No. 649,382. Patented May 8, 1900.

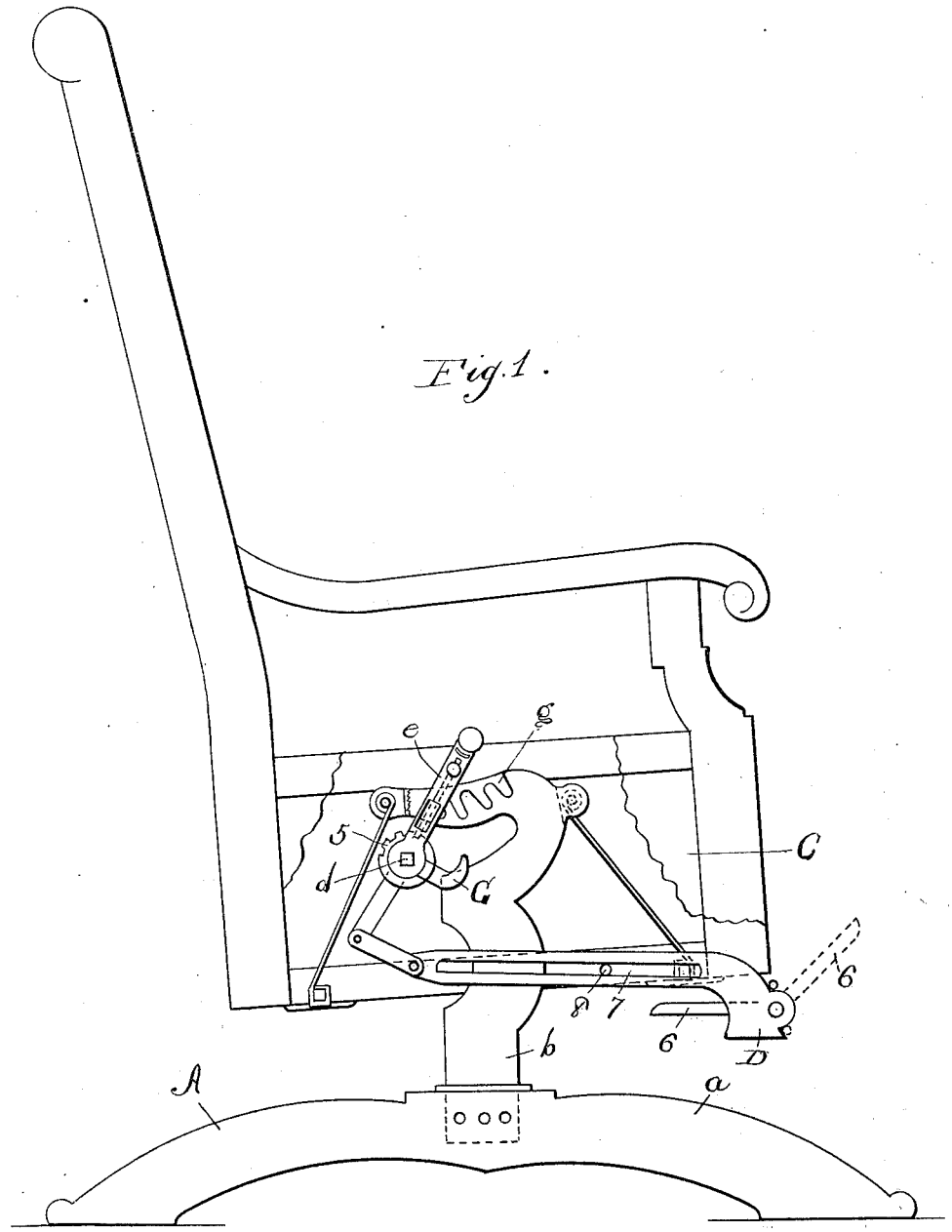
A. WILCKE.

CHAIR.

