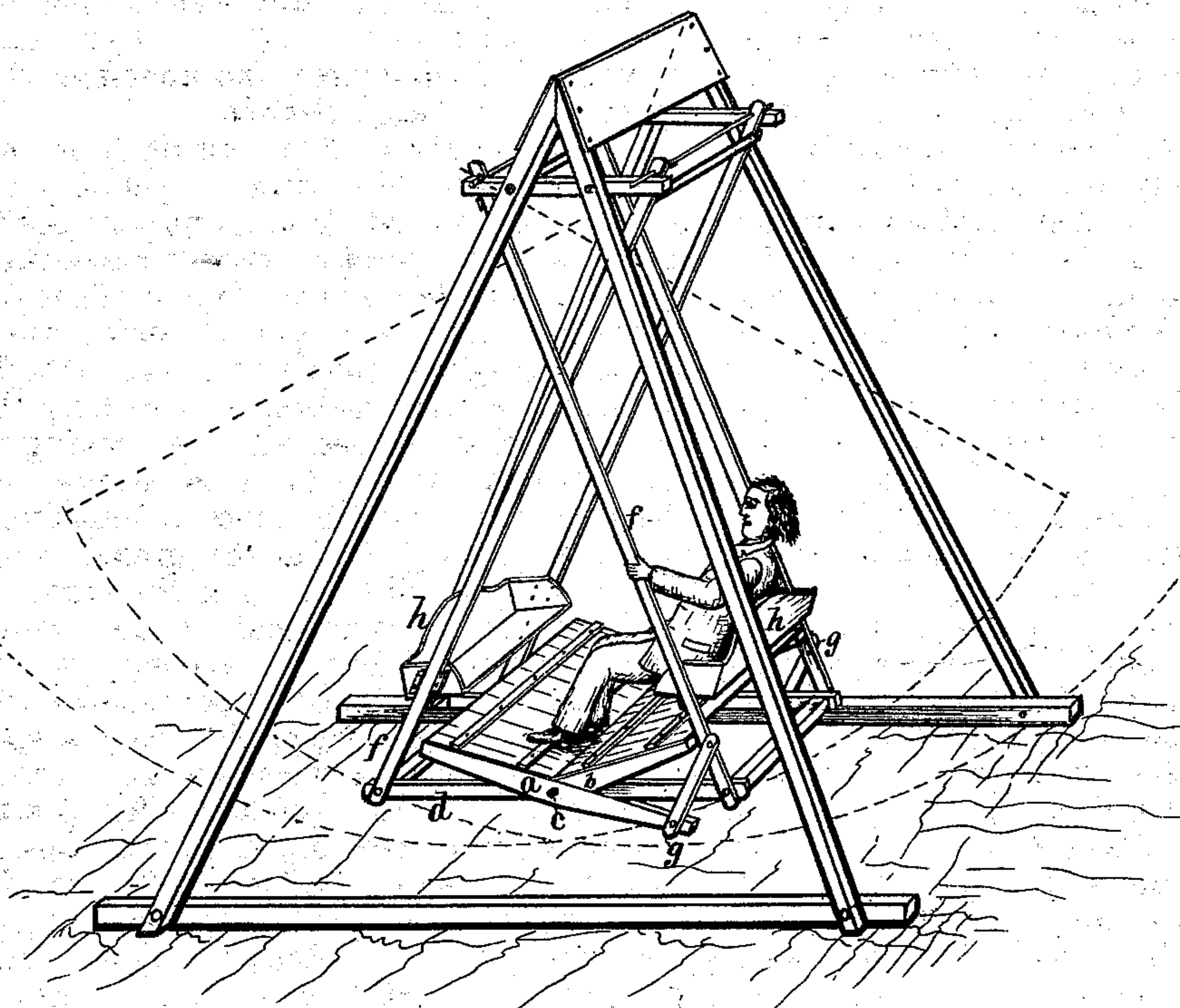


J. R. DAVIS.

Swings.

No. 154,322.

Patented Aug. 25, 1874.



Witnesses,
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UNITED STATES PATENT OFFICE.

