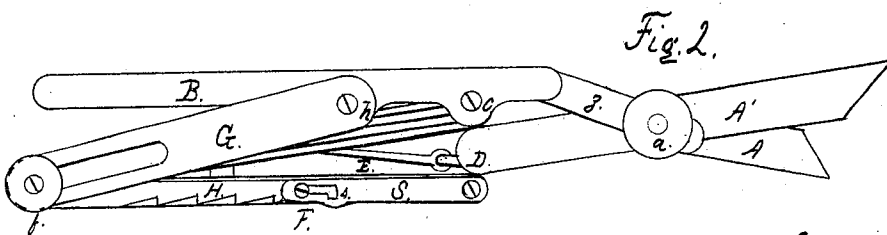
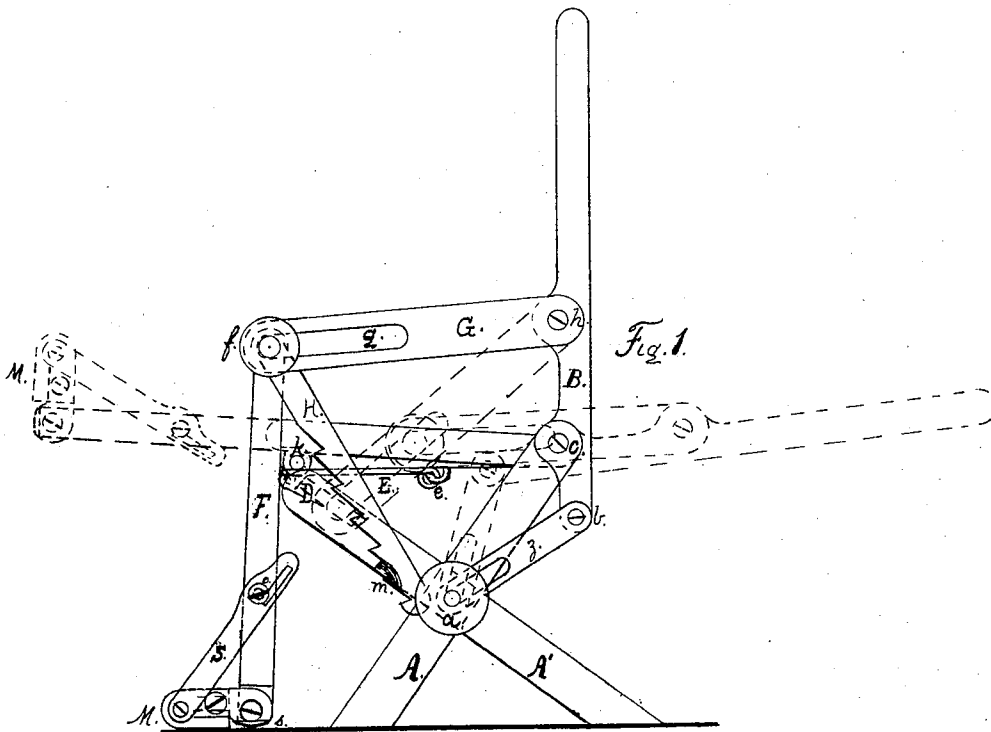


G. C. PAINE.
Reclining Chairs.

No. 141,662.

Patented August 12, 1873.



