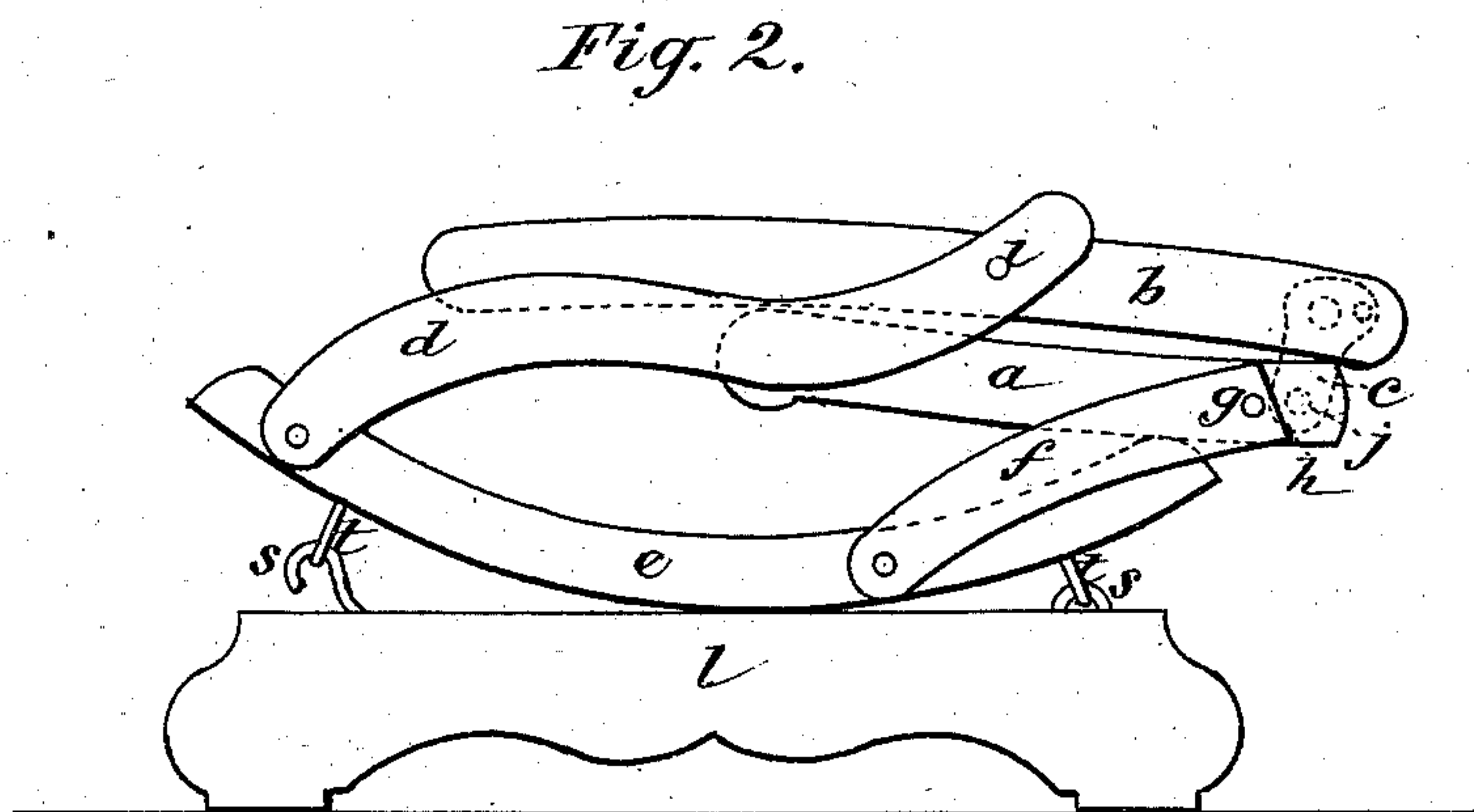
