M. THOMAS.

SWING.

APPLICATION FILED NOV. 3, 1913.

1,140,211.

Patented May 18, 1915.

2 SHEETS—SHEET 1.

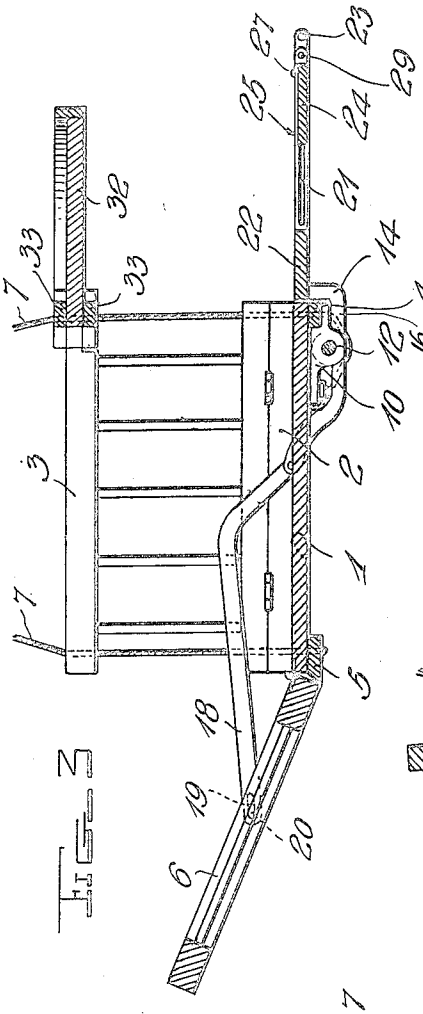


FIG. 3

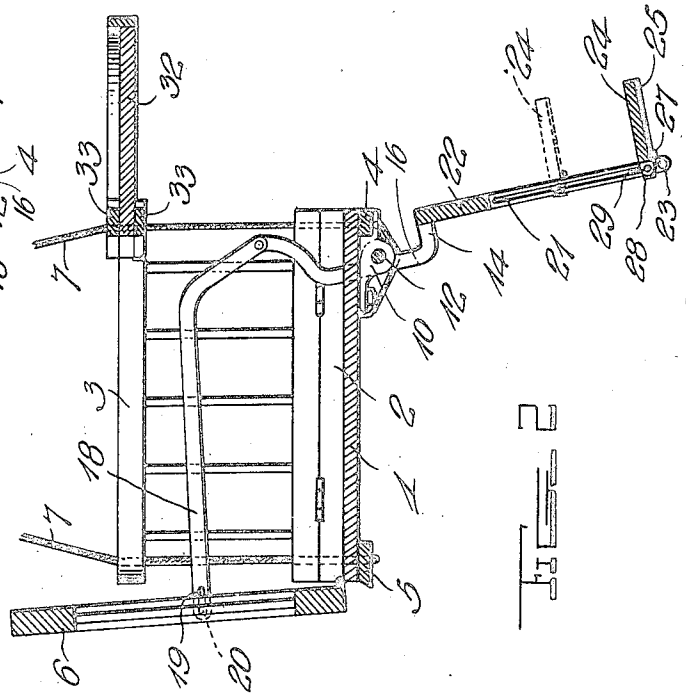


FIG. 2

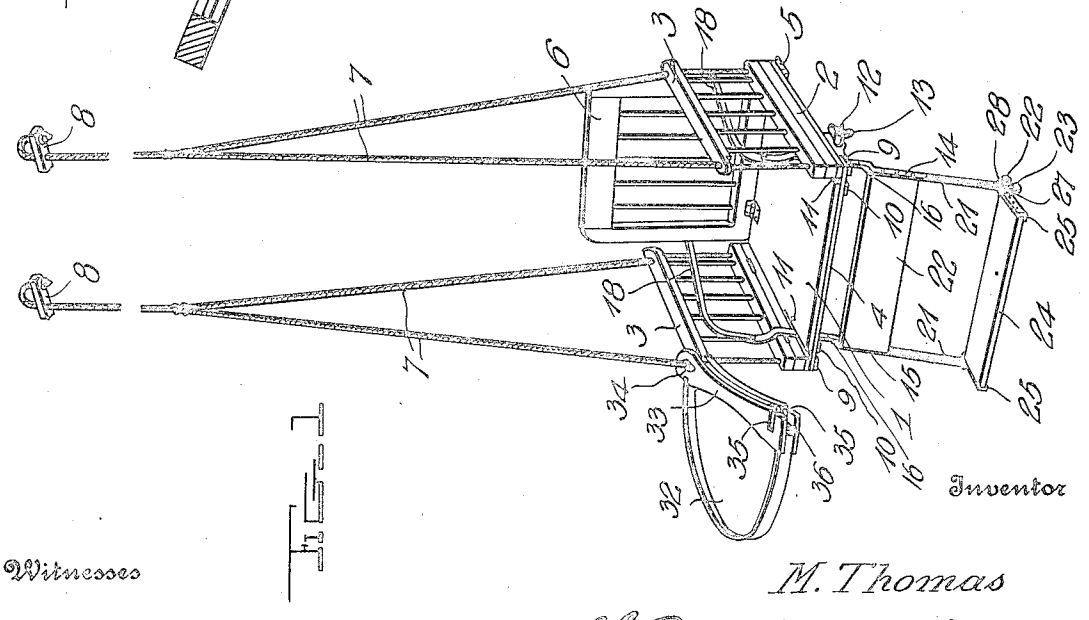


FIG. 1

Witnesses

