R. L. WOODS.

CHAIR.

APPLICATION FILED MAY 21, 1912.

1,069,216.

Patented Aug. 5, 1913.

2 SHEETS—SHEET 1.

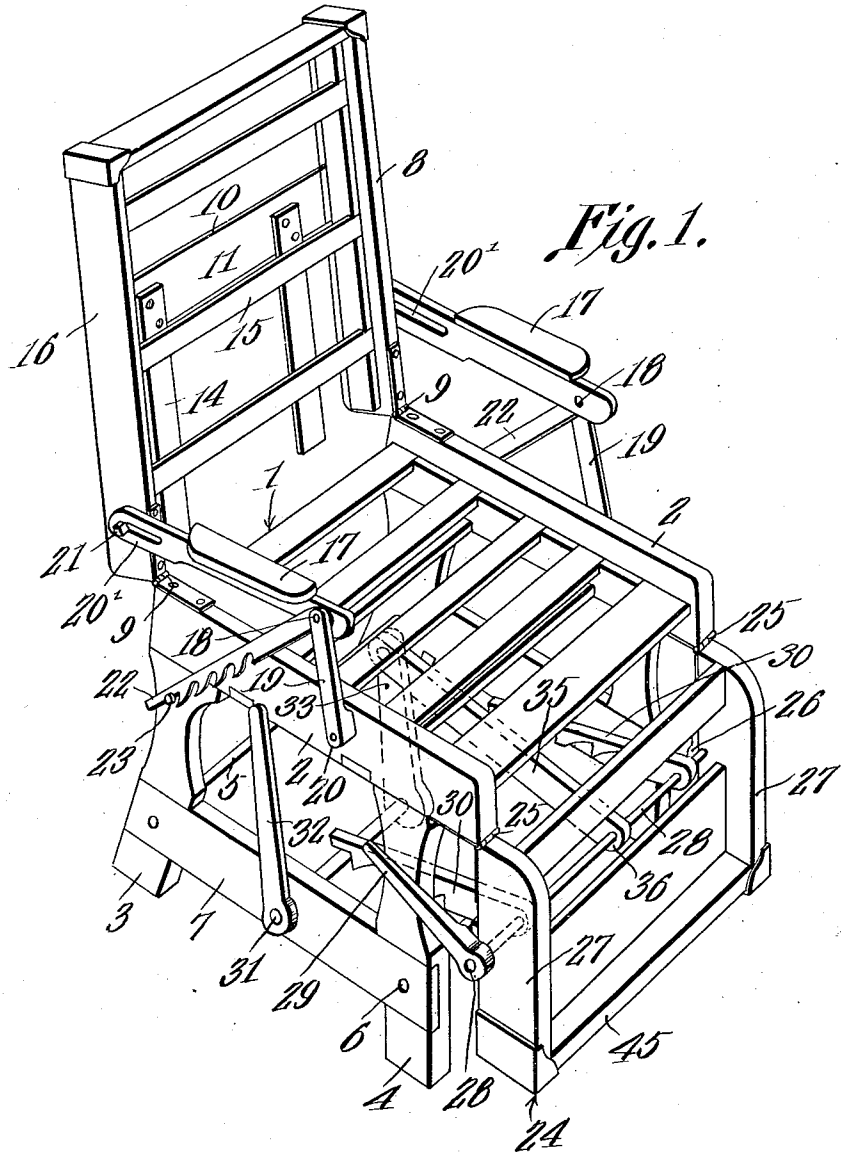


Fig. 1.

Witnesses

J. R. Toner

L. H. Wilson.

R. L. Woods,
Inventor

by C. A. Snow & Co.
Attorneys

R. L. WOODS.

CHAIR.

APPLICATION FILED MAY 21, 1912.

1,069,216.

Patented Aug. 5, 1913.

2 SHEETS—SHEET 2.

Fig. 2.