JOHN R. DAVIS, OF BLOOMFIELD, IOWA.

IMPROVEMENT IN SWINGS.

Specification forming part of Letters Patent No. **154,322**, dated August 25, 1874; application filed June 5, 1874.

To all whom it may concern:

Be it known that I, JOHN R. DAVIS, of Bloomfield, in the county of Davis and State of Iowa, have invented an Improved Swing, of which the following is a specification:

The object of my invention is to provide a two-seated swing that can be operated by the occupants by simply pressing their feet upon the platform, in the manner required to impart motion to a rocking-chair. It consists of a platform pivoted upon a central fulcrum fixed in the base of a double-centered suspended and flexible frame, and a compound lever-connection between the oscillating platform and swinging frame, all as hereinafter fully set forth.

My drawing is a perspective view, illustrating the construction and operation of my invention.

a a represent the base-pieces of the rocking platform. *b b* are branch pieces, rigidly attached to the longitudinal centers of the pieces *a*, and angle upward to form a bent platform, or a platform with two planes angling upward in reverse directions from the center. The bent platform, or two planes of the platform, are floored in any suitable way, and cleats nailed on top of the floor for foot-holds. *c* represents a rod or bolts passed through the base-pieces *a*, and through the horizontal bars of the suspended frame, to form a fulcrum upon which to pivot the rocking or oscillating platform. *d d* are the side pieces of the suspended oblong swinging frame, which carries the rocking platform. *f f* are the suspended rods or bars. At their lower ends they are pivoted to the ends of the horizontal bars *d* by means of suitable bolts. They cross each other at or above their longitudinal centers, and are rigidly connected in pairs by suitable stays, and then hung, by means of rods or bolts for axles, upon suitable bearings, supported in a frame, or by a ceiling, roof, porch, or tree. *g g* are short bars or levers, standing in a vertical position, and pivoted at their ends to form connecting-links between the free lever ends of the pieces *a* with the suspension-bars *f*, and to form a

compound leverage between the pivoted rocking platform and the suspended swinging frame. *h h* represent seats resting upon stays spanned between the bars *f*. They may be movable and adjustable, and upholstered and finished in any style desired.

In the operation of my swing it is necessary to change the center of gravity, in the swing and its load, from its normal position. To do so the operator, when seated, presses his feet upon the ends of the platform opposite his seat in the same manner that he would press them upon a floor, and straighten his legs to impart motion to a rocking-chair. The force thus applied tilts the rocking platform forward, presses down the levers *a*, and, through them and their links *g*, transfers the center of gravity, so that the greater portion of the weight will bear upon the bars *f* connected with the right end of the swinging frame. This will have a tendency to bring this pair of bars *f* into a perpendicular position, and, consequently, the whole suspended apparatus will move and swing to the left. A relaxation of the operator's foot-pressure will allow all to resume its normal position, and the momentum gained will carry it in the opposite direction. By repeating the pressure upon the platform every time it swings from right to left, or vice versa, the swinging action will be continued, and the momentum will accumulate, so that very little effort will be required to keep the swing in operation.

When persons are seated on opposite sides their feet must be pressed in opposite directions, and at alternate intervals. The same results will be obtained by standing astride on the platform, and alternately throwing the weight of the body from one foot to the other.

I am aware that swings have been operated by means of treadles; but I claim that my manner of forming and mounting a platform to perform the functions of a treadle to move a swing is new.

I claim as my invention—

1. The bent platform *a b*, having two planes, and the levers *a*, extending from one of the

planes, when pivoted in a swinging frame, and arranged to operate substantially as described, and for the purposes specified.

2. The flexible swinging frame *d d*, when suspended by its bars *f f* crossing each other to hang upon two axles, to swing from two centers and describe two arcs, said parts being combined and arranged substantially as shown and described, and for the purposes specified.

3. In a swing, the combination of the bent rocking platform *a b*, the flexible swinging frame *d d f f*, and pivoted levers *g g*, constructed and arranged substantially as described, and for the purposes specified.

JOHN ROLPH DAVIS.

Witnesses:

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