Witnesses

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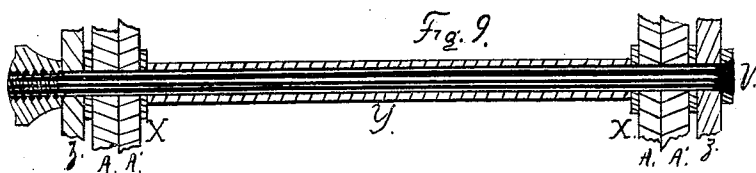
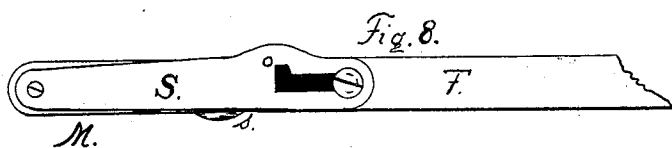
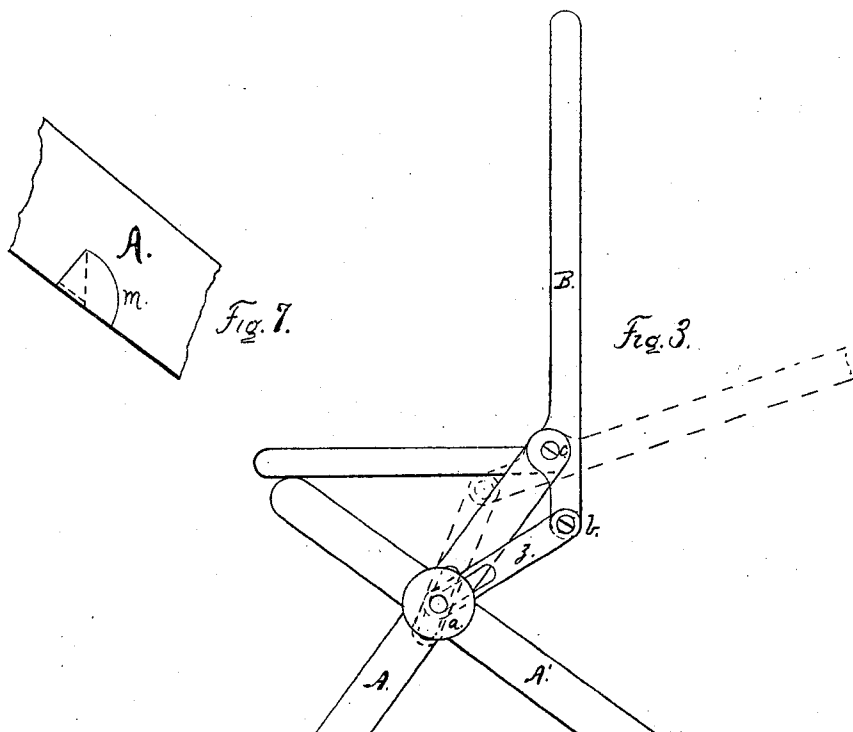
Inventor

Geo. C. Paine

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UNITED STATES PATENT OFFICE.

GEORGE C. PAINE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN RECLINING-CHAIRS.

Specification forming part of Letters Patent No. 141,662, dated August 12, 1873; application filed January 9, 1873.

To all whom it may concern:

Be it known that I, GEORGE C. PAINE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Folding and Reclining Chairs, of which the following is a specification:

This invention relates to certain improvements in the construction and arrangement of parts forming a folding and reclining chair, which are hereafter fully described.

In the drawings accompanying this description, Figure 1 is a side view of my improved chair, showing it in the ordinary position for sitting, and also showing in dotted lines the position of the leg-rest and back when they are extended in a horizontal position, or nearly so. Fig. 2 shows the chair folded together for transportation when it is desired to make it as compact as possible. Fig. 3 shows the chair without the leg-rest and arms. Figs. 7, 8, and 9 show details of construction.

A A' are the legs of the chair, constructed in the usual manner common to folding-chairs; they are pivoted together at *a*, where they cross each other, the pivot being of peculiar construction, which will be more fully described hereafter. At the upper ends of one pair of these legs are pivoted, at *c*, the side pieces B, composing a part of the frame of the back of the chair; these side pieces B extend some distance below the point at which they are pivoted to the legs, as mentioned, and to the extensions thus formed are pivoted, at *b*, bars *z*, which are slotted to pass over the pivot of the legs at the center of their intersection at *a*. The back part of the frame of the seat is pivoted to the legs on the same center *c* as the frame of the back, and the front part of the seat rests on the other legs without being attached thereto; but to the bar D, which connects the upper ends of the front legs together, is pivoted one end of the rods or links E, the other end of the same being pivoted to the bottom of the seat at a point about half way from front to back at *e*.

At the front edge of the seat are pivoted, at *k*, the side pieces F, composing a part of the frame of the leg-rest; these side pieces extend above the seat, and to their upper ends, at *f*, are pivoted one end of the arms G, and a slot, *g*, is provided, through which a pivot,

at *f*, passes, allowing a movement along the pivot *f*. These arms G are also pivoted to the frame B of the back at *h*, which point is the same distance from the pivot *c* as the pivot *f* is from the pivot *k*, so that the points at which the arms are attached to the front and back are equally distant from the pivots upon which they respectively turn. Hanging loosely from each of the pivots *f*, and between the arms G and the side pieces F, I arrange serrated bars H, which act as a ratchet on the catches M attached to the legs. One end of the bolt or pin, which forms the pivot *f*, is fixed rigidly to the upper ends of the side pieces F, and the other end is provided with a screw-thread, upon which is fitted a suitable knob or nut convenient to tighten up this bolt or pin. At the lower end of this leg-rest is pivoted a foot-rest, M. Upon the sides, near the outer edge of this foot-rest, at *n*, is pivoted one end of the bar S, which, at the other end, is provided with a slot, at one end of which slot, at *o*, is a notch or depression. This slot works over the pin or screw *p* attached to the side pieces F at a point above the foot-rest and below the seat.