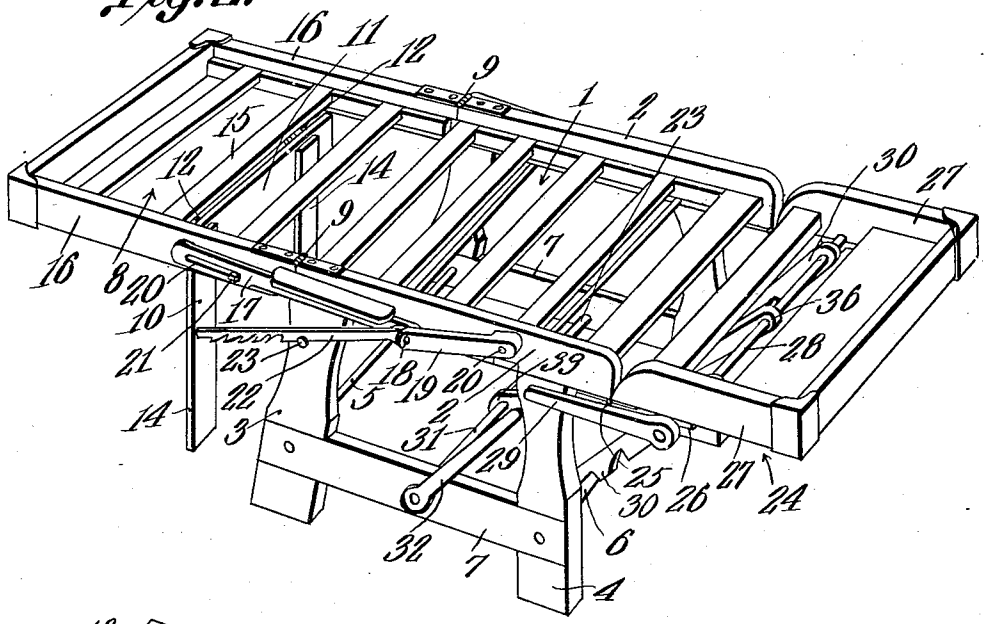


Fig. 3.

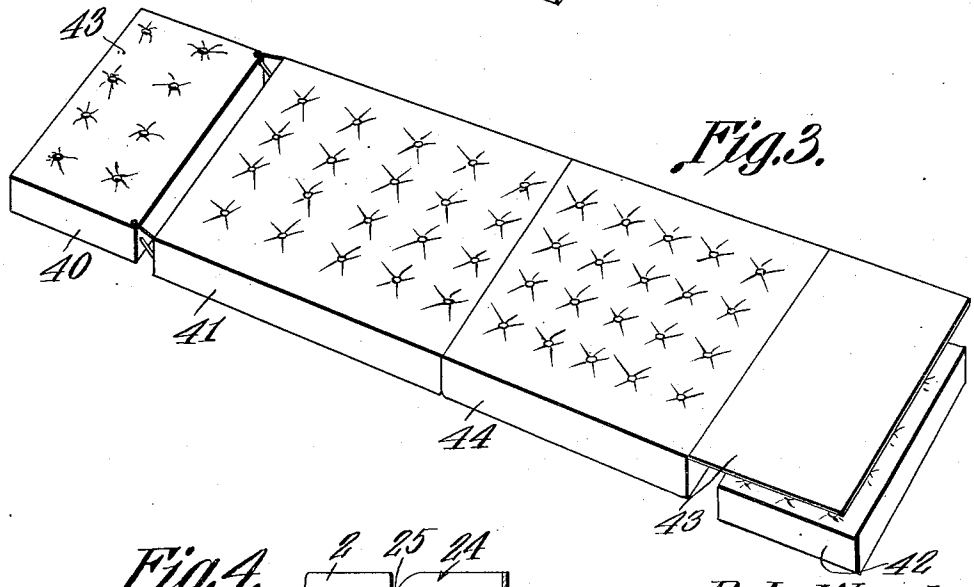
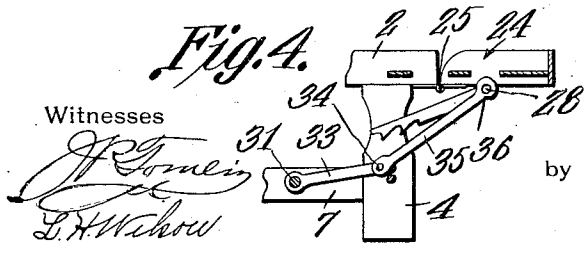


Fig. 4.