(Application filed Nov. 6, 1899.)

(No Model.) 4 Sheets—Sheet 1.

Fig. 1.



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(No Model.) (Application filed Nov. 6, 1899.) 4 Sheets—Sheet 2.

Fig. 2.

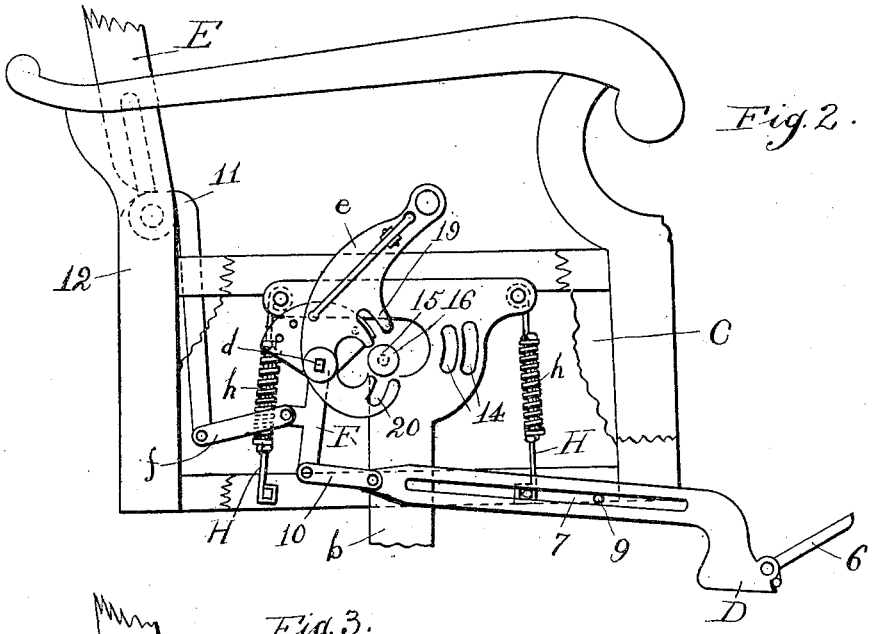
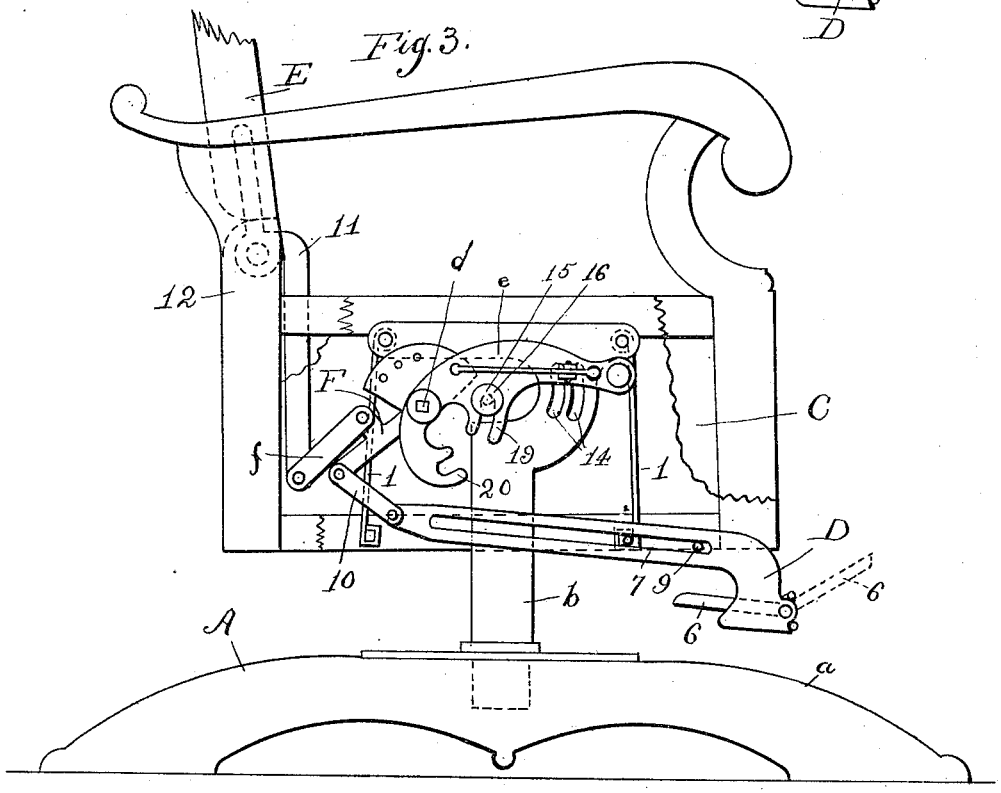


