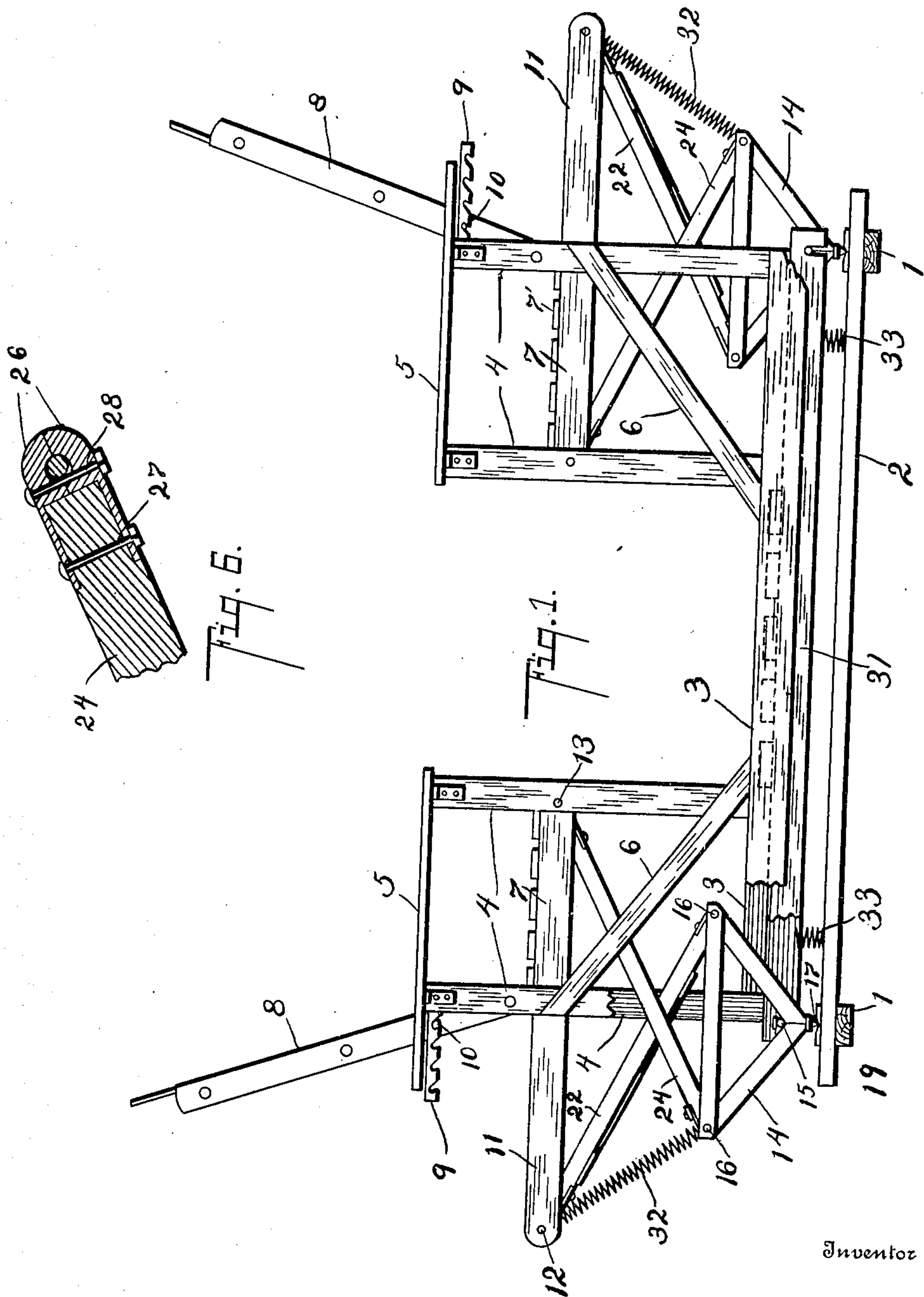


920,379.

R. O. NEVILLE.
SWING.
APPLICATION FILED APR. 24, 1907.

Patented May 4, 1909.
2 SHEETS—SHEET 1.



