

No. 782,335.

PATENTED FEB. 14, 1905.

J. HARVEY.
ADJUSTABLE CHAIR.
APPLICATION FILED MAR. 17, 1904.

2 SHEETS—SHEET 1.

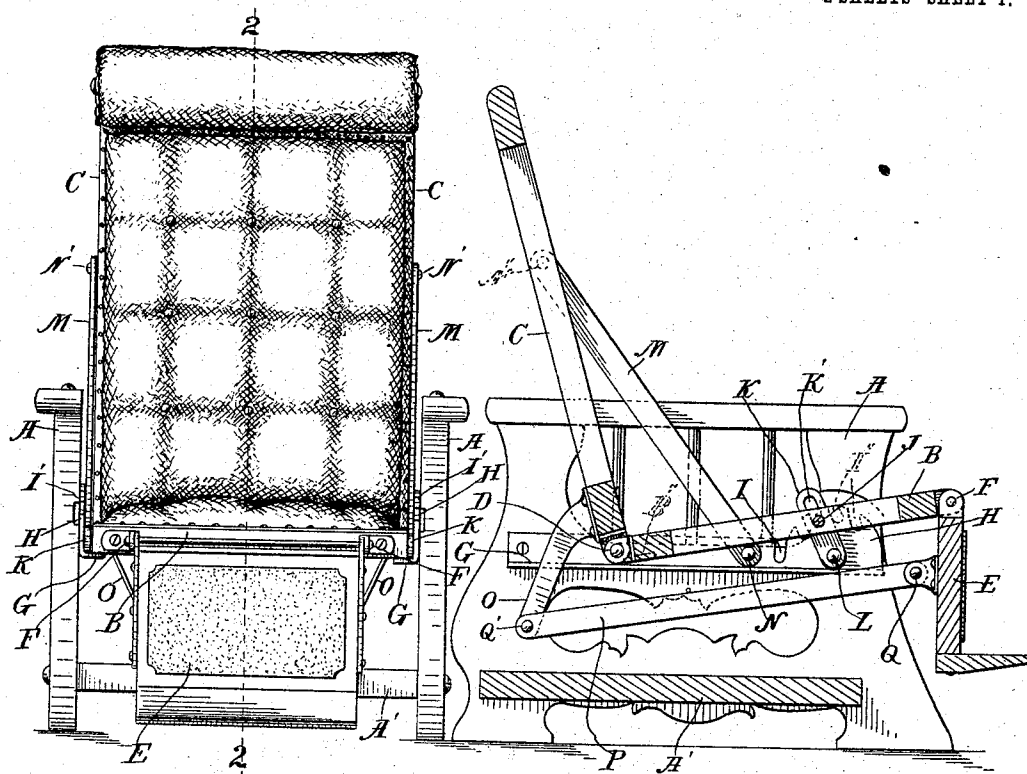


Fig. 1.

Fig. 2.

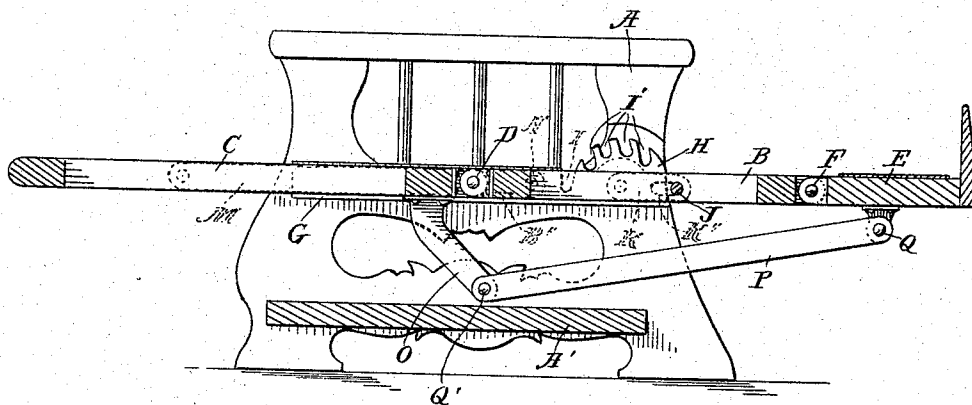


Fig. 3.

Witnesses
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2 SHEETS—SHEET 2.