Fig. 3.



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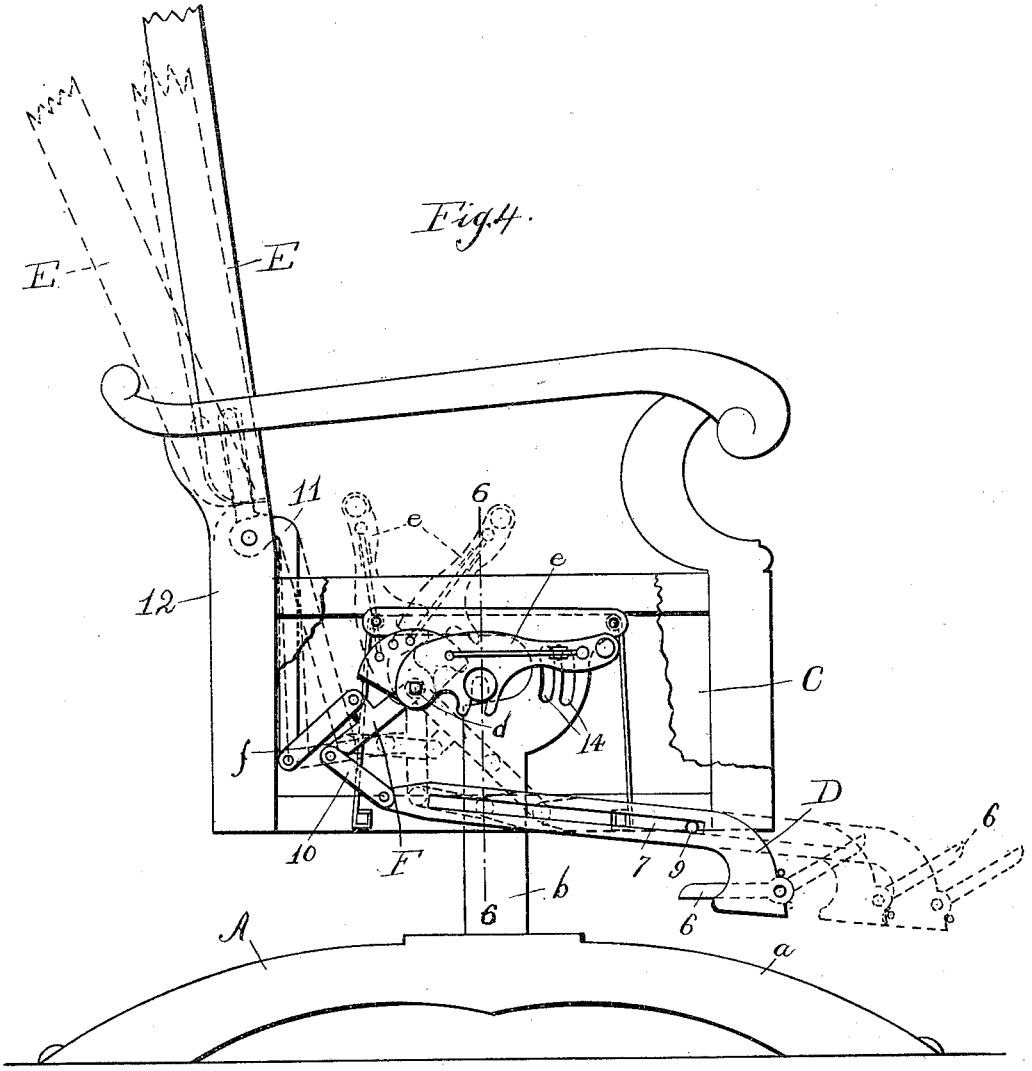
(No Model.) 4 Sheets—Sheet 3.