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2 SHEETS—SHEET 2.

FIG. 4

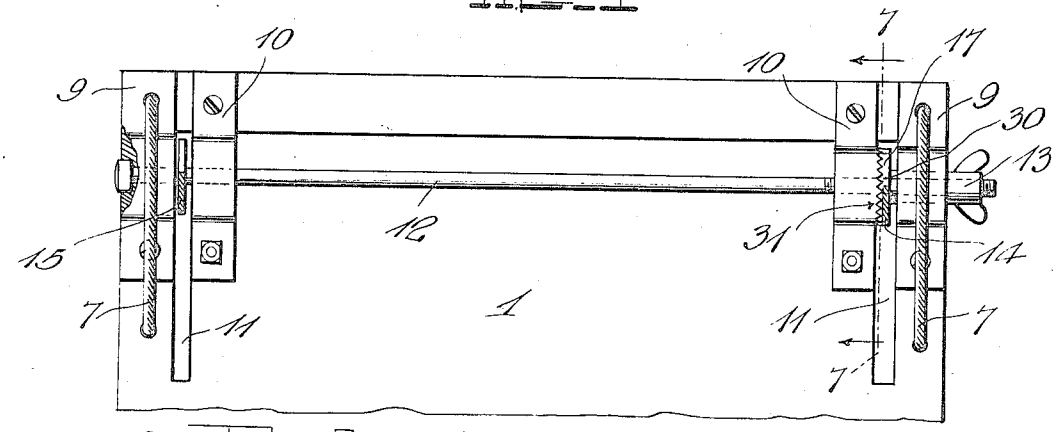


FIG. 5

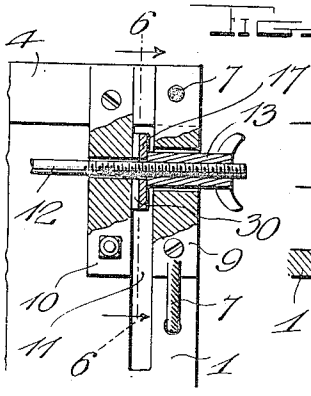


FIG. 6

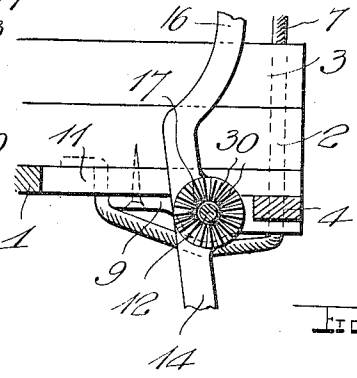


FIG. 7

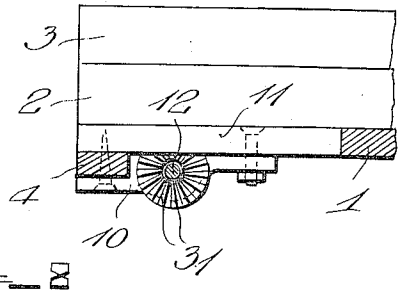
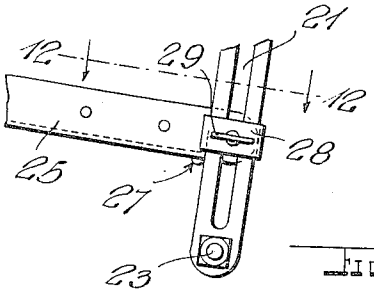