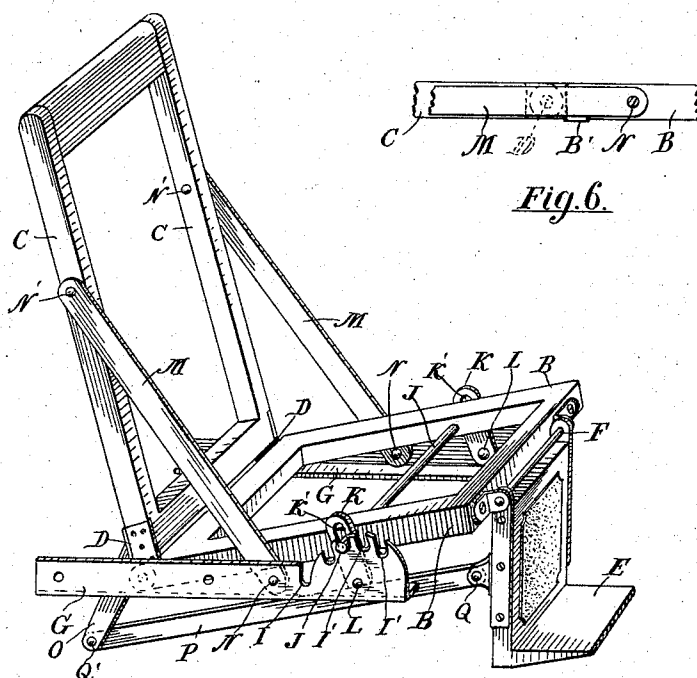
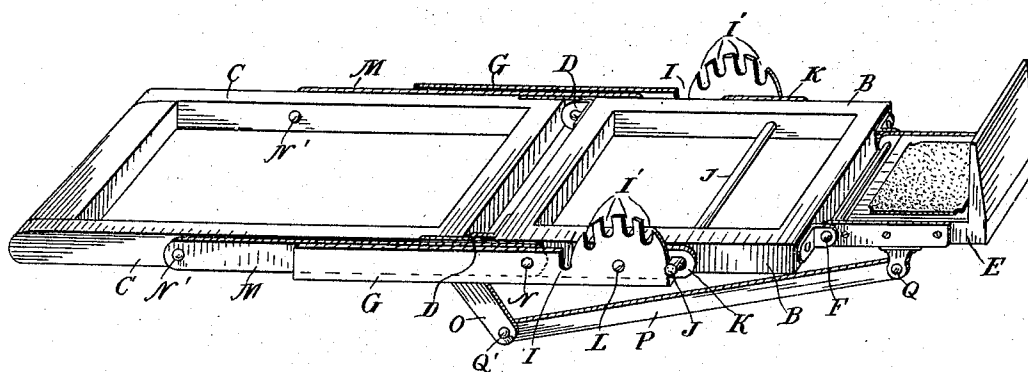


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN HARVEY, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO PETER H. BENJAMIN, OF GRAND HAVEN, MICHIGAN.

ADJUSTABLE CHAIR.

SPECIFICATION forming part of Letters Patent No. 782,335, dated February 14, 1905.

Application filed March 17, 1904. Serial No. 198,550.

To all whom it may concern:

Be it known that I, JOHN HARVEY, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Adjustable 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 ap-
 10 pertains to make and use the same.

My invention relates to improvements in reclining or invalid chairs; and its object is to adapt the adjusting mechanism shown in my Patent No. 749,789 of January 19, 1904, to use in such chairs; and it consists of the
 15 back and seat adjusting mechanism therein shown, modified, arranged, and added to, as hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in
 20 which—

Figure 1 is a front elevation of a complete chair embodying my invention; Fig. 2, a vertical section on the line 2 2 of Fig. 1 with the upholstery removed to show the construction and adjusted in an inclined-chair position; Fig. 3, the same adjusted in horizontal position for use as a couch; Fig. 4, a perspective
 25 detail of the operating mechanism in position shown in Fig. 2; Fig. 5, the same in position as shown in Fig. 3, and Fig. 6 a detail of the stop mechanism for the joint or hinge connecting the seat and back.

Like letters refer to like parts in all of the
 35 figures.

A A represent the sides of the frame of the chair, rigidly connected by a bed-piece A' near the bottom. Attached to these side pieces and projecting inward therefrom to
 40 support the movable portions of the chair are angle-irons G, extending horizontally in the same plane.

