C. L. STEVENS.
Invalid-Chair.

No. 221,124. Patented Oct. 28, 1879.

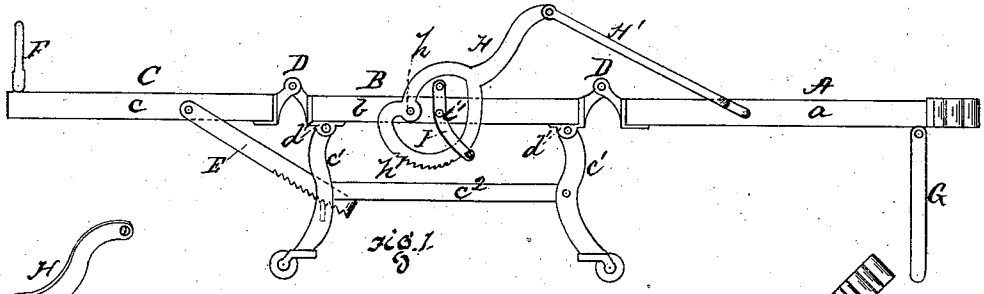


Fig. 1.

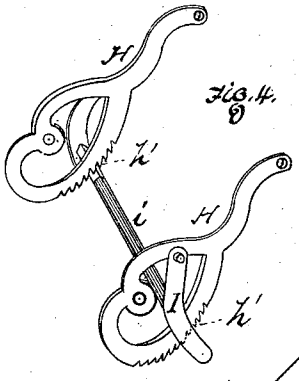


Fig. 4.

Fig. 2.

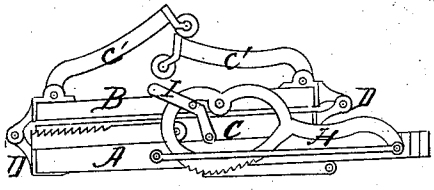


Fig. 6.

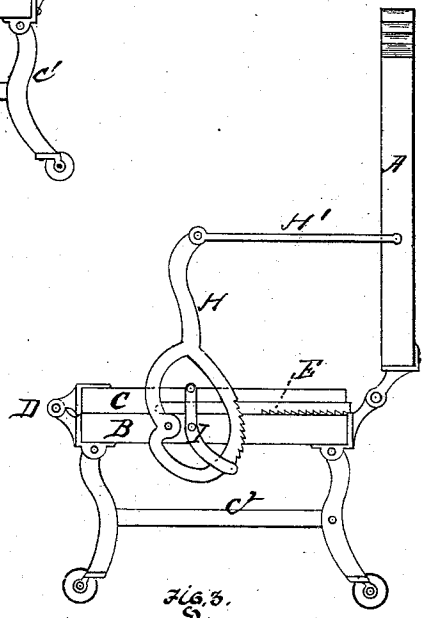


Fig. 3.

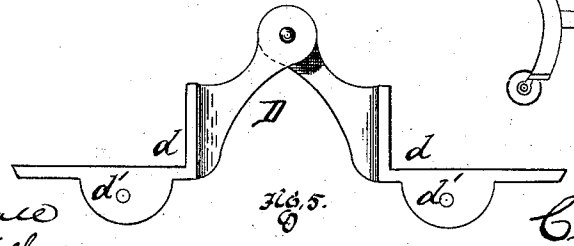


Fig. 5.

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UNITED STATES PATENT OFFICE.

CASSIUS L. STEVENS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN INVALID-CHAIRS.

Specification forming part of Letters Patent No. **221,121**, dated October 28, 1879; application filed May 6, 1879.

To all whom it may concern:

Be it known that I, CASSIUS L. STEVENS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Invalid-Chairs; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of my improved folding chair arranged as a bed or lounge. Fig. 2 is a view of the devices adjusted to form a reclining-chair. Fig. 3 is a view of the devices arranged to form an ordinary straight-backed chair. Fig. 4 is a detached view of the arms and ratchet devices. Fig. 5 is a detached view of the hinge-connections. Fig. 6 is a side view of the chair folded for transportation.

Like letters refer to like parts wherever they occur.

My invention relates to the construction of adjustable invalid-chairs; and it consists, first, in the combination, with a chair-frame, of arms pivoted thereto, and each having an externally-notched segment, pawl-bar levers mounted upon horizontal pivots on the sides of the frame, and a pawl-bar connecting the pawl-bar levers and adapted to engage with the externally-notched segments, whereby a compact, easily folded and manipulated ratchet mechanism for controlling the chair-back is obtained; secondly, in a hinge for connecting the parts of the chair, said hinge having flanges or angle-pieces which brace the chair-frame, and provided with lugs for pivoting the chair-legs, so that the attachment for the legs may be made at those points where the frame is most thoroughly braced, thereby attaining durability with simplicity and cheapness of construction.