In the foregoing description it is supposed that the two sides of the chair are constructed alike, so far as the frame and other parts described are concerned.

Between the legs I use a hollow rod or pipe, Y, at each end of which I place a large washer, X. Through the legs I pass a rod, V, which also passes through the washer W and hollow rod Y. One end of this rod V is provided with a large flat head or washer; the other end is provided with a screw-thread and tightening-nut. This rod extends through and projects out from each side of the legs for the purpose of giving room for the slotted links *z*, which are attached to the frame of the back, and these bars or links *z* fill up the space between the nut on one end and the head on the other end of the rod and the legs of the chair. From the side of the metallic fastenings, which carry the pivots of the foot-rest, I build out small projections *s*, which support the foot-rest by the bars S, so that when extended it may relieve the pressure on its hinge or joint.

Instead of using the rod Y, arranged as described, ordinary studs and nuts may be

used; but the construction shown is preferred on account of its numerous advantages.

From the foregoing description it will be seen that when this chair is opened for use the seat assumes a horizontal position. The back and leg-rest may be placed in a perpendicular position, or nearly so, and the foot-rest stand at a right angle to the leg-rest. Upon the occupant of the chair throwing the weight of his body against the back of the chair the back, with the leg-rest, in consequence of their connection with and by the slotted arms, assumes a position approaching the horizontal, accordingly as the weight of the body is exerted, thus allowing the chair to conform readily to the inclinations of the occupant to assume a recumbent or upright position.

In whatever position the back is placed it may be secured by tightening the nut; and the occupant—especially if the back is in nearly a perpendicular position—by pressing with force upon the end of the leg-rest at the point where it is pivoted to the slotted arms G, may raise the leg-rest to any desired angle, the slots in the arms allowing the leg-rest to assume any angle, while the back remains stationary; and the leg-rest may even be raised considerably higher than a line horizontal with the seat.

When the leg-rest is in the desired position it may be fastened by turning up tightly the knobs and nuts at *f* and *a*. Also, when the leg-rest is made to assume a position by which its lowest part is raised from the floor, the serrated bar H engages with the catch *m* and holds it firmly from falling back, thus forming an additional and auxiliary support. This device may not, in all cases, be necessary, but proves a valuable auxiliary in many chairs.

In case this serrated bar H should be on the wrong side of the catch when the chair is opened, it may be raised up and thrown over to the proper position.

When the leg-rest is in a horizontal position the slotted bar S, which is pivoted to the foot-rest, is raised slightly, so that the notch *o* is released from the pin which holds therein, and the foot-rest is permitted to drop down to a horizontal position, thus making an extension of the leg-rest.

When the foot-rest is on a line with the leg-

rest the bar S rests on the projection *s*, as before mentioned, thus relieving the joints or hinges of the strain which would otherwise come on them.

When the foot-rest is in the last-named position, upon the leg-rest assuming a perpendicular position, the foot-rest, by striking the floor, is automatically thrown so that the depressions in the slotted bar S engage with their pins, thus fastening the foot-rest in a position at a right angle with the leg-rest.

When this chair is folded together for transportation the parts assume the position shown in Fig. 2, and at such time the nuts at *a* and *f* are useful to retain the parts as shown by tightening up the same; and, by the arrangement of the parts, they are all held by tightening the screws, thus obviating the necessity of any fastening.

By removing the foot-rest and arms a comfortable folding chair with adjustable back will remain, as shown in Fig. 3.

It will be seen that the slotted bars *z* are so arranged as to prevent the back from falling down too far, the slot being of such length that the pin *a* brings up at the lower end of the slot, and thus accomplishes this function; also, that, by lengthening the slot *g*, the leg-rest may be attached directly to the upper end of the legs A, if desired, the lengthening of the slot being necessary to provide for folding in such cases.

I claim—

1. Combination of the seat, supported by the legs A A, the back, constructed as shown, having its frame extended below the seat and connected to the pivot of the legs by the slotted bars *z*, and the leg-rest, constructed and arranged as shown, the whole being arranged to fold together for transportation, substantially as set forth.

2. In combination with the above, the slotted arm G, notched bar H, and leg *m*, arranged substantially as set forth.

3. The foot-rest M, provided with the slotted bar S, arranged to retain and support the foot-rest, in combination with the catch *s*, or its equivalent, substantially as set forth.

GEO. C. PAINE.

Witnesses:

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