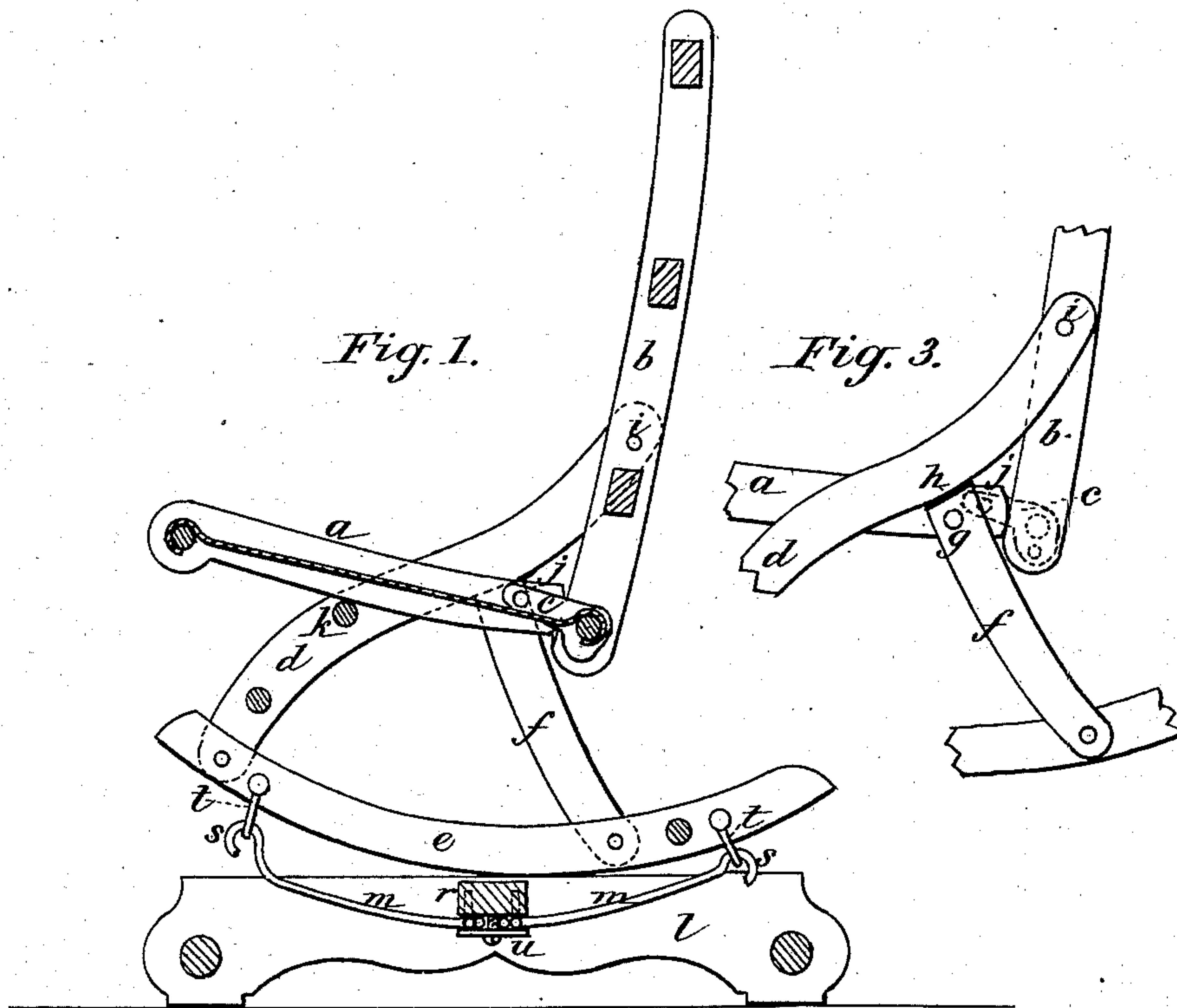


