# Luther Van Orden.

## Impt in Reclining Chairs.

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Fig. 1.

PATENTED JUL 25 1871

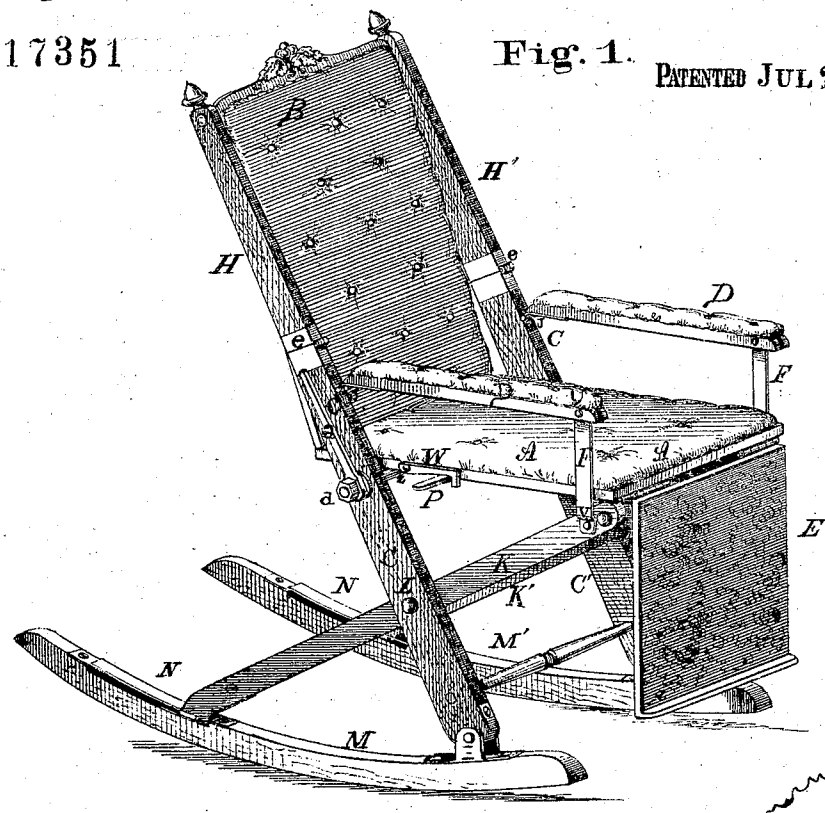



Fig. 3

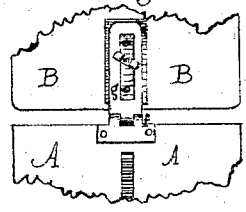
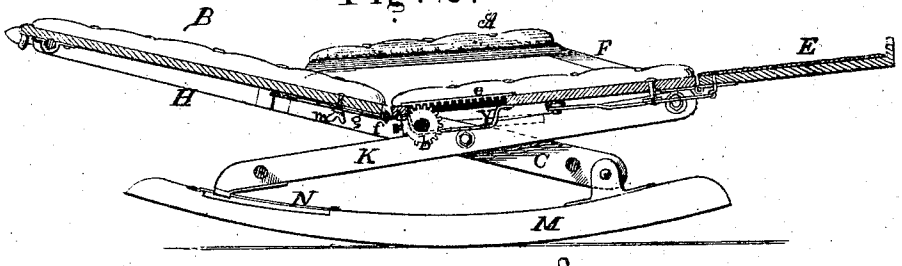


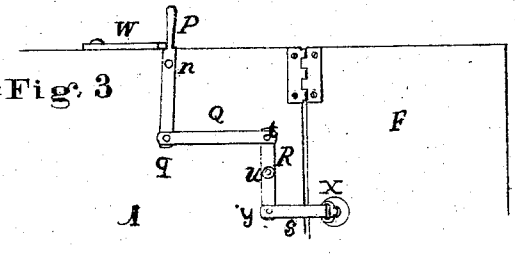

Fig. 2.




Inventor:

Luther Van Orden

Fig. 3




Attest.

Philip W. Shuey

C. G. Hale.

# UNITED STATES PATENT OFFICE.

LUTHER VAN ORDEN, OF CINCINNATI, OHIO.

## IMPROVEMENT IN RECLINING-CHAIRS.

Specification forming part of Letters Patent No. 117,351, dated July 25, 1871.

