

No. 848,534.

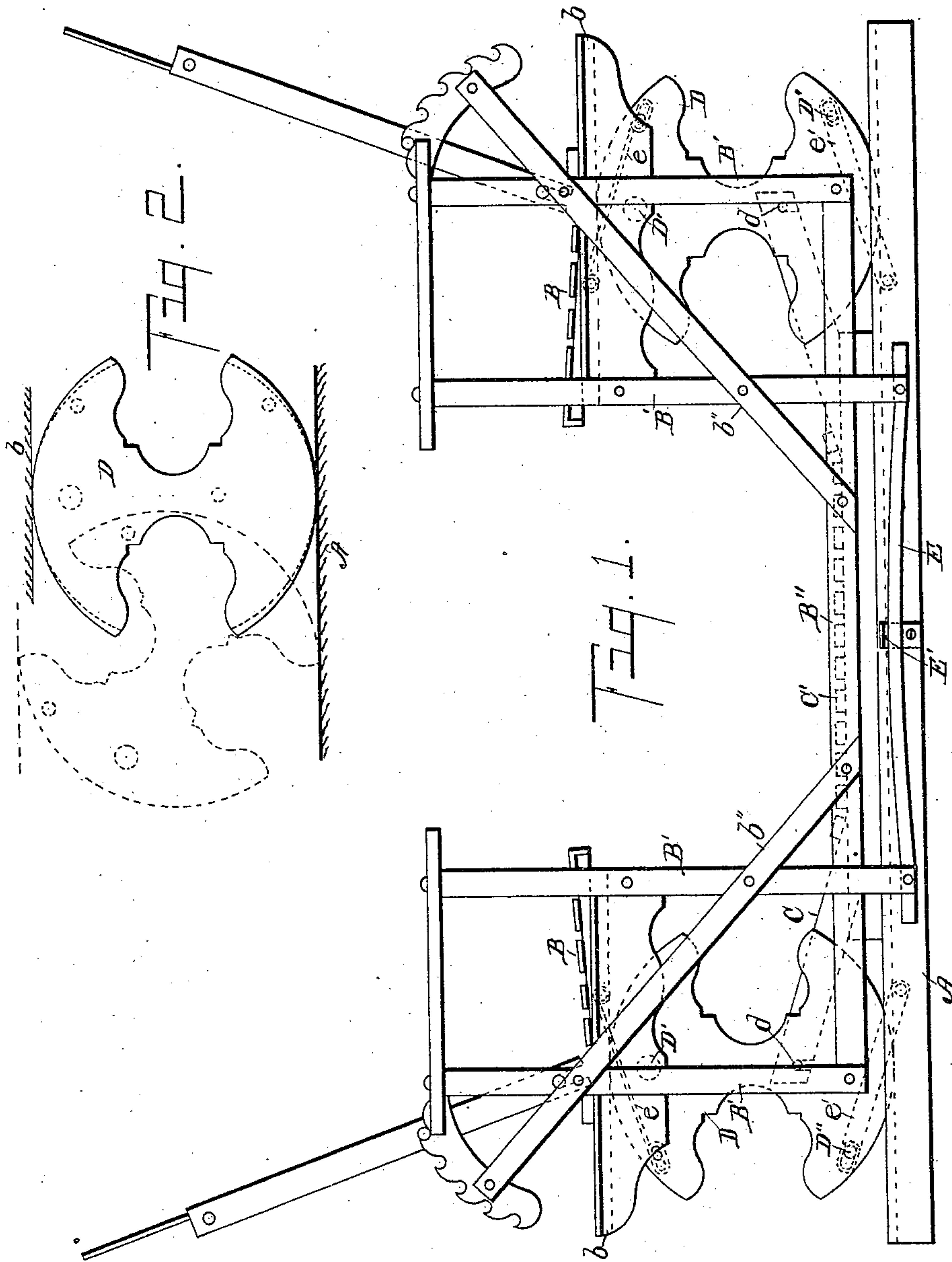
PATENTED MAR. 26, 1907.

A. P. BOYER.

SWING.