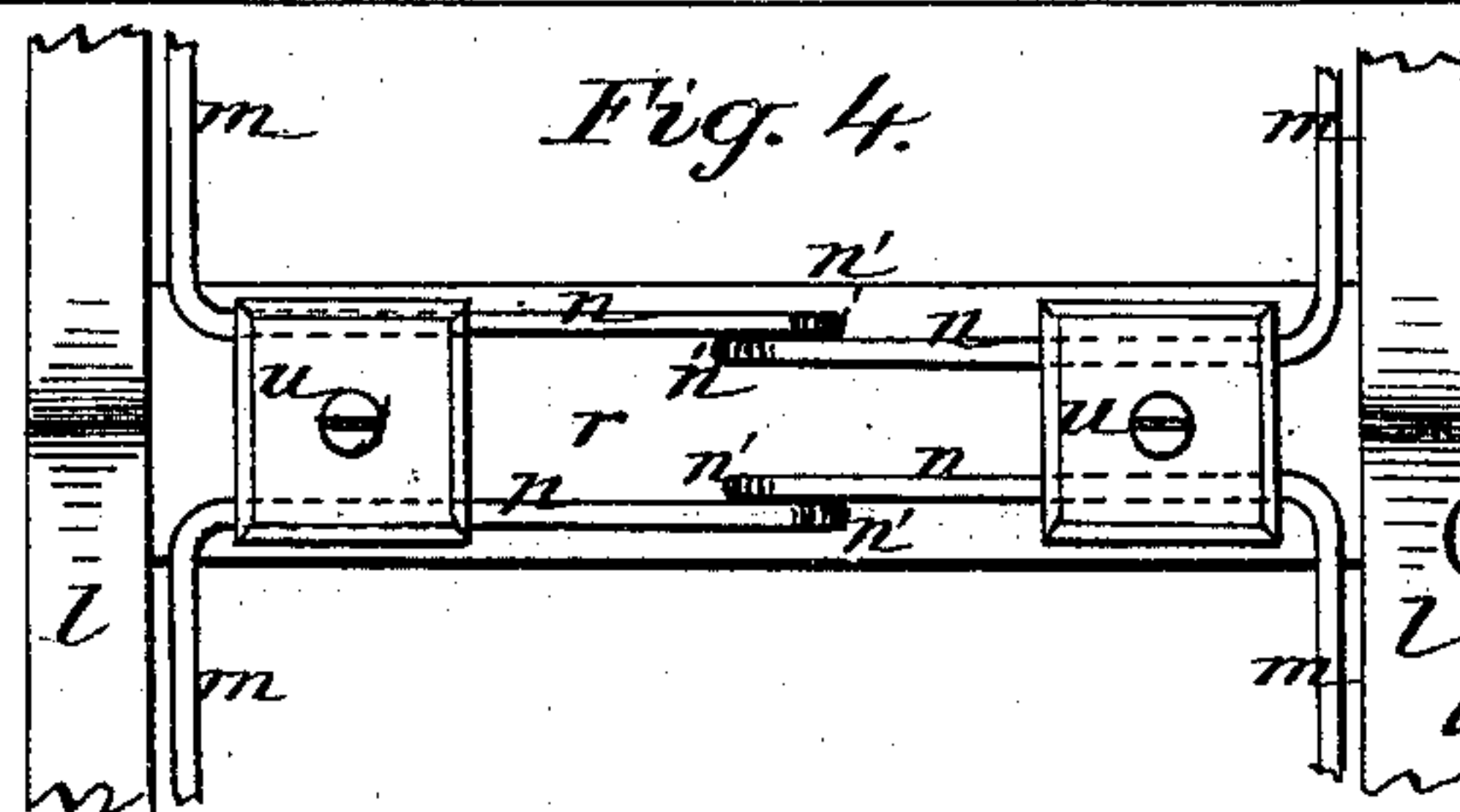
I. N. DANN.  
Folding Rocking-Chair.