Witnesses

J. F. Tomlin

L. H. Wachow

R. L. Woods,
Inventor

by *C. A. Snow & Co.*
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ROBERT L. WOODS, OF ST. LOUIS, MISSOURI.

CHAIR.

1,069,216. Specification of Letters Patent. Patented Aug. 5, 1913.

Application filed May 21, 1912. Serial No. 698,843.

To all whom it may concern:

Be it known that I, ROBERT L. WOODS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Chair, of which the following is a specification.

The device herein disclosed is a chair comprising a seat, a back and a foot rest, the construction being such that the back and the foot rest may be alined with the seat, whereby the chair may be employed as a couch or bed.

One object of the present invention is to provide novel means for supporting the back of the chair, another object of the invention being to provide novel means for operating the foot rest and for maintaining the foot rest at different angles with respect to the seat.

A further object of the invention is to provide a novel arm structure which may be folded below the seat when the back is alined with the seat, the arm structure including means for maintaining the back at an angle to the seat.

A further object of the invention is to provide a mechanism for adjusting the position of the foot rest, the mechanism for adjusting the position of the foot rest being a dual structure, one portion of which constitutes at once a means for swinging the foot rest and a means for maintaining the foot rest in line with the seat, the other part of such mechanism being adapted to lock the foot rest at an angle to the seat.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings Figure 1 shows the invention in perspective, the parts being positioned as they will appear when the device is employed as a chair; Fig. 2 shows the invention in perspective, the parts being positioned as they will appear when the device is used as a bed; Fig. 3 is a perspective of a cushion which may be employed when the device is used either as a chair as shown in Fig. 1 or as a bed as shown in Fig. 2; and Fig. 4 is a fragmental section showing the coöperation between the mechanisms whereby the foot rest is upheld.

The seat of the chair herein disclosed is denoted generally by the numeral 1, the seat 1 including side bars 2 with which the rear legs 3 and the forward legs 4 are connected, the side bars 2 projecting slightly to the front of the forward legs 4. The rear legs are connected by a rung 5 and the forward legs 4 are connected by a rung 6. The forward legs 4 are connected with the rear legs 3 by means of lower bars 7, the rungs 5 and 6 constituting means for maintaining the lower bars 7 assembled with the legs 3 and 4.

A back 8 is provided, the back 8 being hingedly connected with the side bars 2 as indicated at 9. The back 8 is adapted to be swung into alinement with the seat 1 and a frame 10 is hingedly connected with the back 8, the frame 10 being adapted to swing into depending position and to engage the floor to hold the back 8 in alinement with the seat 1. The frame 10 comprises a cross bar 11 connected by means of hinges 12 with the back 8, depending, floor engaging legs 14 being secured to the cross bar 11. When the back 8 is in a substantially vertical position, the cross bars 15 of the back serve as stops to receive the legs 14, the legs 14 swinging between the stiles 16 of the back 8.

The arms of the chair are denoted by the numeral 17, the forward ends of the arms 17 carrying pivot elements 18 connected with arm supports 19 which are united by pivot elements 20 with the side bars 2. In the rear ends of the arms 17 are elongated slots 20 slidably receiving the headed projections 21 outstanding from the stiles 16 of the back 8. The pivot elements 18 support the forward ends of rack bars 22 adapted to engage headed projections 23 outstanding from the rear legs 3.

A foot rest 24 is united by hinges 25 with the lower forward portions of the side bars 2. Bearings 26 are secured to the rear edges of the side walls 27 of the foot rest 24, and in the bearing 26 is journaled for rotation a rock shaft 28 provided at one end with an operating lever 29. A pair of rack bars 30 are secured to the rock shaft 28 and by rotating the rock shaft 28 through the medium of the lever 29, the rock bars 30 may be brought into engagement with the rung 6 to hold the foot rest 27 at an angle to the seat 1.

