

No. 683,539.

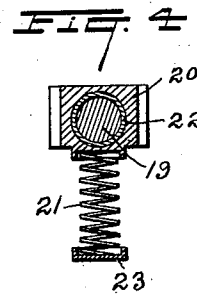
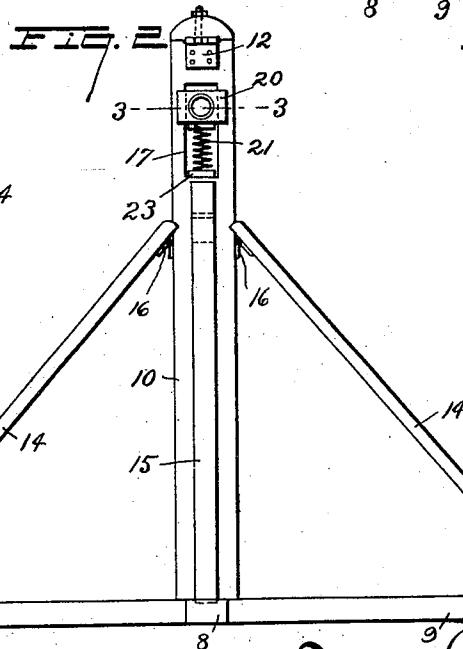
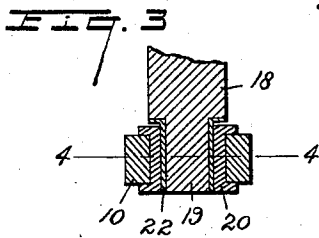
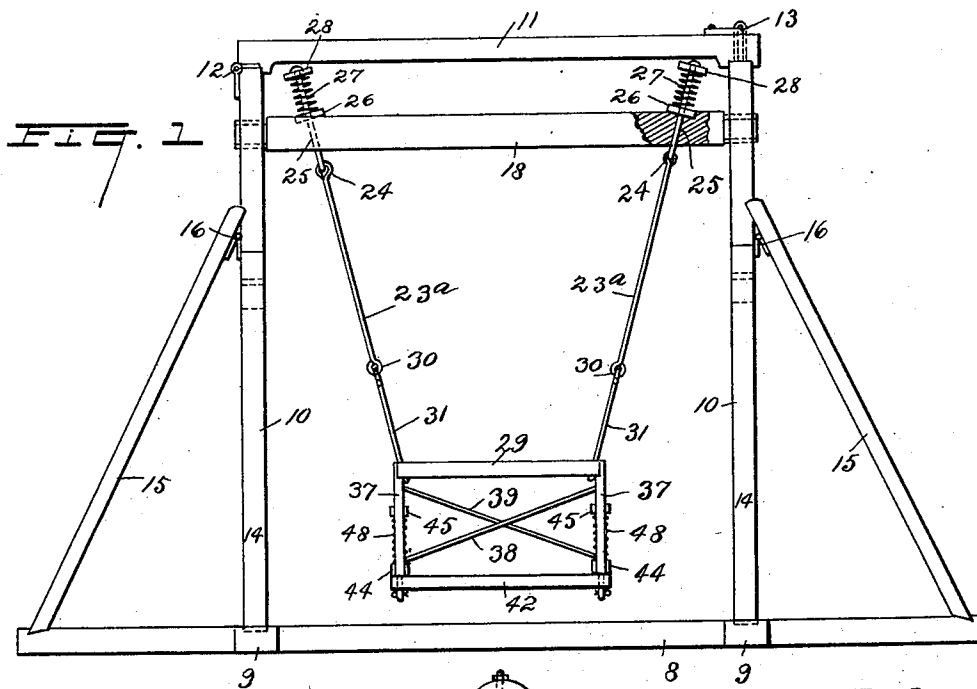
Patented Oct. 1, 1901.