Witnesses
Lulu E. Gifford
Gertrude Tallman

Robert O. Neville
By Chappell & Earl

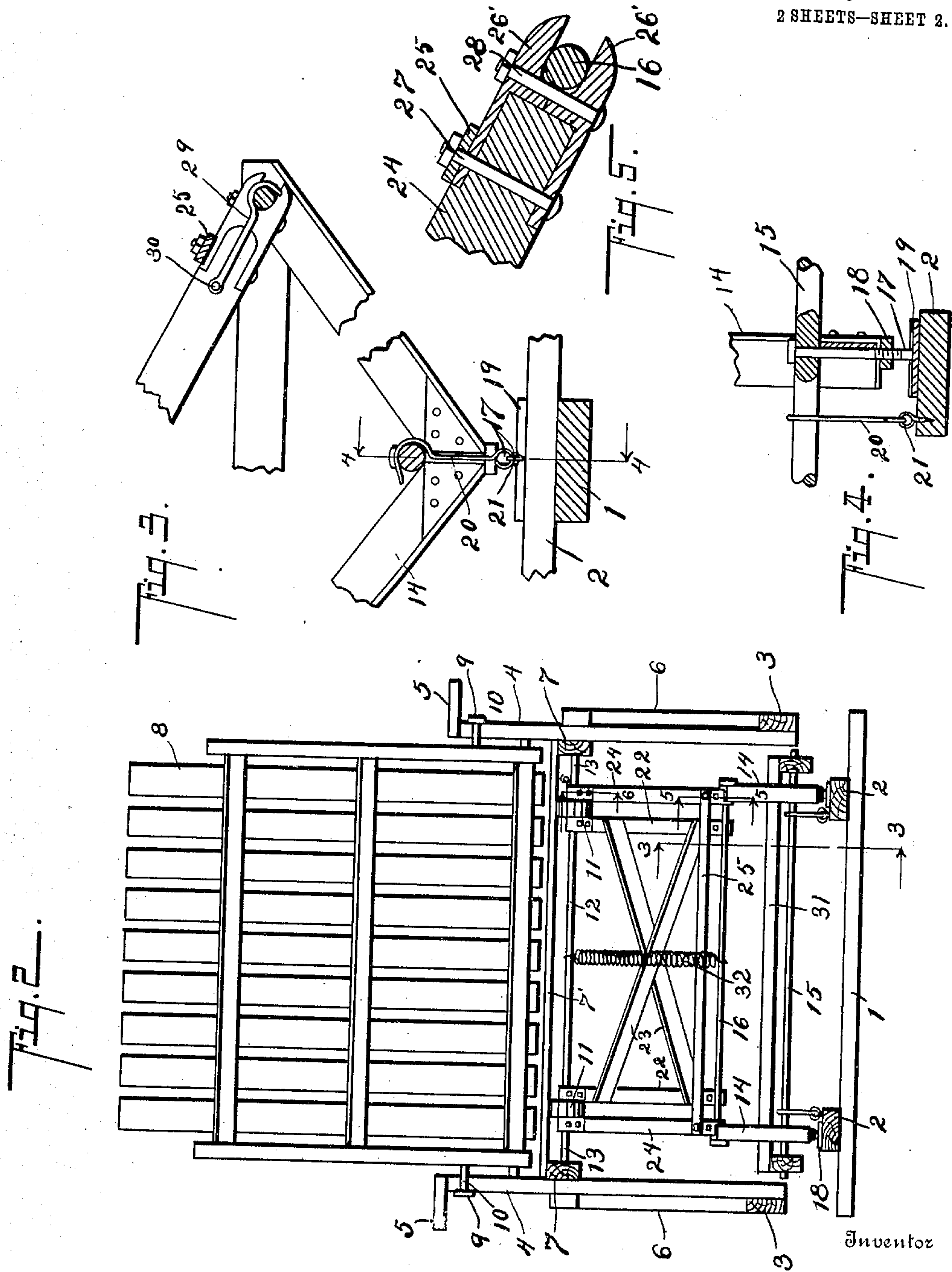
Inventor

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Attorneys

UNITED STATES PATENT OFFICE.

ROBERT O. NEVILLE, OF GOSHEN, INDIANA.

SWING.

No. 920,379.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed April 24, 1907. Serial No. 369,982.