APPLICATION FILED AUG. 31, 1904.

2 SHEETS—SHEET 1.



Witnesses:

Ethel A. Teller

Adelaide J. Adams

Inventor,

Allyn P. Boyer

By *Chappell & East*

Att'ys

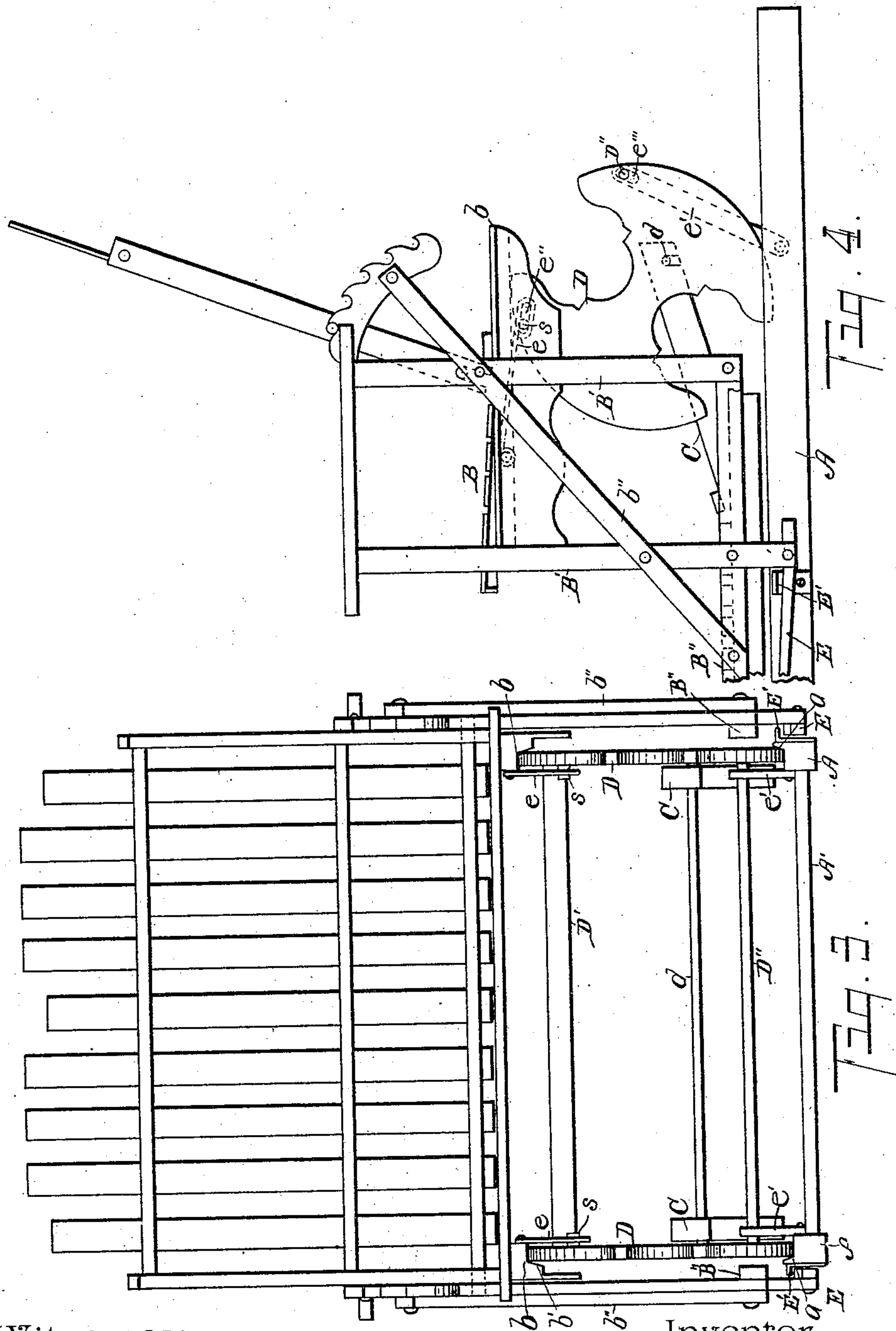
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2 SHEETS—SHEET 2.



