J. KRAPP.

Rocking-Chair.

No. 200,204. Patented Feb. 12, 1878.

Fig. 3

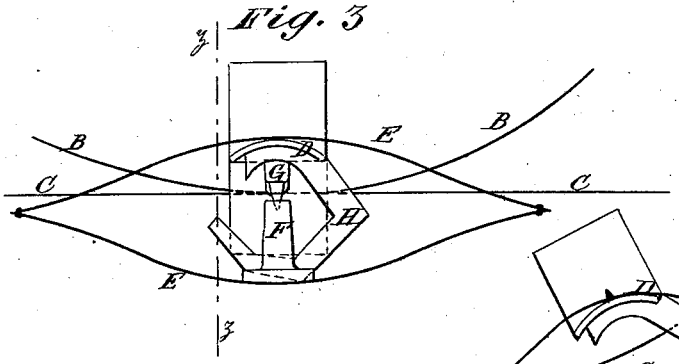


Fig. 4

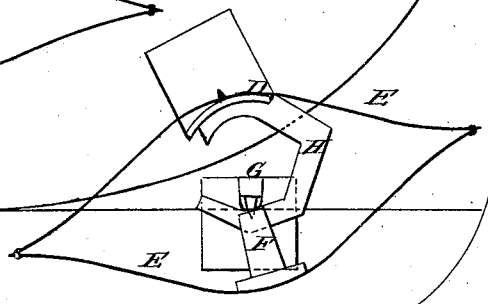


Fig. 5

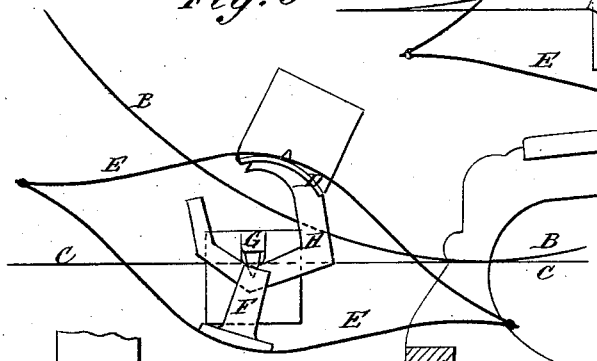


Fig. 1

Fig. 6

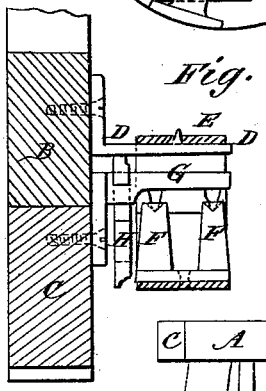
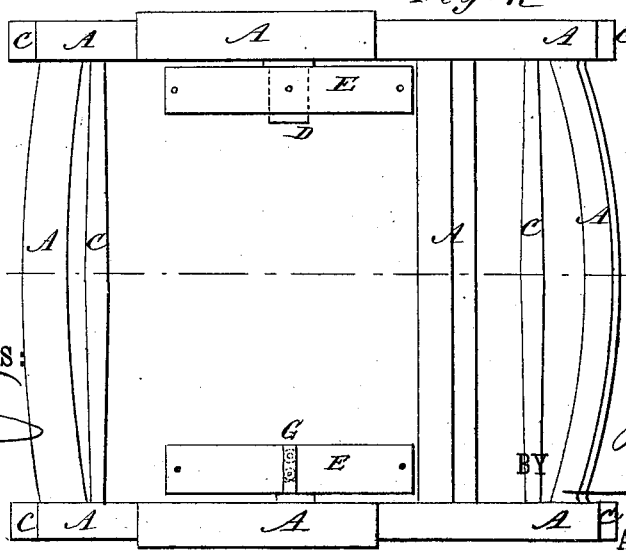


Fig. 2



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UNITED STATES PATENT OFFICE.

JOHN KRAPP, OF BROOKLYN, E. D., ASSIGNOR TO MARTIN J. GROSSMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN ROCKING-CHAIRS.

Specification forming part of Letters Patent No. **200,204**, dated February 12, 1878; application filed January 11, 1878.

To all whom it may concern:

Be it known that I, JOHN KRAPP, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Spring Rocking-Chairs, &c., of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved chair, taken through the line *x x*, Fig. 2. Fig. 2 is a top view of the same, partly in section, through the line *y y* in Fig. 1. Fig. 3 is a detail view of one of the springs, showing the position of the parts when the chair is vertical. Fig. 4 is the same view as Fig. 3, but showing the position of the parts when the chair is rocked forward. Fig. 5 is the same view as Figs. 3 and 4, but showing the position of the parts when the chair is rocked backward. Fig. 6 is a detail cross-section of the spring, taken through the line *z z*, Fig. 3.

The object of this invention is to furnish improved spring rocking-chairs, cradles, and cribs of that kind that rock upon a stationary base, which shall be so constructed that the strain may always be at right angles with the springs, and which shall be simple in construction and easy and uniform in movement.

The invention consists in the combination of the two arms, the elliptic spring, and the oscillating posts with the rocker and pedestal of the chair, cradle, or crib, and in the combination of the two arms, the elliptic spring, the oscillating posts, and the stop-hook with each other, and with the rocker and pedestal of a chair, cradle, or crib, as hereinafter fully described.

Similar letters of reference indicate corresponding parts.

A represents the frame of a chair, and B its rockers, which rock upon the upper edges of the side bars of the stationary base or pedestal C. To the inner sides of the rockers B are attached arms D, the upper sides of which are rounded off to receive the upper part of the elliptic springs E, which are secured in place by points formed upon the upper sides of the said arms D, to pass through holes in the said springs E, or in any other convenient way. To the lower part of the springs E is secured a plate having two short posts, F, formed upon it. The upper ends of the posts F are concaved to receive points formed upon the lower side of the arm G, the outer end of which, or a base-plate formed upon said outer end, is attached to the side bar of the pedestal C. By this construction, as the chair is rocked, the posts F oscillate upon the points of the arm G, so that the springs E are always kept at right angles with the direction of the strain, so that the said springs will not be twisted, but will always act easily and gently.

This construction enables elliptic springs to be used for connecting a rocking-chair, cradle, or crib to its stationary base.

To the arm D is attached, or upon it is formed, a hook, H, which passes around the arm G, to serve as a stop to limit the movement of the chair A B.

The inner edge of the hook H is made with angles, as shown in Figs. 3, 4, and 5, to better adapt it to serve as a stop.

The stop-hooks H also sustain the weight of the pedestal C when the chair is raised by its frame A, to prevent the springs E from being strained by supporting the said weight. If desired, a single spring, E, may be used, its attachments being attached to the middle parts of cross-bars attached to the rockers B and the pedestal C; but in this case the said spring must be made heavier.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the arms D G, the elliptic spring E, and the oscillating posts F with each other, and with the rocker and pedestal of the chair, cradle, or crib, substantially as herein shown and described.

2. The combination of the posts D G, the elliptic spring E, the oscillating posts F, and the stop-hook H with each other, and with the rocker and pedestal of a chair, cradle, or crib, substantially as herein shown and described.

JOHN KRAPP.

Witnesses:

JAMES T. GRAHAM,

C. SEDGWICK.