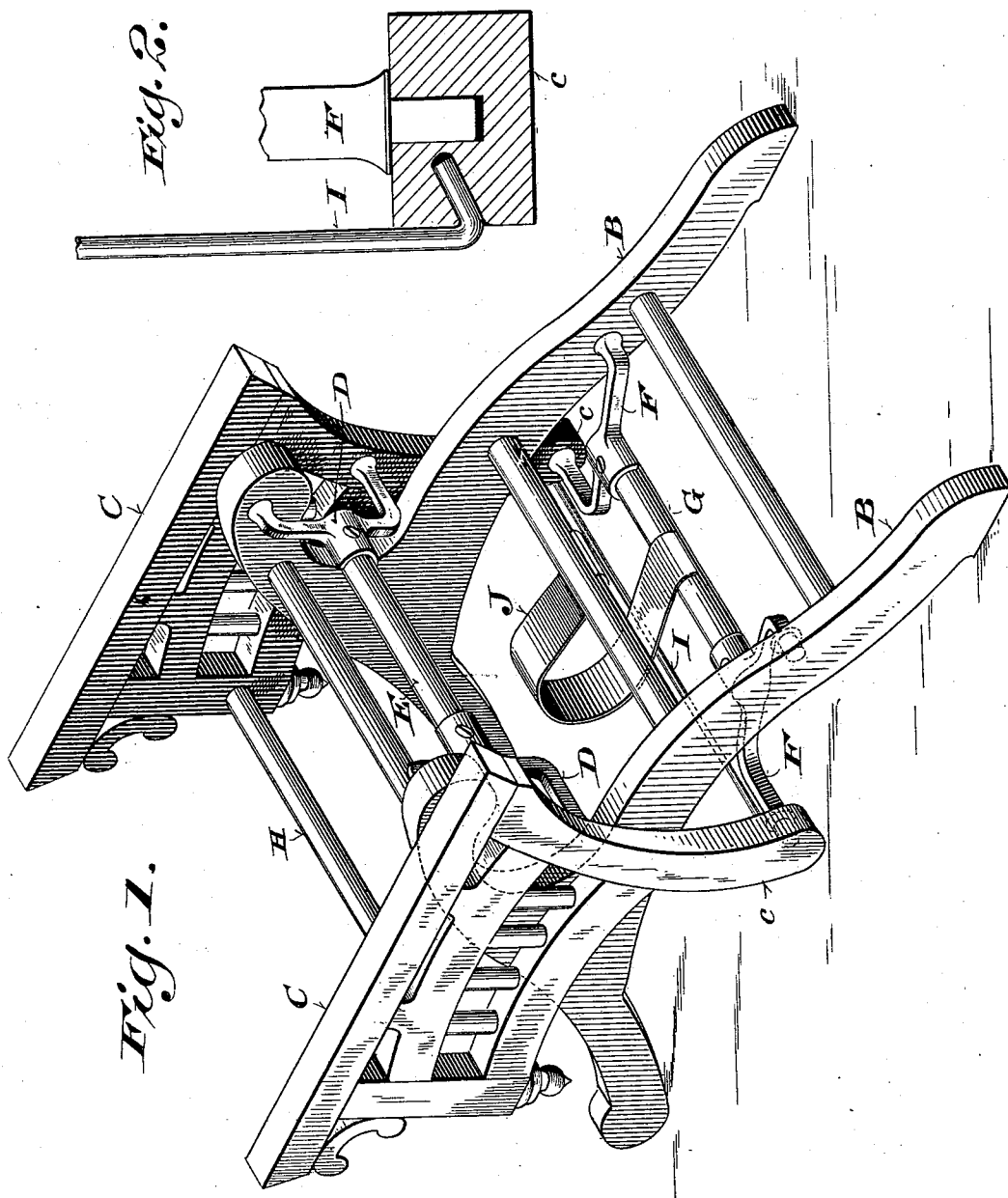


(No Model.)

W. M. BOENNING & J. GILSON.  
ROCKER.

No. 558,476.

Patented Apr. 21, 1896.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM M. BOENNING AND JOHN GILSON, OF PORT WASHINGTON,  
WISCONSIN.

## ROCKER.

SPECIFICATION forming part of Letters Patent No. 558,476, dated April 21, 1896.