J. P. WILLIAMS.
SWING.

(Application filed Sept. 21, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
C. Elwood Bell
F. A. Stenmark

INVENTOR
James P. Williams
BY
Edgar Tatch
ATTORNEYS

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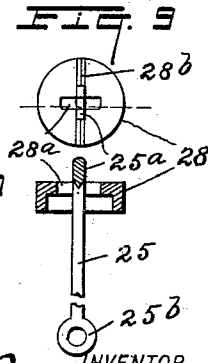
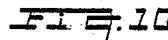
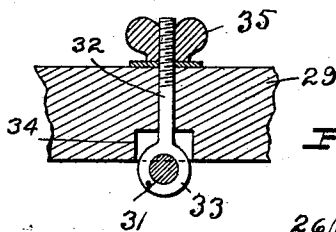
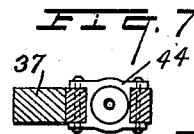
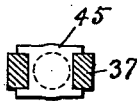
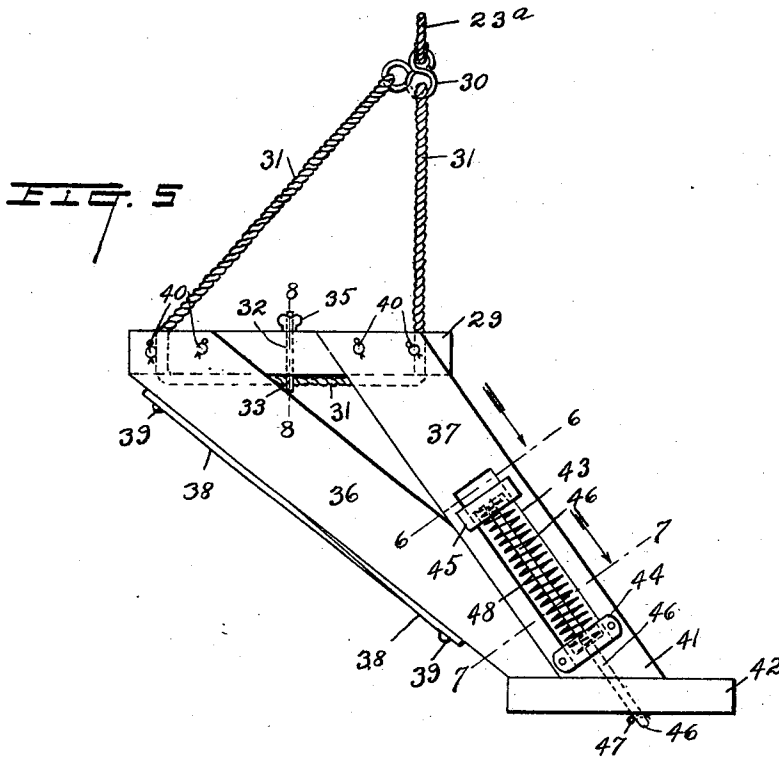
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(Application filed Sept. 21, 1900.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES
Edw. Bell
F. A. Stewart

INVENTOR
James P. Williams
BY *Edw. T. T. T.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES PARRY WILLIAMS, OF NEWCASTLE, PENNSYLVANIA.

SWING.

SPECIFICATION forming part of Letters Patent No: 683,539, dated October 1, 1901.

Application filed September 21, 1900. Serial No. 30,658. (No model.)

To all whom it may concern:

Be it known that I, JAMES PARRY WILLIAMS, a citizen of the United States, residing at Newcastle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Swings, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to swings; and the object thereof is to provide an improved device of this class which is simple in construction and operation and which comprises a frame which may be put up wherever desired and which may be easily disconnected and folded together for shipment, a further object being to provide an improved device for supporting the swing proper and also an improved seat and foot support; and with these and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvements are designated by the same reference characters in each of the views, and in which—

Figure 1 is a side view of a swing constructed according to my invention, part of the construction being shown in section; Fig. 2, an end view; Fig. 3, a section on the line 3 3 of Fig. 2; Fig. 4, a section on the line 4 4 of Fig. 3; Fig. 5, a side view, on an enlarged scale, of the seat and parts connected therewith and showing the means for supporting the same; Fig. 6, a partial section on the line 6 6 of Fig. 5; Fig. 7, a partial section on the line 7 7 of Fig. 5; Fig. 8, a section on the line 8 8 of Fig. 5, and Figs. 9 and 10 represent details of the construction.

In the practice of my invention I provide a base-frame consisting of a bar 8 and bars 9, the latter being arranged parallel and in the line of the movement of the swing and the former being arranged centrally of and transversely of the latter, and with this base-frame is connected an upright frame comprising side standards 10, connected at the top by a cross-bar 11, hinged at one end to

one of the standards 10 and adapted to be detachably connected at the opposite end with the other standard 10, as shown at 13. The detachable connection of the bar 11 at 13 may be made in any desired manner, and the upright standards 10 are provided with braces 14 and also with lateral braces 15, said braces 14 and 15 being hinged at their upper ends to the standards 10, as shown at 16, and the lower ends thereof being provided with bearings in the base-frame.