Fig. 4.



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(No Model.) 4 Sheets—Sheet 4.

Fig. 5.

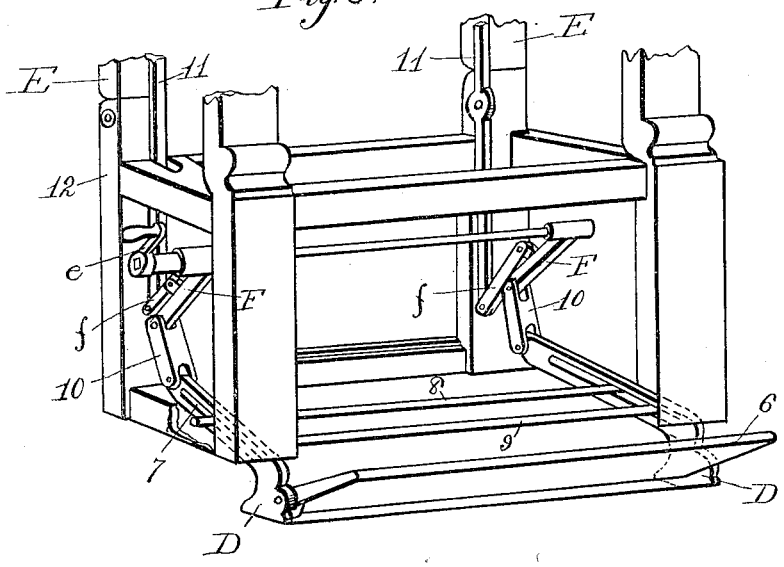


Fig. 6.

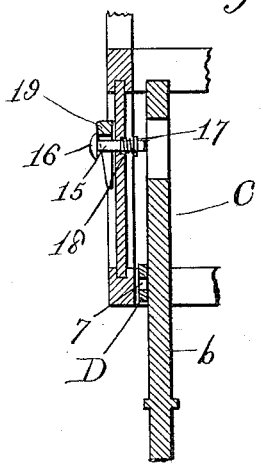
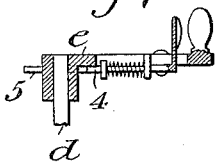


Fig. 7.



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UNITED STATES PATENT OFFICE.

ADOLPH WILCKE, OF CHICAGO, ILLINOIS.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 649,382, dated May 8, 1900.

Application filed November 6, 1899. Serial No. 735,973. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH WILCKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in 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.

My invention relates to a novel construction in a chair, or more particularly to a system of mechanism which can be applied to chairs to form various kinds, all of which are closely allied to each other, the object being to provide simple mechanism to form rocking and reclining chairs and combining both forms in one chair; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a rocker having an extensible foot-rest and rigid back and provided with means for locking it rigidly in one position to form a stationary reclining-chair. Fig. 2 is a similar side elevation of a rocker provided with both the extensible foot-rest and pivoted back and showing the latter partially reclined and the foot-rest partially extended and also showing a slightly-modified means for locking the chair rigidly in one position. Fig. 3 is a similar view showing the foot-rest and back at their inner limits. Fig. 4 is a similar side elevation showing the foot-rest and back in one position in full lines and in two other positions in dotted lines. Fig. 5 is a fragmentary perspective view of a chair-bottom, showing the location of the mechanism therein. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 4. Fig. 7 is a detail view of a modified form of crank-arm.