No. 215,581.

Patented May 20, 1879.



Witnesses:  
Floyd Norris  
O. P. Law



Inventor:  
Isaac N. Dann  
per  
Johnson & Johnson  
Attys

# UNITED STATES PATENT OFFICE.

ISAAC N. DANN, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN FOLDING ROCKING-CHAIRS.

Specification forming part of Letters Patent No. **215,581**, dated May 20, 1879; application filed March 4, 1879.

*To all whom it may concern:*

Be it known that I, ISAAC N. DANN, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Folding Rocking-Chairs, of which the following is a specification.

I have combined a folding rocking-chair with a base in such manner that the folding of the chair forward is made within the length of the base, and the connection of the rockers with the base is effected by a new arrangement of torsional springs adapted to give an easy and uniform rocking of the chair with the least possible efforts of the occupant.

The folding of the chair within the length of the base gives an important advantage in the storage and transportation of the chair.

The construction of the chair is similar to that patented to me October 11, 1875. Certain differences, however, are made to give greater safety to this improved chair when in use.

A rigid seat-frame, *a*, is pivoted to the lower ends of the back bars, *b*, by means of links *c*, rigidly secured to said bars in a manner to allow the ends of the seat side bars to abut against the inner sides of said back bars.

The front legs, *d*, are pivoted to the rockers *e*, and, extending above the seat, are pivoted to the back bars, and form the arms of the chair. The rear legs, *f*, are also pivoted to the rockers and to the seat-arms, the latter connection being at a point, *g*, in front of the arm-connections with the back, so as to bring the upper ends, *h*, of said rear legs in abutting positions with the under sides of chair-arms when the chair is in use. This connection, it will be seen, is also in front of the pivots *i* of the arms with the back, and said arm-pivots are in rear of a vertical line through the pivots *j* of the seat and back, and it is in the relation of these pivots, in connection with supporting the arms upon the rear legs, that the chair is held in its set-up position, while the seat is maintained in position for use by reason of its fixed link-connections *c* with the back, in rear of its pivot-connections *g* with the rear legs, and supported upon a cross-

rung, *k*, of the front legs. This construction and arrangement give greater safety to the chair when in use.

The back of the chair folds forward, and the front and rear legs fold backward.

The chair is mounted upon a base frame, upon the sides *l* of which the rockers *e* rest, and their attachment thereto is made by two sets of wire springs, *m*, having the form of the letter **L**, one branch, *n*, of which lies upon a middle cross-bar, *r*, of the base, and is pinned thereto by a bent end, *n'*, at or near the middle of said bar, while the other branch, *m*, acts as a lever, and extends along the inner side of the base, and terminates in a hook, *s*, which connects with a link, *t*, at or near the end of the rocker.

The branches *n* lie parallel with each other, and are clamped in pairs at or near the bend or angle to said cross-bar by a cap or plate, *u*, so that the springs act by the torsion of their clamped branches *n*, and give a very easy movement to the chair, making a very simple, durable, and easily-attached spring, not only exerting a uniform force upon the end of each rocker, but at each side of the chair, and hold the rockers in place upon the base, whether the chair be unfolded for use or folded up for storage or transportation within the compass of said base.

The drawings represent my improved folding rocking-chair in section, as unfolded, and in elevation as folded, Figure 1 being a vertical section, Fig. 2 an elevation as folded, Fig. 3 a partial elevation as unfolded, and Fig. 4 a bottom view of the base cross-bar, showing the torsional springs connecting the rockers.

I claim—

1. In a folding rocking-chair, substantially such as described, and with or without a rocker-base, the rear legs, pivoted to the seat-frame at a point in front of the connection of the back with said seat, in combination with the fixed links *c* of the back, the front legs extending above the seat and pivoted to the back, and supporting said seat by the cross-rung *k*, all substantially as described.

2. In a rocking-chair having a rocker-base, the **L**-formed torsional springs *m n*, the bent



branch *m* forming a lever attachment with the rocker, and the bent branch *n* the torsional spring proper, fixed at its point *n'* to the base, and clamped at the point of its bend upon the surface of said base, as specified.

3. The lever torsional springs, pinned to the base cross-bar by bent ends *n'*, and clamped in pairs at or near their angles by a cap or plate, *u*, and having their lever-branches *m* de-

tachably connected with the rockers, as and for the purpose described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ISAAC N. DANN.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.