Heretofore, in the construction of this class of adjustable reclining-chairs, the ratchet mechanism has in general consisted of a pawl and ratchet-bar, the pawl usually attached to the arm of the chair and the ratchet-bar to the seat; but such devices are liable to catch the clothing or like drapery, and are more or less limited and difficult of adjustment by persons occupying the chair.

In some instances the arms of the chair have had attached thereto segmental racks, one notched externally and the other internally, and in such cases there has been employed therewith a bar or lever pivoted below the chair-bottom, its end projecting through the internally-notched segment, and in conjuction therewith a spring which held the lever in the notches of the segment; but such a construction is objectionable, first, because it is complicated and is only adapted to a chair having cross-slats in or below the bed; secondly, because the bar working within the segment interferes more or less with the compact folding of the chair; and, thirdly, because the spring-action of the bar has been found liable to pinch the hands and catch the clothing of the occupant of the chair.

It has also been customary to use metallic frames in order to avoid the thick and unsightly frames necessarily used with the ordinary hinges to obtain strength and durability; but metallic frames are objectionable both on account of weight and cost.

The object of the present invention is to construct such chairs so as to overcome the objections specified, facilitate the adjustment of the back by the occupant of the chair, improve the shape and finish, and reduce the cost of manufacture.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the back, B the seat, and C the foot-rest, the frames *a b c* for which parts may be of a light, strong, substantial wood, caned as usual.

The several sections are connected by hinges D of such general form as will permit the parts to be folded upon each other for transportation. These hinges D may be of wrought-iron or other suitable metal, but are preferably malleable castings, because the same are cheaper and equally efficient.

Each hinge D has two rectangular body portions, *d*, adapted to embrace and support the frames to which the hinges are secured by rivets, screws, or equivalent fastenings, and one of said sections in each hinge is provided with a lug, *d'*, wherein is pivoted a leg, *c'*.

c' c' indicate the pivoted legs of the chair, which are provided with the usual hinged brace-rods or cross-bars c^2.

E indicates a rack-bar for setting the foot-

rest, said rack engaging with the connecting-bar of the front legs of the chair.

F indicates a pivoted brace-rack for the feet, and G the pivoted legs for supporting the back A when the chair is extended to form a couch.

H H′ indicate the arms, the portion H being pivoted to the seat-frame B, as at *h*, and consisting of the segment of a circle notched to form a ratchet, *h′*, with which engages a pawl rod or bar, *i*, carried by two pawl-bar levers, I, one pivoted on each side of the seat-frame B, preferably within the segment of the arm, as shown at *i′*.

These devices are ornamental and will admit of as extended movement of the back as is desirable in a reclining-chair.

The devices above described are employed as follows: For a lounge or couch the back and foot-rest are extended in line with the seat, as shown in Fig. 1, the back being supported by the swinging legs G, and the foot-rest by the rack-bar E. For a reclining-chair the back is raised to the desired angle with the seat B, and there secured by the pawl-bar *i*, which engages with the ratchet *h′* on the segment of the arm H, and the foot-rest is lowered and readjusted by means of its rack-bar E. If no foot-rest is required the rack-bar E is turned forward into line with the frame of foot-rest C, and the foot-rest is then turned over on the seat B, the folding of the chair being completed by releasing the pawl-rod *i* and turning the back A down on the foot-rest C, after which the brace-rods *c′* may be loosened and the legs folded down, making a compact article for transportation, as shown in Fig. 6. The chair may be provided with cushions or upholstered in any desired manner.

The advantages of my invention are lightness, symmetry, and reduced cost of construction.

I am aware that two segments, one notched internally and the other externally, have been attached to chair-arms, and used in combination with a pivoted bar engaging with the two sections, and also that a butt-hinge with flange or leaves to screw upon the face and edge of a door and upon the edge and face of a jamb have heretofore been devised, and do not claim the same, as the rack mechanism is complicated, costly, and disadvantageous for the reasons before specified, and the hinge would, if so constructed, prevent the proper attachment and bracing of the chair-legs.

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

1. The combination, substantially as set forth, of the chair-frame, the arms pivoted thereto, and each having an externally-notched segment, the pawl-bar levers mounted upon horizontal pivots on the side of the frame, and the pawl-bar connecting the pawl-bar lever of one side to that of the other side, and engaging simultaneously with both segments, substantially as and for the purpose specified.

2. A hinge for reclining or folding chairs, said hinge having the rectangular body or frame pieces, and the lug for pivoting the leg thereto, substantially as and for the purpose specified.

In testimony whereof I, the said CASSIUS L. STEVENS, have hereunto set my hand.

CASSIUS L. STEVENS.

Witnesses:
F. W. RITTER, Jr.,
A. C. JOHNSTON.