July 1, 1930. W. O. HARTMAN 1,768,905

SWING

Filed June 13, 1929

Fig. 1.

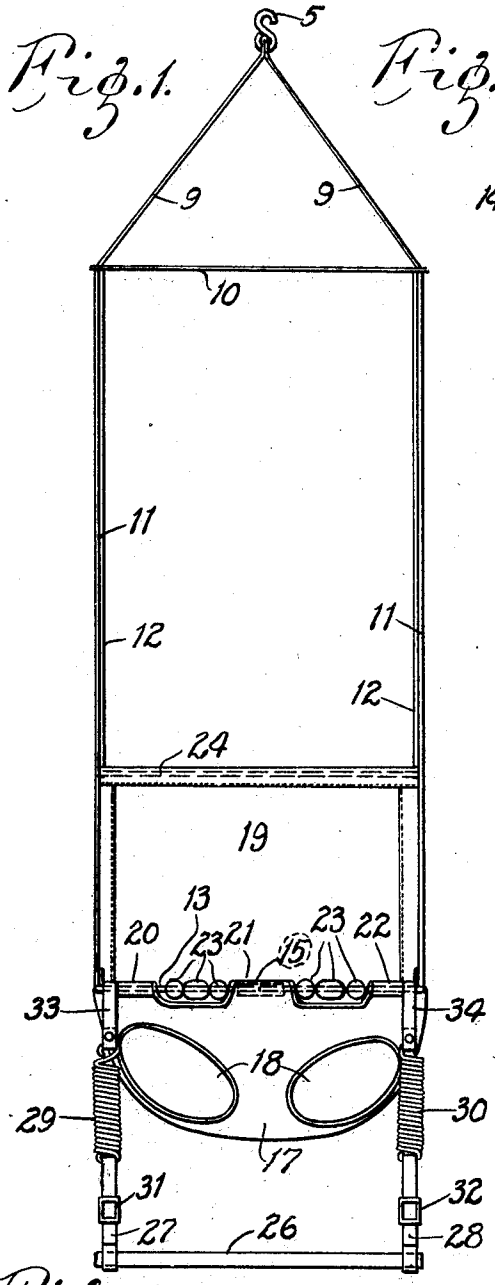


Fig. 2.

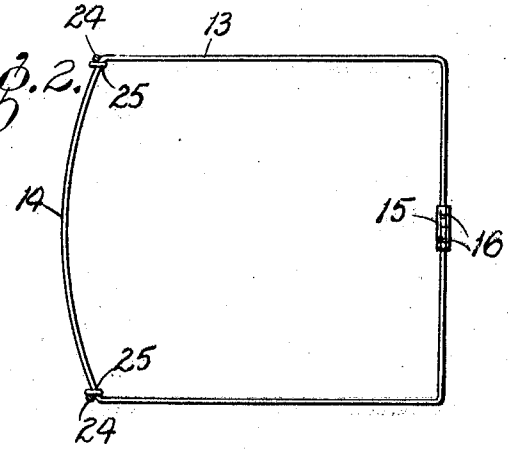


Fig. 3.

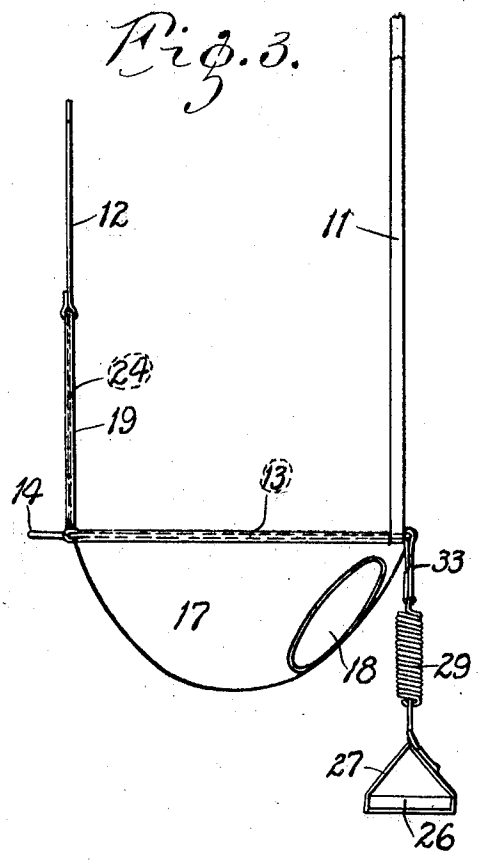
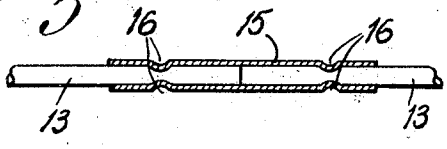


Fig. 4.