Witnesses:

Edith J. Sellen

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UNITED STATES PATENT OFFICE.

ALLEN P. BOYER, OF GOSHEN, INDIANA.

SWING.

No. 848,534.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed August 31, 1904. Serial No. 222,830.

To all whom it may concern:

Be it known that I, ALLEN P. BOYER, a citizen of the United States, residing at the city of Goshen, county of Elkhart, State of Indiana, have invented certain new and useful Improvements in Swings, of which the following is a specification.

This invention relates to improvements in swings.

It relates particularly to an improved swing in which the seats move back and forth without being suspended, such as is illustrated and described in Letters Patent No. 769,298, No. 769,299, issued to me on the 6th of September, 1904, and is a modification of and in some respects an improvement upon the structures therein illustrated and described.

The main object of this invention is to provide an improved swing of the class above described which can be readily moved without disassembling or disarranging the parts.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side-elevation view of my improved swing. Fig. 2 is a side-elevation view of one of the rockers D, showing the structural details thereof, the same being shown by dotted lines at one end of its movement or stroke. Fig. 3 is an end-elevation view of the structure appearing in Fig. 1. Fig. 4 is a detail side-elevation view showing the position of the parts toward one end of the movement or stroke of the swing.

In the drawings similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, the platform or base is formed of side rails A, which are connected together or secured in proper relation to each other by suitable cross-pieces A'. The side rails serve to support and guide the swinging parts above. The side rails are provided with ways on their upper sides for the double-headed rockers D. These ways

are provided with flanges *a* at their outer edges to retain the rockers D thereon and to guide the same. The inner or guiding faces of these flanges are inclined, as clearly appears in Fig. 3.

The seats B are carried by a frame, and this frame is supported by the rockers D. The seat-carrying frame consists of side bars B'', having upwardly-projecting standards B' arranged in pairs at each end. Suitable braces, as *b''*, are provided for the standards B'. Tracks or ways *b*, which are adapted to travel upon the double-headed rockers D, are provided for the frame, thereby supporting the frame and its attached parts. The ways *b* are provided with guiding-flanges *b'*, corresponding to the flanges *a*. The flanges *b'* are also provided with inclined guiding-faces, so that the frame is guided upon the rockers without any tendency of the parts to bind.

The double-headed rockers D are rigidly connected together in pairs by the cross-pieces D', D'', and *d*. (See Fig. 3.) Links *e* and *e'* are pivotally secured to the ways *b* and to the side rails or ways of the platform. The links *e* are provided with longitudinal slots *e''*, which engage the laterally-projecting pin *s* on the inner faces of the rockers. The links *e'* are provided with longitudinal slots *e'''*, which engage the cross-pieces D'' of the rockers. These slotted links permit the free movement of the rockers and serve as stops and assist in retaining the rockers upon the platform and keeping them properly centered in relation to each other. The pairs of rockers are also connected together by the foot-rest frame C, which is supported by the cross rods or pieces *d* of the rockers. These cross-rods *d* are preferably located at a point below the center of the rockers. Thus arranged, motion may be imparted to the structure by the user occupying the seat pushing with the feet against the foot-rest C', which is carried by the frame C, a slight push of the foot being sufficient to cause the frame to glide to and fro upon the rockers.

The curvature of the rockers D is preferably somewhat modified, so that they act as brakes toward the end of the movement thereof, thereby relieving somewhat the strain upon the other parts and serving to slacken the speed of the swing toward the ends of its movement. By thus forming the rockers they always return to a central po-

sition when not in use. A very slight modification of the same, as is illustrated by dotted lines in Fig. 2, is found sufficient.