FIG. 8

FIG. 11



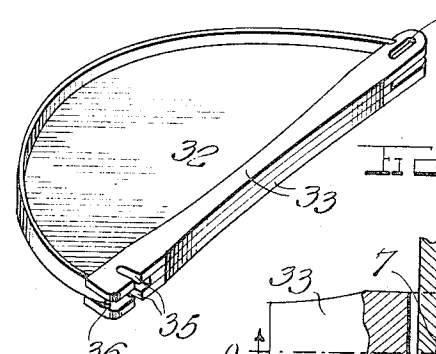


FIG. 10

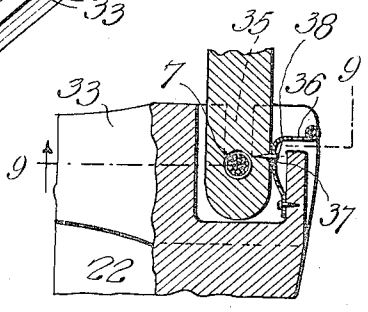


FIG. 9

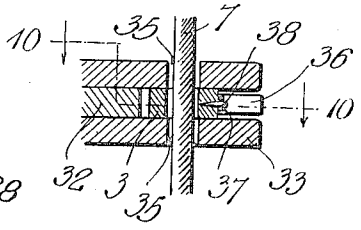
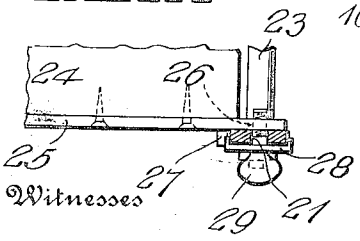


FIG. 12



Witnesses

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SWING.

1,140,211. Specification of Letters Patent. Patented May 18, 1915.

Application filed November 3, 1913. Serial No. 798,953.

To all whom it may concern:

Be it known that I, MICHAEL THOMAS, a citizen of the United States, residing at Blairsville, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Swings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in swings.

One object of the invention is to provide a swing having an improved construction and arrangement of back and foot rest and means for supporting these parts whereby they may be adjusted and securely fastened in different positions thus transforming the device into a swinging chair or into a swinging couch.

Another object is to provide a swing of this character which will be simple, strong, durable and inexpensive in construction, reliable in use and which may be suspended from any suitable overhead support and when not in use may be folded in small compact form.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 is a perspective view of my improved swing arranged in the form of a chair; Fig. 2 is a central vertical longitudinal section thereof; Fig. 3 is a view similar to Fig. 2 showing the swing arranged as a couch; Fig. 4 is a bottom plan view partly in section of the front end of the seat illustrating the arrangement of the mechanism for holding the back and foot rests of the swing in their adjusted positions; Fig. 5 is a bottom plan view of one of the front corners of the seat and the mechanism for holding the back and foot rests in adjusted positions, parts being broken away and in section; Fig. 6 is a vertical section taken on the line 6—6 of Fig. 5; Fig. 7 is a similar view taken on the line 7—7 of Fig. 4 and looking in the opposite direction from Fig. 6; Fig. 8 is a detail perspective view of the tray; Fig. 9 is a detail vertical section of one end of the tray taken on the line 9—9 of Fig. 10; Fig. 10 is a horizontal sectional view taken on the line 10—10 of Fig. 9 and illustrating the mechanism for fastening this end of the tray when in an operative position; Fig. 11 is a detail view of the portion of the lower end of one of the foot rest supporting bars, and a portion of the foot rest illustrating the manner in which the latter is pivotally and adjustably secured to the foot rest bars; Fig. 12 is a detail horizontal sectional view of the parts shown in Fig. 11 and taken on the line 12—12 of this figure.

Our improved swing comprises a bottom 1 which may be of any suitable construction and is here shown as a solid bottom and as having secured to its side edges upwardly projecting hinge strips 2 to the upper edges of which are hinged inwardly folding sides 3. To the under side of the bottom near the front and rear edges thereof are secured cross cleats 4 and 5, said rear cleat 5 projecting a slight distance beyond the rear edge of the bottom and having its projecting portion beveled on its upper edge as shown. Hinged to the upper side of the rear edge of the bottom is a back 6 which is adapted to be swung downwardly and rearwardly to any desired inclination and which is limited in its downward swinging movement by the beveled projecting portion of the cleat 5 as clearly shown in Fig. 3 of the drawings.