Referring now to said drawings, A indicates a base or stand for a rocking-chair, said base comprising two side pieces *a*, connected together by a suitable cross-piece and carrying two uprights *b*, each having arms *c* at its upper end, thus forming a T-shaped standard. The chair B is provided with a box-shaped bottom C, into which said standards project, and is hung upon said standards by means of links 1, pivotally secured to said arms *c* at one end and at their other ends to shafts 2, extending across said bottom C and held in place thereon by means of U-shaped plates 3.

As shown in Figs. 2, 3, 4, and 5, said standards may be varied in form, the upper ends being curved in the manner of goosenecks to accommodate themselves to the other mechanism contained in said bottom C.

In Fig. 2 I have illustrated a chair provided with an extensible foot-rest D, connected with mechanism for adjusting same, such mechanism comprising a shaft *d*, journaled in bearings in the side panels of the bottom C and carrying a crank-arm *e* at one of its projecting ends, by means of which it is turned. Said crank-arm *e* carries a spring-actuated sliding pawl 4, which is adapted to engage a notched disk 5, rigidly mounted on one of said side panels of said bottom C to rigidly hold said foot-rest D in any desired position. Said foot-rest D comprises a plate pivotally mounted between two arms 6 and suitably limited in its movement to assume either one of the two positions shown relatively to said arms 6. Said arms 6 are curved at their front ends and are provided with longitudinal slots 7, extending along the middle and rear portions of same and through which pins 8 and 9 on the bottom portion C pass to guide said arms 6 in their movement. Links 10 connect said arms 6 with the ends of arms F, rigid on said shaft *d*.

In Figs. 3, 4, and 5 I have shown the chair provided also with a pivoted back E, which is rigidly mounted upon the upper ends of levers 11, pivotally mounted between their ends upon the rear posts 12 of the chair, the lower ends of said levers being pivotally connected with said arms F on said shaft *d* by means of links *f*, connecting with projections 13 on the middle portions of said arms F. Said connection between said levers 11 and arms F is so made that when said shaft *d* is turned, as indicated by the arrow, the movement of the back E will at first be very slow in proportion to the movement of the crank-arm *e* and subsequently increases the rapidity of its motion relatively to said crank-arm. This feature will be more fully described hereinafter. As shown in Fig. 2, said crank-shaft *d* may be employed in operating the

foot-rest only in a chair having a rigid back, and, as likewise shown in said figure, the chair is hung upon the standards *b*, the latter being modified in form to permit free swing to the crank-shaft *d*, and said standards provided on their horizontal upper ends with racks *g*, adapted to be engaged by the bent end of an arm G on said crank-shaft *d* to lock said chair rigidly in any desired position on said standards, said foot-rest being extended when said chair is so held rigid.