A mechanism is provided for maintaining the foot rest 24 alined with the seat 1, and this mechanism includes a rock shaft 31 journaled in the lower bars 7 and provided with an operating lever 32. The operating lever 32 and the operating lever 29 are preferably located upon the common side of the chair. A crank arm 33 is secured to the rock shaft 31, the forward end of the crank arm 33 being pivotally connected as indicated at 34 with a link 35 within which the rock shaft 28 is journaled for free rotation as indicated at 36. By manipulating the lever 32 the crank arm 33 and the link 35 will knuckle downwardly, out of alinement, so as to form a toggle adapted to support the foot rest 24 in alinement with the seat 1, the arm 33 being engageable by the rung 6 to uphold the foot rest 24 parallel to the seat 1 when the point of pivotal connection 34 between the link 35 and the crank arm 33 lies below a plane passed through the rock shafts 28 and 31. The back 8 may be placed at any desired angle with respect to the seat 1, the rack bars 22 engaging with the projections 23 to hold the back 8 in position.

The foot rest 24 may be swung to assume any desired angle with respect to the seat 1 by manipulating the lever 32 whereupon the rock shaft 31 will be actuated, the crank arm 33 actuating the link 35 and the link 35 in its turn actuating the foot rest 24. When the free forward end of the foot rest 24 is elevated, the rack bars 30 will ride over the rung 6 and ultimately engage the rung to hold the foot rest in position. By manipulating the lever 29, the rock shaft 28 is actuated and the rack bars 30 are moved out of engagement with the rung 6, whereupon the foot rest 24 may be placed in any desired position by manipulating the lever 32.

If desired the back 8 may be placed in alinement with the seat 1 and the foot rest 24 may also be placed in alinement with the seat. Under some circumstances, the frame 10 will swing into a vertical position so that the legs 14 of the frame will engage the floor to uphold the back 8. When the foot rest 24 is alined with the seat 1, the point of pivotal connection 34 between the crank arm 33 and the link 35 will drop below the plane in which the rock shafts 28 and 31 are located, the arm 33 engaging the rung 6 to hold the foot rest in position.

When the back 8, the seat 1 and the foot rest 24 are horizontally alined, the device may be used as a bed, and thus a single article of furniture may be made to exercise the double function of a chair and a couch. When the parts 1, 8 and 24 are alined horizontally, the arms 17 may be depressed below the side bars 2 of the seat 1, owing to the fact that there are in the arms 17 elongated slots 20 which engage the projections 21 upon the back 8.

When the structure is positioned to form a bed, as shown in Fig. 2, the cushion shown in Fig. 3 serves as a mattress. The part 40 of the cushion may be folded over upon the part 41 to serve as a pillow, and an auxiliary cushion 42 may be placed beneath the flap 43 which is hingedly connected with the part 44 of the cushion, the part 44 of the cushion being hingedly united with the part 41.

When the device is in use as a chair, as indicated in Fig. 1, the part 40 of the cushion constitutes a head rest, the part 41 serves as a cushion for the back and the part 44 serves as a cushion for the seat. The flap 43 serves to cover the rear portion of the foot rest 24, the auxiliary cushion 42 being removed preferably, so that the feet of the operator may rest upon the platform 45 of the foot rest.

Having thus described the invention, what is claimed is:

In a chair, a seat supporting structure; a fixed member carried thereby; a foot rest hinged to the supporting structure; a primary shaft journaled in the foot rest; a rack bar secured to the primary shaft and adapted to engage the fixed member to hold the foot rest at an angle to the horizontal; means connected with the primary shaft and independent of the rack bar for actuating the primary shaft; a secondary shaft journaled in the supporting structure; pivotally connected parts, one of which is a crank arm secured to the secondary shaft, the other of which is a link in which the primary shaft is journaled, said parts being actuable by the secondary shaft to raise the foot rest, and being adapted to knuckle and bring one of said parts into engagement with the fixed member, thereby to hold the foot rest in a horizontal position, independently of the engagement between the rack bar and the fixed member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ROBERT L. WOODS.

Witnesses:
EDWARD CLARK,
WILLIAM T. DAVIS.