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UNITED STATES PATENT OFFICE

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SWING

Application filed June 13, 1929. Serial No. 370,491.

The object of my device is to make a swing intended more particularly for the use of children and infants. A further object is to make an inexpensive swing, one that may be readily suspended at any particular place and one which is collapsible and may be folded to occupy very little space, one that lends itself, when in the collapsed position, readily for storage and shipping. My swing comprises a pocket seat in which the child may sit and provides a flexible back for the support of the child when sitting in the swing.

A further object is to provide a rectangular shaped frame for securing the main portion of the pocket seat, which frame is made of one piece of wire or rod, having the ends secured together at the front of the frame by means of a collar. A further object is to arcuate outwardly the frame in its rear portion, so that when the child is sitting, in the swing, his back will not come in contact with the frame, but only with the fabric back of the swing.

A still further object is to provide the swing with a foot support, which is secured to the main frame of the pocket seat at its front corners, which front support is secured to the frame by means of webbing or other similar material, and has a coiled spring secured therein. There are two such coiled springs, one on each side, and the webbing is adjustable as to length. The object of the springs or other resilient element or material, is to prevent the child from standing up in the swing with the danger of falling out of the swing. When the child attempts to stand on the foot rest, the springs are elongated and the child is unable to stand up and is forced to remain in a seated position. Furthermore the foot rest being resiliently secured to the main frame enables the child, occupying the swing, to move the foot rest up and down against the expansion and contraction of the resilient elements. This movement of the child's legs is an object of interest to the child and causes it to be contented when sitting in the swing, and enables the child to exercise its legs and prevent the numbness in the legs when the legs remain stationary for too long a period, particularly when the body is in the seated position.

A further object is to so construct the main frame that colored beads or other toys may be secured in sliding engagement on the main frame, so as to be accessible to the child when seated in the swing.

With these and other objects in view, my invention has relation to certain novel features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claims and illustrated in the drawing, in which

Fig. 1 is a front elevation of my device.

Fig. 2 is a plan view of the main frame of my device, showing the pivotal jointure of the back frame and showing the means of securing the ends of the main frame in its front side.

Fig. 3 is a fragmental side elevation of my device, showing the entire swing, but only a portion of the upper supports for the swing.

Fig. 4 is a sectional elevation of the collar used to join the ends of the main frame, showing the means of securing the ends of the main frame therein.

Numeral 5 designates the hook used to support my swing to a ceiling or lintel, etc. To the hook 5 are secured four fabric cords 9, the free ends of which are secured to a rectangular supporting frame 10. At the front corners of the rectangular supporting frame 10 are secured the fabric cords 11 and at the rear corners of the rectangular supporting frame 10 are suspended the rear fabric cords 12. Numeral 13 designates the main frame, which is substantially rectangular in shape, which is made of one piece of wire, tubing or a rod, etc., of any conventional cross section. A circular cross section is most common. The rear sides of the main frame 13 are arcuated as shown at 14.

Numeral 15 designates a tubular collar, the inside diameter of which is equal to the outside diameter of the rod forming the main frame. In securing the ends of the main frame together, the ends are simply inserted into the collar 15 until they meet and then

an annular depression is made in the collar and rods as shown at 16.

Numeral 17 designates the pocket seat made of 4 walls and a bottom made of canvas or fabric of any suitable description, the front wall having a pair of openings 18 formed therein for the reception of the legs of the child occupying the swing. The rear wall 19 of the pocket seat 17 extends upwardly beyond the upper edges of the other walls of the pocket seat. The sides of the pocket seat 17 are looped by stitching and the sides of the main frame 13 pass through the loops thus formed. On the front edge of the pocket seat 17 are stitched three loops 20, 21 and 22 in spaced relationship with each other. The front of the main frame extends through these loops, the ends being joined together by the tubular collar 15, as previously described. The tubular collar 15 is concealed by the loops 21. By these means the pocket seat 17 is secured to the main frame 13. It is to be particularly observed that the pocket seat 17 is not secured to the rear or arcuated side of the main frame 13. Colored beads or loops 23 are placed in sliding engagement on the front rod of the main frame 13 between the loops 20 and 21 and between the loops 21 and 22. In assembling, the rod forming the main frame is bent in its middle to be arcuated as at 14, the ends are bent at right angles (substantially) as shown in Fig. 2 and passed through the side loops of the pocket seat 17, the ends being then bent at right angles toward each other, as shown in Fig. 2 and passed through the loops 20 and 22, that is, one end passes through the former and the other through the latter. The beads 23 are then slid over the rod and the tubular collar 15 placed in the loop 21 with the ends of the rod of the main frame placed in contact. The annular depressions are then made in the tubular collar 15 and the ends of the rods of the main frame 13 within the tubular collar 15 and the assemblage is completed.