To secure the seat-carrying frame and platform together, so that the rockers will not be lifted from the platform in moving the structure, I arrange upwardly-curved bars E on the lower ends of the standards B' of the frame, so that the bars are reciprocated along-side of the side rails of the platform, as clearly appears from the drawings. Hooks E', which project outwardly over the side bars, are centrally arranged on the platform. Thus arranged the whole structure may be lifted by the seat-carrying frame without danger of disarranging the parts. These bars and hooks also serve as stops to limit the movement of the rockers. Owing to the slight upward lift of the seat-carrying frame by the rockers at the end of the movement thereof, the bars E are lifted upwardly against the hooks E', thereby stopping the movement in that direction. These parts can be readily made of comparatively heavy material, so that they are not injured, although the swing may be moving with considerable force. The stops are also in such position that the movement is checked with comparatively little strain on the parts. It is evident that were rockers employed in which the curvature was not modified as is illustrated it would not be desirable to curve the bar E, as in case it were curved the hooks E' would not properly secure the parts together for transportation. It is evident that the form of these parts might be greatly modified and still secure substantially the same results.

By the arrangement of the parts as I have illustrated and described I secure a swing which may be operated with comparatively slight exertion and one which is very compact in structure, and although comparatively light in weight it is rigid and durable and capable of carrying heavy loads without injury thereto.

I have illustrated and described my improved swing in detail in the form preferred by me on account of its simplicity and the economy of construction. I am, however, aware that it is capable of considerable structural variation without departing from my invention.

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

1. In a structure of the class described, the combination of a base or platform; ways on said platform having guiding-flanges thereon, said guiding-flanges having inclined guiding-faces; a frame; seats carried by said frame; irregularly-curved double-headed rockers arranged in pairs, adapted to travel on said ways; ways on said frame, having guiding-flanges thereon, said guiding-flanges having

inclined guiding-faces, adapted to travel on said rockers; upwardly-curved bars arranged at the sides of said platform, carried by said frame; and hooks on said platform projecting outwardly over said bars, for the purpose specified.

2. In a structure of the class described, the combination of a base or platform; ways on said platform having guiding-flanges thereon, said guiding-flanges having inclined guiding-faces; a frame; seats carried by said frame; double-headed rockers arranged in pairs adapted to travel on said ways; ways on said frame, having guiding-flanges thereon, said guiding-flanges having inclined guiding-faces adapted to travel on said rockers; bars arranged at the sides of said platform, carried by said frame; and hooks on said platform projecting outwardly over said bars, for the purpose specified.

3. In a structure of the class described, the combination of a base or platform; ways on said platform; a frame; seats carried by said frame; irregularly-curved double-headed rockers arranged in pairs, adapted to travel on said ways; ways on said frame adapted to travel on said rockers; upwardly-curved bars arranged at the sides of said platform, carried by said frame; and hooks on said platform projecting outwardly over said bars, for the purpose specified.

4. In a structure of the class described, the combination of a base or platform; ways on said platform; a frame; seats carried by said frame; double-headed rockers arranged in pairs adapted to travel on said ways; ways on said frame adapted to travel on said rockers; bars arranged at the sides of said platform carried by said frame; and hooks on said platform projecting outwardly over said bars, for the purpose specified.

5. In a structure of the class described, the combination of a base or platform; ways on said base; a seat-carrying frame; carrying-rockers therefor adapted to travel on said ways on said base; upwardly-curved bars carried by said seat-carrying frame, arranged at the sides of said platform; and retainers on said base, projecting over said bars, for the purpose specified.

6. In a structure of the class described, the combination of a base or platform; ways on said base; a seat-carrying frame; carrying-rockers therefor adapted to travel on said ways on said base; bars carried by said seat-carrying frame arranged at the sides of said platform; and retainers on said base projecting over said bars, for the purpose specified.

7. In a structure of the class described, the combination of a base or platform; a seat-carrying frame supported to reciprocate thereon; upwardly-curved bars carried by said seat-carrying frame; and retainers on said base or platform, projecting over said bars, for the purpose specified.

8. In a structure of the class described, the combination of a base or platform; a seat-carrying frame supported to reciprocate thereon; bars carried by said seat-carrying frame; and retainers on said base or platform,
5 projecting over said bars, for the purpose specified.

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

ALLEN P. BOYER.

Witnesses:

ADELAIDE S. ADAMS,
OTIS A. EARL.