*To all whom it may concern:*

Be it known that I, LUTHER VAN ORDEN, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Reclining-Chairs, of which the following is a specification:

My invention in general relates to a chair which, with my improvements, may be made an extension, a folding, and, if desired, a rocking-chair, the whole making a chair which is comfortable, easily convertible into a good couch, and capable of being made very compact for transportation. In particular my invention consists: First, in certain devices connecting the legs of an adjustable reclining-chair to the rockers or foot-rests, whereby the legs on each rocker may be easily drawn toward each other or separated, and the chair thus elevated or depressed. Second, in a device whereby the foot-piece of an adjustable reclining-chair can be raised or dropped at will, and independently of the other parts of the chair. Third, in a device whereby the back of an adjustable reclining-chair may be folded upon the arms of said chair in such a manner as to compress the whole chair into a very small compass, thus permitting it to be transported. Fourth, in a simple device, whereby the seat, back, and foot-piece of said adjustable reclining-chair, in connection with the devices whereby the feet are connected to the rocker or foot-rest, may be easily and rapidly elevated or depressed at will any desired distance. Fifth, to a device whereby the chair can be held secure at the desired elevation.

In the accompanying drawing, Figure 1 is a view in perspective, showing the front, top, and one side of chair embodying my improvements when said chair is in use as an ordinary rocking-chair. Fig. 2 is a longitudinal vertical section through the center of said chair when extended for reclining. Fig. 3 is a view of a portion of the bottom of the seat of the chair and of the foot, and of the device for raising and lowering said foot, and for securing it when so raised or lowered.

M is one of the rockers of the chair. A leg, K, extends from the upper side of the rear portion of the rocker upward to the bottom of the corner of that side of the seat corresponding to the rocker mentioned. This leg K is attached by a guide to a long slide, N, upon the rear portion of the upper side of rocker M. This slide N is long enough to admit of a desired elevation or depression of the seat A. A leg, C, extends from the top of the front side of this rocker up past the rear part of the corresponding side of the chair high enough to form supports for the back B of said chair. The foot of C is so pivoted at P to the rocker that the leg is capable of backward and forward motion in the vertical plane of the rocker M. A pivot, L, through both the legs K and C at the point of their intersection, allows and compels leg K to slide forward or backward in slide N as leg C is moved backward or forward. D is one arm, the rear end of which is secured to the leg C at a distance above the seat suitable for the proper sustentation of the arm of the occupant. A shaft or rod, F, pivoted in the forward end of the arm D, and at V, in the upper end of the leg K, forms a movable support for the front of arm D. Just above the arm the leg C is divided at *e* into two parts, which are attached together by a hinge. This hinge permits the upper portion H of the leg to be folded over upon the arm D when desired. The construction and arrangement of the rocker M′, leg K′ corresponding to leg K, and leg C′ corresponding to leg C, and arm D′ corresponding to D, are precisely similar to the construction and arrangement of the rocker M and legs C and K and arm D, just described. The back B of the chair is suspended between the parts H H′ of the legs at or near their tops, and swings between them. The back may be secured at its bottom to the back side of the seat by a device hinged at *f*. One end of the hinge is attached to the bottom of the rear edge of the seat. The other end, *g*, is long, flat, and slotted. Upon the lower end of the back is attached a turn-key or button, *m*, narrow enough to permit it to enter lengthwise the slot. (See Figs. 2 and 3.) E is the foot-piece, of a suitable size, attached by hinges to the front edge of the seat, and, when not in use, is inclined under the seat out of the way. Under the middle of one side of A is a lever, P, (see Figs. 1 and 3,) pivoted at *n*, and connected with one end of a straight shaft, Q, by a pivot at *q*. The other end of shaft Q is attached to one end of lever R. Lever R turns upon a pivot, *u*, which passes through its center and into the bottom of the seat A. The other end of lever R is attached to