The swing is provided with flexible suspending elements which are preferably in the form of ropes 7, the lower ends of which are branched and said branched ends are engaged with alined apertures formed in the upper and lower bars of the sides 3 and through apertures in the hinge strips 2, bottom 1 and front and rear cleats 4 and 5 of the bottom and have their lower extremities secured in any suitable manner to the bottom of the swing. The upper ends of the suspending ropes 7 preferably have a sliding engagement with the apertured ends of short blocks 8 which form loops in the ends of the ropes whereby they may be securely fastened to any suitable overhead support.

Secured to the lower side of the bottom 1 and to the front cross cleat 4 are outer apertured lugs 9 and inner apertured lugs 10. In the bottom 1 between each pair of lugs are formed slots 11 and engaged with the lugs and extending across beneath the bottom of

the swing is a foot rest supporting rod or bolt 12, one end of which is headed and provided with a squared portion adapted to fit in the squared aperture in the adjacent outer lug 9 whereby the bolt or rod is held against turning. The opposite end of the bolt is threaded and has screwed thereon an elongated clamping nut 13 the purpose of which will be hereinafter described. Pivotally engaged with the rod or bolt 12 are foot rest supporting bars 14 and 15 said bars having substantially U-shaped members 16 at their inner ends and on the cross bars of which are arranged semi-circular enlargements 17 provided with bolt holes to receive the rod or bolt 12. The inner ends of the bars 14 and 15 which comprise the outer legs of the U-shaped members 16 are laterally offset curved slightly longitudinally and have a pivotal connection with the downwardly turned forward ends of arched back supporting links 18 the rear ends of which have formed therein short slots 19 to receive screws 20 whereby said ends of the links 18 are pivotally connected with the side edges of the back as shown in Figs. 2 and 3 of the drawings. The forward or outer ends of the foot rest bars 14 and 15 are provided with longitudinally extending slots 21. Rigidly secured between the bars beyond the U-shaped members 16 thereof is an inner foot rest board or plate 22. The outer ends of the bars 14 and 15 are connected and held in spaced relation by a cross rod 23 and slidably engaged with the slotted portions of the bars 14 and 15 is an outer foot rest board or plate 24. The board 24 has secured to its ends flanged metal cleats 25 the inner ends of which extend beyond the inner edge of the board and have formed therein threaded apertures 26. Formed on the lower edges of the cleats near their inner ends and projecting outwardly are short stop lugs 27 which are provided for a purpose hereinafter described. Slidably engaged with the outer sides of the slotted lower portions of the bars 14 and 15 are flanged clamping plates 28 having therein centrally disposed apertures with which are engaged clamping screws 29. The screws 29 have a threaded engagement with the apertures 26 in the inwardly extended ends of the cleats 25 and when screwed up in said apertures, securely clamp the bars 14 and 15 between the plates 28 and the extended ends of the cleats 25 thereby supporting the board 24 at any desired position between the slotted outer portions of the bars 14 and 15. By thus pivotally connecting the board or plate 24 to the bars 14 and 15 it will be seen that said plate may be swung outwardly and downwardly at substantially right angles to said bars and that said board may also be swung upwardly and inwardly in line with the bars 14 and 15, thus co-acting with the inner rigid bar 22 of the foot rest to form an extension for the bottom of the swing when the foot rest is swung upwardly as clearly shown in Fig. 2 of the drawings. When the outer board 24 of the foot rest is swung outwardly at right angles to the bars 14 and 15 the stop lugs 27 on the cleats 25 will engage the outer edges of said bars below the pivotal connection of the cleats 25 therewith and when the board is swung upwardly in line with said bars, said lugs will engage the latter above the pivotal connection of the cleats as will be readily understood. The lugs 27 when thus engaged with the bars 14 and 15 will securely hold the outer foot rest member in either of its positions.