The standards 10 are provided near the tops thereof with vertical slots or openings 17, and I also provide a horizontal swing-supporting bar 18, the ends of which are provided with trunnions 19 and passed through box-bearings 20, mounted in the slots or openings 17 and resting upon strong spiral springs 21. The box-bearings 20 are preferably made of suitable metal, and the trunnions 19 of the bar 18 are provided with metal casings 22, and the lower ends of the springs 21 are set in metal receivers 23 at the bottom of the slots or openings 17 in the standards 10. As thus constructed it will be seen that the bar 18 is free to turn in its bearings 20, and the said bearings 20 are yieldingly supported by the springs 21.

The swing proper is supported by rods, cords, or other suitable devices 23^a, the upper ends of which are loosely connected at 24 with rods 25, which pass upwardly through the bar 18 and through the bearing-plates 26, mounted on the upper side of said bar, and said rods 25 are provided above the bearing-plates 26 each with a spiral spring 27, held in place by a cap or nut 28.

One of the rods 25, the bearing-plate 26, and the cap-plate 28 are clearly shown in Figs. 9 and 10, Fig. 10 being a plan view of one of the bearing-plates 26, and the cap-plate 28 being shown in plan and in section in Fig. 9. The bearing-plate 26 is provided with an upwardly-directed flange or rim and a transverse slot 26^a, and the cap 28 is provided with a downwardly-directed flange or rim and with a transverse slot 28^a and in the top thereof with a transverse groove 28^b, which crosses the slot 28^a at right angles, and the rod 25 is provided with a transverse head 25^a, which in practice is passed upwardly through the slots 26^a and 28^a in the plate 26 and the cap 28,

and the transverse head 25^a of the rod 25 rests in the groove 28^b in the cap 28.

In the drawings forming part of this specification the rods or supports 23^a and 25 are arranged at a diverging angle; but said rods may be arranged vertically, if desired. The rods 25 are provided at their lower ends with eyes 25^b, and the holes in the bar 18, through which these rods pass, may be made large enough to permit of the eyes 25^b passing there-through.

The swing proper consists of a seat 29, and the rods or supports 23^a are provided at their lower ends with attaching devices 30, each of which is provided with three eyes, and in practice a rope or other flexible support 31 is connected with one of said eyes of the attaching devices 30 and passed downwardly through the front portion of the seat and backwardly transversely of the bottom thereof, then upwardly through the rear portion of the seat and connected with another eye of the attaching device 30, as clearly shown in Fig. 5.

Passing through the seat 29, at one or both ends thereof, is a bolt 32, provided at its lower end with an eye 33, through which the rope, cord, or other device 31 is passed either at one or both ends of the seat, and the seat is provided at one or both ends and in the lower side thereof with a notch or recess 34, adapted to receive the eye 33 of the bolt 32, and the bolt 32 is provided at its upper end with a thumb-nut 35, and by means of this construction the seat 29 may be adjusted to any desired position or tilted forwardly or backwardly and may be held in such adjusted position by tightening the nut or nuts 35.

Connected with the opposite ends of the seat 29 are two forwardly and downwardly directed supports 36 and 37, the supports 36 being arranged rearwardly of the supports 37, and the backward or rearward supports 36 at the opposite ends of the seat are connected by transverse and diagonal braces 38, the ends of which are preferably detachably connected at 39 with said backward or rearward supports 36.

The supports 36 and 37 at each end of the seat are detachably connected with the seat at 40 in any desired manner, preferably by bolts and key-pins, and the lower ends of the supports 37 rest upon the lower ends of the supports 36 at each end of the seat, and said lower ends of each of the supports 36 and 37 at each end of the seat are cut off diagonally substantially parallel with the seat, as shown at 41, and a footboard 42 is also provided, which normally rests against the lower ends of the supports 36 and 37.