one end of the straight shaft-rod S by a pivot, *y*. This latter rod S is attached to a socket or handle, X, in the middle of the width of the foot-piece, and near the hinged edge of said piece. A handle on the end of rod P projects beyond the edge of side P. A latch, W, is pivoted to the side of A in such a position that, when the handle is drawn as far back or as far forward as it will go, the latch will hold it in either position. Instead of latch W, it is proposed to use a ratchet, and, by attaching a pivot to the handle of P, thus to enable the occupant of the chair to secure the handle at any point within its arc of revolution, and thus to give any desired inclination to the foot-piece. The levers P and R might be so lengthened as to touch each other, and be pivoted together at their point of junction, thus leaving out the levers Q and R. In such case the pivot *n* would be moved along toward S as far as desirable. Z is a shaft passing through the legs C C′, and supporting the rear end of seat A. This shaft turns in bearings within the said legs. One end of the shaft protrudes beyond the outside of the leg, and to this end a lever, *a*, or wheel for turning the shaft Z is attached. Upon the center of this rod Z is attached a ratchet-wheel, *b*. (See Fig. 2.) This ratchet-wheel *b* gears into a straight ratchet, *e*, set into the bottom of the seat. A guard, Y, attached to the seat, passes below the shaft Z, and thus holds said ratchet-wheel to the ratchet *e*. Instead of the rockers M M′, straight pieces of wood might be substituted, and, if desired, be placed upon the casters. The chair could then be rolled to a given point.

The mode in which my chair is operated is as follows: Suppose the chair to be in position for an upright sitting posture, as shown in Fig. 1. When the person occupying the chair desires to lower himself he grasps the lever and turns it forward. The back is first secured to the seat A by pressing the key *m* through the slot in the end *g* of the hinge aforesaid. As the lever moves it turns with it the shaft Z, which latter turns the ratchet-wheel *b*. As the ratchet-wheel gears into ratchet *e* it forces ratchet *e*, and therewith the seat A, forward. As the seat A is pushed forward the distance between shaft Z in legs C C′ and the upper points of K and K′ is increased. As this distance is increased the distance between the lower ends of legs K and C and between the lower ends of legs K′ and C′ must increase. The lower ends of the legs *c* and *c′* being stationary, the legs K K′ will therefore be forced back along the slides *n n′*. The operator continues turning the lever until the seat is sufficiently depressed. He then causes it to remain in that position by pressing a spring-pawl against a small ratchet-wheel outside of leg C′ upon the end of shaft Z, opposite to where the lever *a* is attached. As the seat is depressed the legs *c c′* are more and more inclined backward, and these legs incline the back more and more, until, when the seat is entirely depressed, the back and the seat are both very nearly horizontal. Both seat and back are lowest where they meet, thus adapting themselves to the form of the person who lies upon them. The arms D D, as the legs C C′ incline backward, are lowered. In order to more perfectly adapt this chair to a person in a recumbent posture, the person occupying the chair lifts the latch W, and, grasping the handle P, presses it forward, thereby raising out and up the foot-piece E so as to bring it in the same plane with seat A. He then allows latch W to drop behind the handle P, and the foot-piece is secured in position. The chair is now converted into a couch. By reversing the motion of the lever the operator can elevate the seat to the desired height, when the spring-pawl will again hold the seat at such elevation. By raising latch W and drawing back the lever P the foot-piece E is lowered. The chair is then reconverted into an upright rocking-chair. When it is desired to transport the chair to a distance the foot-piece E is folded up under the seat. The seat is then, by means of the lever *a*, depressed as far as possible. The slotted hinge *g* being removed from key *m*, the upper parts H H′ of the legs C C′ are folded forward upon the arms D D, and carry with them back B. The chair is then brought into a very compact form, and is easily boxed and transported.

What I claim as new is—

1. A foot-piece, M, whether made in rocker-form or straight, when provided with guide N, in combination with the intersecting legs K and C, irrespective of the formation of that portion of the leg C which is above the seat of said chair, substantially as and for the purposes set forth.

2. The combination of ratchet *e*, wheel *b*, shaft Z, seat A, and legs *c c′*, irrespective of their formation above the seat, the whole as a device, in combination with an adjustable chair, substantially as and for the purposes set forth.

3. In combination with the seat of an adjustable reclining-chair, the foot-piece E and the device for adjusting the said foot-piece, consisting of levers P and R, links Q and S, and stop W, or the equivalent of said device.

4. In combination with the back B of an adjustable reclining-chair, such as described, the legs C C′ when hinged at *e e*, and when the back is suspended between them.

LUTHER VAN ORDEN.

Witnesses:

C. G. HALE,

PHILIP M. SHUEY.