

*Patented Jan. 18. 1870.*

A detailed diagram of a parallel motion linkage mechanism. It consists of two long, thin links, labeled 'A' at both ends, which are connected at their inner ends by a short link labeled 'C'. The outer ends of the long links 'A' are connected to two fixed pivots, labeled 'B'. The mechanism is shown in a slightly deformed state, with the links forming a parallelogram shape. Various points are labeled with letters: 'a' at the pivots, 'c' at the joints, and 'd' at the ends of the short link 'C'. A small detail at the bottom left shows a cross-section of a joint, with labels 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z' indicating different parts of the assembly.

Inventör

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*Letters Patent No. 98,867, dated January 18, 1870.*

## IMPROVED STOP FOR THE HINGED FRAME OF RECLINING-CHAIRS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, JAMES G. HOLMES, of Charleston, in the district of Charleston, and State of South Carolina, have invented a new and improved Stop for the Hinged Frames of Reclining-Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a hinged chair-frame having my invention applied to it.

Figure 2 is a side view of the same.

Figures 3 and 4 are sectional views, showing the construction of the stop.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on that class of chairs which have their backs, seats, arms, and foot-boards connected together by means of metallic quadrangular hinged frames, so that a person can either sit erect, or incline at any desired angle.

The nature of my invention consists in applying to the said hinged metallic frames diagonal braces and cam-stops, in such manner, that by a very simple manipulation, the jointed parts of the chair can be rigidly locked at any desired angle, as will be hereinafter explained.

As the reclining or therapeutic chairs to which my improvement relates are so well known, I have only represented in the accompanying drawings one of the jointed frames to which the arms, backs, seats, and foot-boards of such chairs are secured. This frame, shown in figs. 1 and 2, is composed of two longitudinal parallel pieces, A A, connected, by joints *a a*, to short end pieces B B, from which project the pivots *b b*. This is the well-known form of quadrangular frame used in the construction of the chairs in question.

To the bottom side of the top piece A, a plate, *d*, is rigidly secured; and to this piece, a brace-rod, C, is hinged, at *c*.

This brace-rod extends forward and downward a suitable distance, and is pivoted, at *e*, to a sliding strip, F, the forward end of which is turned up, at *f*.

The strip F lies flat upon the upper side of the bottom piece A of the hinged frame, and is allowed, when not locked, to slide longitudinally thereon.

The length of this sliding strip F should be such as to allow all the required movements to be given to the chair-sections, and also to allow the chair-sections to be adjusted to the different angles required.

Two upright bearings, *i i*, are rigidly secured to and rise above the edges of the bottom piece A, between which slides the piece F.

These bearings have applied to them a vertically-movable piece, *h*, the ends of which are forked, so as to be held in place between the bearings; and above this piece *h* is a cam, *g*, which is pivoted to the transverse pin *n*, so as to rock freely thereon.

This cam *g* has a flattened extension or handle, G, formed on it, by which it is adjusted.

By depressing the handle G, as shown in fig. 3, the cam *g* will forcibly press down the plate *h* upon the sliding piece F, and thus rigidly lock and hold this piece in place upon the frame-strip A.

By raising the handle G, the cam *g* will release the plate *h* from the slide F, and, by thus relieving the slide, allow the frame to be flexed about its joints.

It will be seen that the plate *h*, which is applied between the cam *g* and the slide F, receives directly upon it the perimeter of this cam, and affords a wide bearing-surface upon the said slide, and a much wider bearing-surface than would be afforded by the cam alone.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

In combination with the hinged frame of a reclining-chair, the diagonal brace C, slide F, movable plate *h*, and rocking cam *g*, substantially as and for the purposes described.

JAMES G. HOLMES.

Witnesses:

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