking device moves with it and locks the back-rest automatically as soon as it is released, so that for adjusting the back-rest in a more vertical position all that is necessaay is to move the back-rest forward; but if the back-rest is to be moved back the bar R must be moved in the direction of the arrow *b′*, Fig. 2, to disengage the catch Q from the rack *o*. As soon as the bar R is released it swings back and locks the back-rest in place. The back-rest can be held at any desired inclination. The leg-rest S can be adjusted in a similar manner. If the chair is not in use, the leg-rest S can be folded over the seat and the back-rest over the leg-rest, as shown in dotted lines in Fig. 1. If the leg-rest is folded in the manner described, its locking device, which is the same as the locking device for the back-rest, is first moved in the direction of the arrow *b′*, and is then moved in the inverse direction of the arrow *b′;* but when moved in the inverse direction of the arrow *b′* the clip-piece P must be held in such a direction that its catch cannot engage with the rack *o*. This is accomplished by means of a pin, t^4, projecting from the face of the pivoted bar T in front of the lower end of clip-piece P, so that when the leg-rest and bar T are being brought to the position shown by dotted lines in Fig. 2 the said pin will form a bearing for the clip and prevent it from assuming a sufficiently vertical position to bring its catch into engagement with the teeth *o*. In the return movement of the clip, leg-rest, and bar T the pin does not act at all.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a chair, the combination, with a seat and a base, of crossed pivoted legs, a segmental rack held on the pivots of the legs a pawl pivoted on the seat, and a lever connected with the pivot or cross-rod of the legs for raising the same, and a fulcrum-connection between said lever and base, substantially as herein shown and described.

2. In a chair, the combination, with a seat and base, of crossed pivoted legs, a segmental rack held on the pivot of the legs, a curved track-bar held above the rack, a switch or tongue pivoted at the end of the track-bar, and a pawl pivoted to the seat, a lever secured to pivot-rod *a*, and a fulcrum-connection between said lever and the base, substantially as herein shown and described.

3. In a chair, the combination, with the base C and seat A, of the crossed pivoted legs B, the disk D on the pivot of the legs, the ratchet-disk E on the disk D, the lever J, having an arm, J′, the connecting-rod K. pivoted to the arm J′, and the base C, substantially as herein shown and described.

4. In a chair, the combination, with the seat side bar, A, having a longitudinal slot, O, and a rack, *o*, in the bottom edge, of the clip P, having the catch Q on the lower end of the same, and the wedge *p* in the upper end of the same projecting into the slot O, and of a brace-bar pivoted to the lower end of the clip P, substantially as herein shown and described.

5. In a chair, the combination, with a seat side bar having a longitudinal slot, and below it a rack on the bottom edge of the bar, of a clip-plate provided at its upper end with a projection extending into the slot in the seat side bar, and a catch on its lower end, which catch is adapted to engage with the rack, and of a brace-bar pivoted to the lower end of the clip and connected with a back-rest or equivalent moving part, substantially as herein shown and described.

6. In a chair, the combination, with a seat side bar, A, having a longitudinal slot, O, and rack *o*, of the leg-rest S, pivoted to the side bars, clip P, provided on its upper end with a projection extending into the slot O, and a catch on its lower end engaging the rack *o*, the brace-bar T, pivoted to the leg-rest and to the lower end of the clip, and a pin, t^4, on said brace-bar in front of the lower part of the clip, substantially as and for the purpose set forth.

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Witnesses:
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C. SEDGWICK.