The supports 37 at each end of the seat are provided with a longitudinal slot 43, and at the lower end of each of these slots is secured a bearing 44, and a movable bearing 45 is also placed in each of said slots, and passing through these bearings 44 and 45 is a rod 46, which also passes downwardly through the

foot-plate 42, and passed through the lower ends of each of said rods is a pin 47, and between the movable supports or bearings 45 and the stationary bearings 44 at each end of the seat or in each of the supports 37 is placed a spiral spring 48. By means of this construction it will be seen that the rods or supports 23^a and the rods 25, which form the direct suspending devices for the swing proper, are yieldingly supported, as is also the cross-bar 18, and the plate 42 is also yieldingly supported, any pressure thereon causing the rods 46 to move downwardly against the operation of the springs 48, and when the pressure from the footboard is removed it is withdrawn by the springs 48 to the position shown in Fig. 5. This movement of the footboard 42 facilitates to a large extent the operation of the swing, as when the swing is once in motion pressure applied to the footboard in the same manner as it is usually applied in the operation of "pumping" will cause the swing to move in the same manner as when the swing is "pumped" by a person standing on the seat. It will also be apparent that the spring-supports of the bar 18, operating in connection with the spring connections of the supports 23^a, will give my improved swing an ease of movement and action not common to most swings as now constructed, and many changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. A swing, comprising a frame, a transverse bar mounted in the top thereof, and provided at its opposite ends with trunnions and spring-supported bearings, spring-supported rods or attaching devices passing through said bar, other supports connected with said rods or attaching devices, and a seat connected with said last-named supports, substantially as shown and described.

2. A swing, comprising a frame, a transverse bar mounted in the top thereof, and provided at its opposite ends with trunnions and spring-supported bearings, spring-supported rods or attaching devices passing through said bar, other supports connected with said rods or attaching devices, and a seat connected with said last-named supports, said seat being provided at its opposite ends with downwardly and forwardly directed supports, and a spring-supported footboard at the lower ends of said supports, substantially as shown and described.

3. A swing, comprising a frame consisting of a base-frame, side standards, a top bar hinged to one of said standards and detachably connected with the other, braces for said side standards, a bar arranged transversely of said side standards near the top thereof, and the ends of which are provided with trunnions, spring-supported bearings for said trun-

nions located in said side standards, rods or attaching devices passing upwardly through said bar, and provided with supporting-springs located above said bar, supporting devices connected with the lower ends of said rods or attaching devices, and a seat connected with the lower ends of said supporting devices, substantially as shown and described.

4. A swing, comprising a frame consisting of a base-frame, side standards, a top bar hinged to one of said standards and detachably connected with the other, braces for said side standards, a bar arranged transversely of said side standards near the top thereof, and the ends of which are provided with trunnions, spring-supported bearings for said trunnions located in said side standards, rods or attaching devices passing upwardly through said bar, and provided with supporting-springs located above said bar, supporting devices connected with the lower ends of said rods or attaching devices, and a seat connected with the lower ends of said supporting devices, said seat being provided at its opposite ends with downwardly and forwardly directed supports, and a spring-supported footboard connected with said supports, substantially as shown and described.

5. A swing, comprising a frame consisting of a base-frame, side standards, a top bar hinged to one of said standards and detachably connected with the other, braces for said side standards, a bar arranged transversely of said side standards near the top thereof, and the ends of which are provided with trunnions, spring-supported bearings for said trunnions located in said side standards, rods or attaching devices passing upwardly through said bar, and provided with supporting-springs located above said bar, supporting devices connected with the lower ends of said rods or attaching devices, and a seat connected with the lower ends of said supporting devices, said seat being provided at its opposite ends with downwardly and forwardly directed supports, and a spring-supported

footboard connected with said supports, said supports being also provided at the back thereof with detachable cross-braces, substantially as shown and described.

6. In a swing, a seat provided with recesses in the bottom thereof supporting ropes or other flexible devices passing through the opposite ends thereof, and transversely of the bottom thereof, and devices for preventing said ropes from slipping, consisting of bolts passing through the ends of the seat and provided with eyes through which the ropes are passed, and means for drawing said eyes into said recesses, substantially as shown and described.

7. A swing, comprising an upright frame, suspending devices secured therein, a seat connected with the lower ends of said suspending devices, supports detachably connected with the opposite ends of said seat and extending downwardly and forwardly, brace-rods detachably connected with the back of said supports, and a spring-supported footboard connected with the lower ends of said supports, substantially as shown and described.

8. A swing, the seat of which is provided with forwardly and downwardly directed supports, spring-supported rods connected with said supports, and a footboard connected with said rods below said supports, substantially as shown and described.

9. A swing, the seat of which is provided with forwardly and downwardly directed supports which are detachably connected therewith, and spring-operated devices connected with said supports and extending below the same, and a footboard connected with said devices, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses.

JAMES PARRY WILLIAMS.

Witnesses:

ROBERT K. AIKEN,
GEORGE T. WEINGARTNER.