In Figs. 3, 4, and 5, as before stated, I have shown a chair provided with a pivoted back and extensible foot-rest hung upon said standards *b* by means either of extensible rods H, having springs *h* interposed between them to hold them normally contracted, as shown in Fig. 4, or by means of one-piece rods, as shown in Fig. 5. The extensible rods with springs interposed obviously cushion the chair and permit same a compound motion. The means for extending the foot-rest and reclining the back of the chair shown in these figures and also in Fig. 6 are the same as those shown in Fig. 2; but the devices for locking the chair rigid in any desired position with relation to the standards *b* are modified. The standards *b* are provided with recesses 14 just below the horizontal upper ends and in alinement with the recess formed below the same in which the crank-shaft *d* swings. In the side panels of the bottom C, in practically horizontal alinement with said shaft *d*, are two openings, through which pins 15 pass, which are provided at their outer ends with heads 16 and near their inner ends with collars 17, between which and said panels springs 18 are interposed, which serve to normally hold said pins at the inner limits of their movement. The crank-arm *e* at one end of said shaft *d* and a short arm of similar form at its other end are both provided with wedge-shaped projections 19, in the recess between which said pins are adapted to be received and the inclined outer faces of which are adapted to engage said heads 16 of said pins to draw and hold same to the outer limits of their movement against the action of said springs 18. Said crank-arm *e* and said arm at the other end of said shaft *d* may both be provided with extensions 20 of similar form to so engage and withdraw said pins at both limits of motion of said shaft *d*. The said pins 15 are adapted when at the inner limits of their movement to enter said recesses 14 or engage the edges of the standard on either side of said recesses 14, according to the position of the chair when said pins are released, thereby either locking said chair rigidly in one position in relation to said standards or limiting the swing of the chair in an obvious manner. By turning the shaft *d* in the same direction to the other limit of its movement the extensions of the crank-arms will engage said pins and withdraw same, so that the chair, with foot-rest extended and back reclined, can be rocked freely. In said Figs. 4 and 5 I have shown a modified form of devices for locking the crank-arm in any desired point of its movement; but as any suitable device of this character may be used without departing from the spirit of my invention I will omit special description of the same.

In Fig. 5 I have shown a chair of the same construction as that shown in Figs. 3 and 4, omitting the extension 20 of the crank-arm and showing the foot-rest and back in three positions. The connection between the arm 11, carrying the back E, and the arm F of the crank-shaft *d* is so made, as above mentioned, as to cause said back to remain almost stationary during the movement of said arm F from the position shown in said figure. This is effected by extending said arm 11 to a point below the pivotal connection of the link *f* with said arm F, so that said link normally stands at an incline of about forty-five degrees to said arm 11 and almost parallel with the arm F. Consequently as said arm F swings forward said link *f* also swings to a horizontal position without moving said back E to any appreciable extent. During this movement, however, said foot-rest 6 is extended more than one-half its movement, so that said connection serves practically as a means for partially extending the foot-rest without materially changing the position of the back, and subsequently as a means for simultaneously extending the foot-rest and reclining the back to their respective limits.

By means of my system as above described all kinds of chairs can be constructed by combining the elements of one kind with the elements of another to produce a third, &c. The construction in all cases is simple, cheap, and efficient and is particularly adapted for railroad-car purposes.

I claim as my invention—

1. In a chair, the combination with a base carrying standards, a chair-body, link connections between said chair-body and said standards to permit said chair-body to swing relatively to said base, and devices carried by said chair-body and adapted to engage said standards to lock said chair in given positions in its movement, of a lever pivotally mounted on said chair-body and adapted to actuate said locking device.

2. In a chair, the combination with a base carrying standards, a chair-body, link connections between said chair-body and said standards to permit said chair-body to swing relatively to said base, an extensible foot-rest carried by said chair-body, and devices carried by said chair-body and adapted to engage said standards to lock said chair-body at any given point in its movement, of a lever pivotally mounted upon said chair-body and common to said foot-rest and said locking devices.

3. In a chair, the combination with a base carrying standards, a chair-body, link connections between said chair-body and said

standards to permit said chair-body to swing relatively to said base, an extensible foot-rest on said chair-body, a pivoted back on same, and devices carried by said chair-body and adapted to engage said standards to lock said chair at any given point in its movement, of a lever adapted to actuate all of said mechanism, pivotally mounted upon said chair-body.

4. In a chair, the combination with a base carrying standards, a chair-body, link connections between said chair-body and said standards to permit said chair-body to swing relatively to said base, recesses in said standards, and a spring-actuated pin carried by said chair-body and adapted to enter said recesses in said standards to lock said chair at any given point in its movement, of a lever pivotally mounted on said chair and adapted to engage said pin to hold same normally out of engagement with said standards.

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

ADOLPH WILCKE.

Witnesses:
RUDOLPH WM. LOTZ,
E. F. WILSON.