To all whom it may concern:

Be it known that I, ROBERT O. NEVILLE, a citizen of the United States, residing at 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.

The main objects of this invention are, first, to provide an improved swing having a gliding reciprocating movement; second, to provide an improved swing which is easy to operate, and one which may be operated by the occupant, through the foot-rest; and third, to provide an improved swing which is strong and durable, and, at the same time, comparatively simple and economical in structure.

Further objects, and objects relating to details of construction, 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 drawing, forming a part of this specification, in which,

Figure 1 is a side elevation of a structure embodying the features of my invention, portions being broken away to better show the structural details and arrangement of the parts; Fig. 2 is an end elevation thereof; Fig. 3 is an enlarged detail section taken on a line corresponding to line 3—3 of Fig. 2, showing details of the supporting rockers and links; Fig. 4 is an enlarged detail taken on a line corresponding to line 4—4 of Fig. 3; Fig. 5 is an enlarged detail taken on a line corresponding to line 5—5 of Fig. 2, showing the structural details of the lower ends of the carrying links; and Fig. 6 is an enlarged detail taken on a line corresponding to line 6—6 of Fig. 2, showing structural details of the upper ends of the carrying links.

In the drawing, the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Referring to the drawing, I provide a base which is preferably made up of cross-pieces 1 and longitudinal side rails 2. The seats and

the carrying-frame therefor preferably consist of side rails 3, to which are rigidly secured the uprights 4. At the upper ends of these uprights are cross-pieces 5 and 7. The cross-pieces 5 form the arms or side rails of the seats. The uprights are preferably braced by the pieces 6, arranged in a diagonal manner, as clearly appears from the drawing. The slats 7' of the seats are supported on the cross-pieces 7. The backs 8 of the seats are preferably of the common slat construction and are supported by racks 9, which are adapted to engage suitable projecting pins 10 at the edges of the backs. The seat-carrying frames are also provided with outwardly-projecting arms 11 which are connected by cross-rods 12 at their outer ends. These rods form pivots for the carrying or supporting links, as will be pointed out. The pivot rods 13 are arranged at the forward ends of the side pieces 7 of the seats.

The seat-carrying frame is supported on the rocker members 14, and the links 22 and 24. The rocker members 14 are preferably triangular in form, as illustrated, and are provided with bearing pivots 17, which are arranged on suitable bearing plates 19 on the base. I preferably form these rockers of strips of angle iron, as illustrated. The rocker members are connected in pairs by means of the cross-rods 16 at the upper ends thereof and the cross-rods 15 as clearly appears from the drawing. The cross-rods are preferably adapted to serve as pivots. The rods 15 are preferably secured in position by arranging the pivots 17 of the rockers there-through and providing nuts 18 for their lower ends,—see Fig. 4,—the pivots being formed of bolts. The rocker members are detachably secured to the base preferably by means of the hooks 20, which are secured to the base by means of the screw-eyes 21. This retains the bearing pivots on the bearing plates and holds the structure together, so that it may be carried about without disarranging the parts.

The links 24 and 22 are arranged in crossed pairs, the lower ends of the links being preferably pivoted on the cross-rods 16 of the rocker members and their upper ends being pivoted on the rods 12 and 13 of the seat-carrying frame. The corresponding links of each pair are preferably rigidly connected, the link 22 being connected by the cross-pieces 23 and the links 24 by the cross-pieces 25. The links are preferably made of wood

for the sake of lightness, and are provided with metal clip members for securing them to the pivot rods, the clips serving as bearings. These clips are preferably made up of two parts, as 26, the parts being capped onto the ends of the links and secured by bolts, as 27. The parts are further secured together by means of the bolts 28, which are arranged therethrough in position to form bearings for the links. The bearing surface is thus made comparatively slight. The clips for the lower ends of the links are preferably modified, being open at the end, so that the structure may be readily disassembled, the links being held on the pivot rods by means of the hooks 29, which are pivoted to the links at 30 and engaged over the rods. This provides a convenient way of connecting the parts and enables the ready assembling or disassembling for the purpose of transportation or storage.