B represents the seat-frame, and C the back-frame, hinged to each other at D and adjusted
 45 either in chair position or couch position. The back is adjusted at the upper end by means of rods M, pivoted at one to the angle-irons C, as at N, and at the other end to the back, as at N'. I also provide a step-by-step

adjustment of the seat and back at various
 50 angles, and for this purpose each angle-iron G is provided with an upwardly-projecting semicircular portion H, and a series of recesses I and I' are provided therein to engage and hold the rod J, which rod extends through
 55 the seat-frame B and projects therefrom at each side thereof to support and adjust the same in various positions. Links K are pivoted at one end in the axis of the portion H and serve only to limit the outward movement
 60 of the rod J and may be dispensed with. This rod engages the various recesses I and I' at its outer ends and is shifted from one to the other of said recesses I and I', as occasion re-
 65 quires, and also adjusted opposite the outer end of the angle-iron G, as illustrated in Figs. 3 and 5. The seat-frame is thus adjusted in horizontal position within the frame or in
 70 horizontal position projecting forward of the frame or in several intermediate inclined positions by engaging the rod J with the different recesses I'. At the same time the back
 75 is adjusted at its lower end in various positions along on the angle-iron G, being nearly vertical when the seat-frame is adjusted with-
 80 in the side frames A and horizontal when the seat-frame is adjusted in its forward position and adjusted at various angles as the rod J is shifted to the various recesses I and I'. As
 85 a chair the device is thus adjusted in several angular positions having more or less inclination to the vertical at the back and to the horizontal at the seat or can be arranged as a
 couch in a horizontal plane, as in Figs. 3 and 5.

To extend the device when in couch position and to furnish a suitable foot-rest when
 90 in chair position, a foot-rest E of suitable angular construction is pivoted to the front of the seat-frame at F, and this foot-rest is automatically adjusted to suitably correspond
 95 to the various adjustments of the seat and back by means of rigid arms O, attached to the back and extending rearward and downward therefrom, and connecting-rods P, pivoted to the arms at Q' at one end and to the
 rear of the foot-rest at the other end, as at Q, the radius traversed by each pivot Q and Q' about the pivots D and F being so related as

to properly adjust the foot-rest E from vertical to horizontal and intermediately at intervals to conform to the seat and back adjustment. It will also be noted that the seat
 5 is pivotally supported on the rod J, whereby the device when adjusted as a chair will tilt forward and let the foot-rest down to the floor, which is sometimes of advantage in using the chair, especially for invalids.

10 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a chair, a seat and back pivoted to each other, rods having fixed pivots at one
 15 end and pivoted to the back at the other end, projections on the respective sides of the seat near the front thereof, plates having a series of recesses to receive the projections and adjust the seat step by step, and means for movably supporting the rear of the seat and back.

2. In a chair, a seat and back pivoted to each other, angle-irons on which the seat and back are movably supported, a series of opposing recesses in the angle-irons, projections
 25 on the seat engaging the recesses and adjustable therein, and rods pivoted at their respective ends to the back and angle-irons.

3. In a chair a seat and back pivoted to each other, pivoted rods to support the back,
 30 links pivoted at one end and having elongated openings, plates each having a series of recesses, and projections on the seat and engaging the links and recesses.

4. In a chair, the combination of a seat and
 35 back pivoted to each other, angle-irons to movably support the same and having a series of recesses, rods pivoted to the angle-irons and back, links pivoted to the angle-irons at one end and having elongated openings, and
 40 a rod extending through the seat and links

and adjustable in the recesses of the angle-irons.

5. In a chair, the combination of a seat, a back pivoted to the rear of the seat, a foot-rest pivoted to the front of the seat, angle-
 45 irons supporting the seat and having recesses, rods pivoted to the angle-irons and back, projections on the seat and engaging the recesses in the angle-irons, a rigid arm attached to the back and a rod pivoted at its respective ends
 50 to the arm and foot-rest.

6. In a chair, the combination of a seat, a back pivoted to the seat, a foot-rest pivoted to the seat, angle-irons supporting the seat, segmental upward extensions on the angle-
 55 irons and having recesses, links having elongated openings and pivoted to the angle-irons, a rod extending through the seat and links and adjustable in the recesses and links, a rigid arm on the back, and a rod pivoted at
 60 its respective ends to the arm and foot-rest.

7. In a chair, angle-irons having segmental portions provided with a series of opposing recesses, a seat and a back hinged to each
 65 other and movably supported on the angle-irons, rods pivoted to the angle-irons at one end and to the back at the other end, links pivoted to the angle-irons and traversing the segments, a rod extending through the seat and links and also engaging the recesses in
 70 the segments, a foot-rest pivoted to the seat, rigid arms on the back, and rods connecting the arms and foot-rest.

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

JOHN HARVEY.

Witnesses:

LUTHER V. MOULTON,
 GEORGIANA CHACE.