Numeral 24 designates the rear wall frame. The tops and sides of the rear wall 19 have stitched loops formed thereon. The rear wall frame 24 is made of a rod or tubing similar to the construction of the main frame 13. The rear wall frame 24 passes through the three loops of the rear wall 19, its central portion forming the top and its ends forming the sides. The free ends of the rear wall frame 24 have the hooks 25 formed thereon, which hooks engage the rear corners of the main frame 13. By these means the rear wall frame 24 is rotatively secured to the main frame 13. The free ends of the front fabric cords 11 are secured to the front corners of the main frame 13 and the free ends of the rear fabric cords 12 are joined to the upper corners of the rear wall frame 24. The front fabric cords are longer than the rear fabric cords 12, so that when the swing as thus far described is suspended from the hook 5, the main frame 13 will be in a horizontal plane and the rear wall frame 24 will be in a substantially vertical frame.

Numeral 26 designates the foot rest, which is a rectangular board of proper size for a child and of the length of the width of the main frame 13. To the foot rest 26 is secured the webbing 27 and 28, one strip on each side. The webbing 27 and 28 is secured to the lower sides of the foot rest 26, the ends passing up and over the sides of the foot rest 26. The ends pass upwards through the ends of the springs 29 and 30 and terminate in the buckles 31 and 32, the buckle 31 being attached to the webbing 27 and the buckle 32 being attached to the webbing 28. By means of these buckles and the webbing, the distance between the foot rest 26 and the lower ends of the springs may be varied. In order to keep the webbing on each side together a rivet may be inserted into the webbing immediately beneath the buckles. To the upper end of the spring 29 is secured the webbing 33, to the upper end of the spring 30 is secured the webbing 34. The upper end of the webbing 33 is secured to the one front corner of the main frame 13 and the upper end of the webbing 34 is secured to the other front corner of the main frame 13. By these means the foot rest 26 is suspended from the front side of the main frame 13, so that the foot rest will be suspended in a horizontal plane. By means of the buckles 31 and 32, the distance from the foot rest 26 to the plane of the main frame may be adjusted.

It will be seen that when the child, that is sitting in the swing, attempts to stand up on the foot rest 26, that his attempt will be futile, because the weight of his body is placed on the foot rest 26, it will extend the springs 29 and 30, so that he will have no support to raise himself out of the pocket seat 17. The plane of the foot rest 26 will normally be such a distance from the plane of the main frame 13, that the child when in the seated position, will be able to push down on the foot rest 26 against the force of the springs 29 and 30, the springs will return the foot rest to the normal position. This action of the child in pushing against the foot rest 26 and the action of the springs in returning the foot rest to its normal position, will require muscular effort and movement on the part of the child's legs. This effort and movement provides the exercising feature for the child's legs.

It will be observed that the toys or beads 23 are secured to the main frame 13, so as to be always visible and easily accessible to the child when seated in the swing. It will also be observed that by the construction indicated that these beads are easily and simply placed in position on the main frame 13.

It will be observed also that when the child

is sitting in the pocket seat 17, with his back against the rear frame 19, that there will be no contact between his body and the arcuated portion of the main frame 13. This is a great advantage because the lack of such contact makes the seat more comfortable for the child. If the rear portion of the main frame 13, that is arcuated in my construction, is made straight there will then be a contact between the child's body and this frame portion to the great discomfort of the occupant of the swing. Furthermore, if the main frame 13 does not have a rear element such as the arcuated portion 14, the weight of the child in the swing will cause the sides of the main frame to be bent inwardly at the rear corners against the body of the child to the great discomfort of the child. It is necessary, therefore, to have positive means to prevent the rear ends of the main frame 13 from being distended inwardly from the child's weight.

What I claim and mean to secure by Letters Patent is:

1. In a device of the character described, a seat comprising a seat pocket having a rearward extension above the upper edges of the other walls of the pocket, a main frame having an externally arcuated rear member, a back frame pivotally secured to said main frame, said seat pocket secured to said main frame and its rearward extension secured to said back frame.

2. In a device of the character described, a seat comprising a seat pocket having a rearward extension above the upper edges of the other walls of the pocket, a main frame having an externally arcuated rear member, a back frame pivotally secured to said main frame, said seat pocket secured to said main frame and its rearward extension secured to said back frame, the free ends of said main frame selectively secured in the front of said frame.

In testimony whereof I affix my signature.

WILLIAM O. HARTMAN.