With the parts arranged as thus described, I secure a swing which has a gliding movement, and one which is very easy to operate, it being designed to be operated by the user through the foot-rest. The foot-rest, 31, is pivotally mounted on the cross-rod 15 of the rocker arms. It being mounted above the pivot point, it is obvious that its movement is in the same direction as the seat-carrying frame. The foot-rest might be omitted as the structure still would be quite satisfactory.

To assist in retaining the parts in a central position, I provide the return springs 32, which are preferably connected to the outer cross-rod 16 of the rocker arms and to the pivot rod 12 on the seat-carrying frame. I also preferably provide buffer springs, as 33, for the rocker members. These springs also assist in returning the parts to their central position, and prevent shock at the end of the movement of the swing, insuring an easy action.

My improved swing is comparatively simple and economical in structure, and, as stated, is easy to operate and very durable in use. I have illustrated and described the same in detail in the form preferred by me on account of structural simplicity and economy. I am, however, aware that it is capable of considerable variation in structural details without departing from my invention and I desire to be understood as claiming the same specifically, as illustrated, as well as broadly.

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

1. The combination with a base, of a seat-carrying frame; triangular-shaped rocker members arranged in pairs; cross-rods by which said pairs of rocker members are connected, arranged at the angles thereof, said cross-rods being adapted to serve as pivots; bearing pivots for said rocker members; bearings for said pivots arranged on said

base; pivot-rods on said seat-carrying frame; supporting links for said seat-carrying frame, mounted on said pivot-rods thereon and detachably mounted on the upper cross-rods of said rocker members, said links being arranged in crossed pairs, and the corresponding links of each pair being secured together; hooks pivotally secured to said base adapted to engage the lower cross-rod of said rocker members; and a foot-rest pivotally mounted on the lower cross-rods of said rocker members.

2. The combination with a base, of a seat-carrying frame; triangular-shaped rocker members arranged in pairs; cross-rods by which said pairs of rocker members are connected, arranged at the angles thereof, said cross-rods being adapted to serve as pivots; bearing pivots for said rocker members; bearings for said pivots arranged on said base; pivot-rods on said seat-carrying frame; supporting links for said seat-carrying frame, mounted on said pivot-rods thereon and mounted on the upper cross-rods of said rocker members, said links being arranged in crossed pairs, and the corresponding links of each pair being secured together; and a foot-rest pivotally mounted on the lower cross-rods of said rocker members.

3. The combination with a base, of a seat-carrying frame; rocker members arranged in rigidly-connected pairs; bearing pivots for said rocker members; bearings for said pivots arranged on said base; supporting links for said seat-carrying frame, pivotally connected thereto and to said rocker members, said links being arranged in crossed pairs, and the corresponding links of each pair being secured together; hooks pivotally secured to said base adapted to engage said rocker members; and a foot-rest pivotally connected to said rocker members above the bearing pivots thereof.

4. The combination with a base, of a seat-carrying frame; rocker members arranged in rigidly-connected pairs; bearing pivots for said rocker members; bearings for said pivots arranged on said base; supporting links for said seat-carrying frame, pivotally connected thereto and to said rocker members, said links being arranged in crossed pairs, and the corresponding links of each pair being secured together; and a foot-rest pivotally connected to said rocker members above the bearing pivots thereof.

5. The combination of a seat-carrying frame; rocker members arranged in pairs; pivots on said rocker members and seat-carrying frame; supporting links for said seat-carrying frame arranged in crossed pairs; clips by means of which said links are secured to said pivots, said clips each comprising two members capped upon the ends of said links; bolts arranged through said members and links for securing them thereon;

bolts arranged through said clip members to form bearings for said links; and pivoted hooks on said links adapted to engage said pivots for retaining the clips thereon.

5 6. The combination of a seat-carrying frame; rocker members arranged in pairs; pivots on said rocker members and seat-carrying frame; supporting links for said seat-carrying frame arranged in crossed
10 pairs; clips by means of which said links are secured to said pivots, said clips each comprising two members capped upon the ends

of said links; bolts arranged through said members and links for securing them thereon; and bolts arranged through said clip mem- 15 bers to form bearings for said links.

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

ROBERT O. NEVILLE. [L. s.]

Witnesses:

J. ALBERT SNAPP,
CHAS. F. CLINE.