On the inner side of the enlargement 17 in the U-shaped member 16 of the foot rest supporting bar 14 are formed a series of radially disposed corrugations or ribs 30 which are adapted to co-act with a similar series of radial corrugations or ribs 31 formed on the outer side of the adjacent inner lug 10 mounted on the bottom of the seat 1. The corrugated or ribbed portion of the supporting bar 14 is held in operative engagement with the corrugated surface of the lug 10 by the nut 13 which is screwed inwardly on the adjacent threaded end of the bolt 12 and through the aperture in the adjacent outer lug 9 with which the inner portion of the nut is loosely engaged. By pivotally connecting the offset inner portions of the foot rest supporting bars 14 and 15 to the bottom of the swing by the bolt or rod 12 as herein shown and described it will be seen that the foot rest may be swung upwardly and downwardly and adjusted to the desired position or angle with respect to the seat of the swing and that by means of the back supporting links 18 and their pivotal connection with the inner ends of the bars 14 and 15 the back will be simultaneously lowered and raised. In other words, when the foot rest is swung upwardly the back will be swung outwardly and downwardly, thus bringing the foot rest and back more or less in line or on a level with the bottom and when the foot rest is swung downwardly the back will be swung upwardly thus arranging the swing in the form of a chair or seat. When the foot rest and back have been adjusted to the desired positions the nut 13 is screwed inwardly on the rod or bolt 12, thus forcing the corrugated portion of the adjacent foot rest bar 14 into engagement with the corrugated surface of the lug 10 which will securely fasten the foot rest bar and the foot rest and back in their adjusted position.

In connection with the swing we also preferably provide a combined guard and tray 32 on the inner edge of which are secured upper and lower cleats 33. The opposite inner corners of the tray are notched out, thus forming between the ends of the cleats 33

recesses which are adapted to receive the reduced forward ends of the upper bars of the sides of the swing whereby the tray is supported in position in front of the occupant of the swing. One end of the tray is loosely connected to one of the suspending ropes of the swing and in making this connection the end of the upper cleat has formed therein a slot 34 which receives the suspending rope while the adjacent end of the lower cleat has a notch which is engaged with the rope when this end of the tray is in engagement with the adjacent side of the swing and which will permit this end of the tray to be disengaged from the upper cross bar of the side of the swing and the tray to drop or swing down to an inoperative position. The opposite end of the tray has a detachable engagement with the upper cross bar of the opposite side of the swing and with the rope which passes through this end of said upper cross bar and to permit this end of the tray to be thus engaged with said upper cross bar. The upper and lower cleats 33 have formed therein alined notches 35 which engage the rope above and below the end of the cross bar as shown. When this end of the tray is engaged with the upper cross bar of the side the reduced end of the bar enters the notch in the end of the tray between the ends of the cleats and the tray is held in this position by a spring catch 36 having an aperture 37 which is adapted to spring into engagement with a locking pin 38 arranged in the outer side of this end of the upper cross bar and thereby securely fasten the tray in an operative position. When it is desired to remove the tray it is first necessary to retract the spring catch 36 and to thus disengage the same from the pin 38 whereupon the tray may be swung outwardly on its pivotal connection with the opposite side bar of the swing as hereinbefore described.

By hingedly connecting the sides, back and foot rest to the bottom of the swing as herein shown and described it will be seen that these parts may be readily folded into engagement with the bottom and the swing thus reduced to a small compact form for storing or shipping.

It is to be observed, however, that when the device is extended for use as seen in Figs. 1 and 2, the projecting upper ends of the bars 14 and 15 abut the inner sides of the arm sections 3, thus preventing them from being accidently forced inwardly upon the child occupying the swing. It is likewise to be noted, that the arched links 18 are so disposed in respect to the arm sections 3 as to prevent such inward movement of said sections, when the back 6 is swung downwardly to the position seen in Fig. 3. In view of the added safety gained by disposing the upper ends of the bars 14 and 15 in contact with the inner sides of the arm sections and by arching the links 18, it will be evident that these features are very salient elements of the invention.

Having thus described our invention, what we claim is:

A foldable swing comprising a supported rectangular seat having a pair of cleats rising from its side edges, and a pair of longitudinally extending slots at its front corners, a pair of inwardly foldable arm sections hinged at their lower edges to said cleats, a foot rest below the front edge of the seat, a pair of substantially upright pivotally supported bars rising from said foot rest through the aforesaid slots and abutting the inner sides of said arm sections to normally prevent inward movement thereof, a rearwardly foldable back hinged to the rear edge of the seat, and a pair of arched links disposed adjacent the inner side of said arm sections and pivoted at their front ends to the upper ends of the aforesaid bars, and at their rear ends to opposite sides of the back.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MICHAEL THOMAS.

Witnesses:
MARY AGNES MOORE,
NORMAN F. MOORE.