Application filed November 30, 1894. Serial No. 530,363. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM M. BOENNING and JOHN GILSON, citizens of the United States, and residents of Port Washington, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Rockers; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention has for its object to improve that class of rockers set forth in United States Patent No. 472,330, granted April 5, 1892, to William M. Boenning, one of the parties in this application; and it consists in certain peculiarities of construction and combination of parts hereinafter specified with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a perspective view of a portion of a chair embodying our invention; and Fig. 2, a detail plan view, partly in horizontal section, illustrating the connection of a tie-rod and hanger-arm.

Referring by letter to the drawings, B represents a chair-base of that character comprising parallel standards united by a series of rounds; but said base may be of any ordinary or suitable construction. Hangers C are suspended from base-standards by a pair of parallel links D, and a transverse brace E may be utilized to connect the links, the ends of the latter being herein shown in the form of journals loosely engaging corresponding sockets in said hangers and base-standards. Below their connection with the links D, downwardly-projecting arms *c* of the hangers C are connected to the base-standards by other parallel links F, the latter being similar to those aforesaid and preferably united by a transverse brace G, as herein shown.

A transverse bar H is employed to unite the hangers C in front of the base-standards, and tie-rod I connects the arms *c* of said hangers, each end of this tie-rod being bent at an acute angle to the remainder thereof and engaged with an oblique socket in a hanger-arm, as clearly illustrated in Fig. 2. The engagement of the ends of the tie-rod with the sockets in the hanger-arms is accomplished by springing said arms, and this engagement being effected it is impossible for said tie-rod to

become loose or accidentally displaced, and it is also impossible for the aforesaid arms to spread.

The hangers herein shown are for the support of a chair seat and back, the rocker thus far described being one possible form of a structure that involves the combination of depending hangers, links suspending the hangers from a relatively-fixed support, and vertically-movable connections between the said hangers and support, as set forth in the first claim of the aforesaid patent. It is also to be understood that the generic rocker is applicable in connection with cradles, hobby-horses, &c., and susceptible of various modifications in the matter of detail without departure from the fundamental combination and arrangement of parts.

One feature of the present rocker is the interposition of a spring between the base or fixed support and the hanger in link connection therewith in order to compensate for the otherwise extreme sensitiveness of said rocker. The position of the spring is immaterial so long as it resists and equalizes the motion of the hangers in either direction, and said spring may be multiplied as many times as may be found necessary or desirable in the various possible applications of our rocker.

The spring J herein shown is a bow having one extremity under a round of the supporting-base B and its other extremity opposed to the transverse brace G, uniting the links F above specified.

The operation of the herein-described rocker is substantially the same as that set forth in the former patent, the links D swinging from a normally vertical position to thereby tilt the hangers C in either direction, while at the same time there is a lift of said hangers, this lift being due to the arc motion of the aforesaid links and the other links F holding the arms *c* of the aforesaid hangers in an approximately vertical line when the tilt is effected. After a tilt in one direction the weight on the hangers and the resistance of the spring tending to return the links D to their normal or vertical position causes the hangers to swing in an opposite direction past their normal position, thus producing an easy rocking motion that may be maintained with but little

effort, the spring compensating for what would be otherwise a too sudden approach to or recovery from a full tilt of said hangers in either direction. It also follows that the resistance of the spring is proportional to the degree of tilt in either direction, and the farther the links D are swung from their normal or vertical position the greater will be the elevation of the hangers. Consequently there is a compensating tendency of the weight on said hangers and expansion of said spring to carry said links past the vertical line when the action is reversed.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a base embodying parallel standards united by rounds, links depending from the base-standards, a structure involving hangers suspended by the links, and having downwardly-projecting rear arms and other links connecting said base-standards and said arms, a transverse brace joining the latter links, and a spring intermediate of the brace and one of the base-rounds.

2. The combination of a base comprising parallel standards and connecting-rounds,

links depending from the base-standards, a structure embodying hangers having downwardly-projecting rear arms, a tie-rod connecting the arms, other links connecting said standards and arms, a transverse brace connecting the latter links, and a spring interposed between a base-round and said link-connecting brace.

3. The combination of a base embodying parallel standards and connecting-rounds, a pair of hangers linked to the standards and provided with downwardly-projecting rear arms, a bar connecting the hangers forward of said standards, a tie-rod joining the hanger-arms, other links connecting these arms and standards, a brace joining the latter links, and a spring interposed between a base-round and said brace.

In testimony that we claim the foregoing we have hereunto set our hands, at Port Washington, in the county of Ozaukee and State of Wisconsin, in the presence of two witnesses.

WILLIAM M. BOENNING.  
JOHN GILSON.

Witnesses:

H. W. BOLEUS,  
WM. AHLHAUSER.