

Oct. 12, 1965

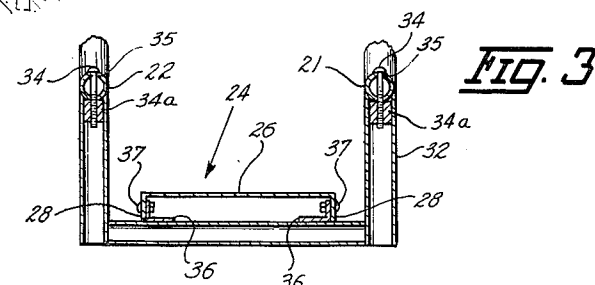
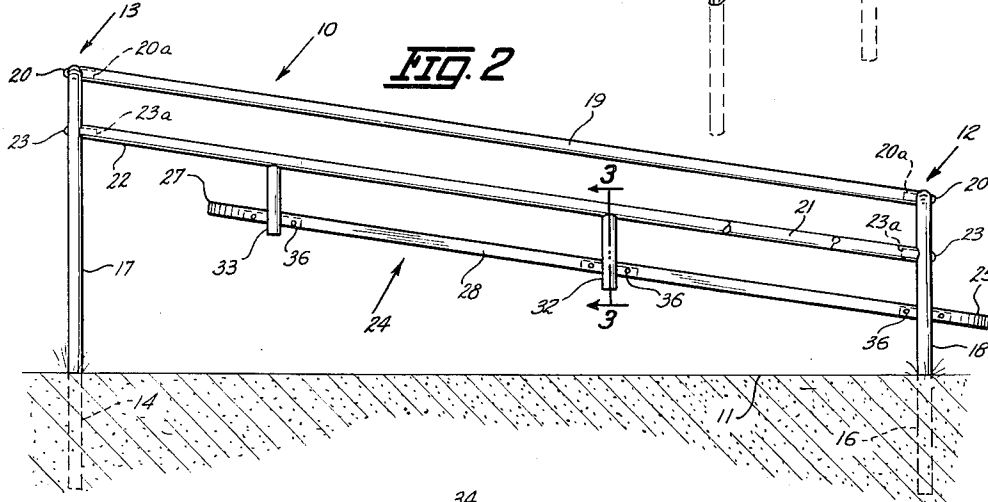
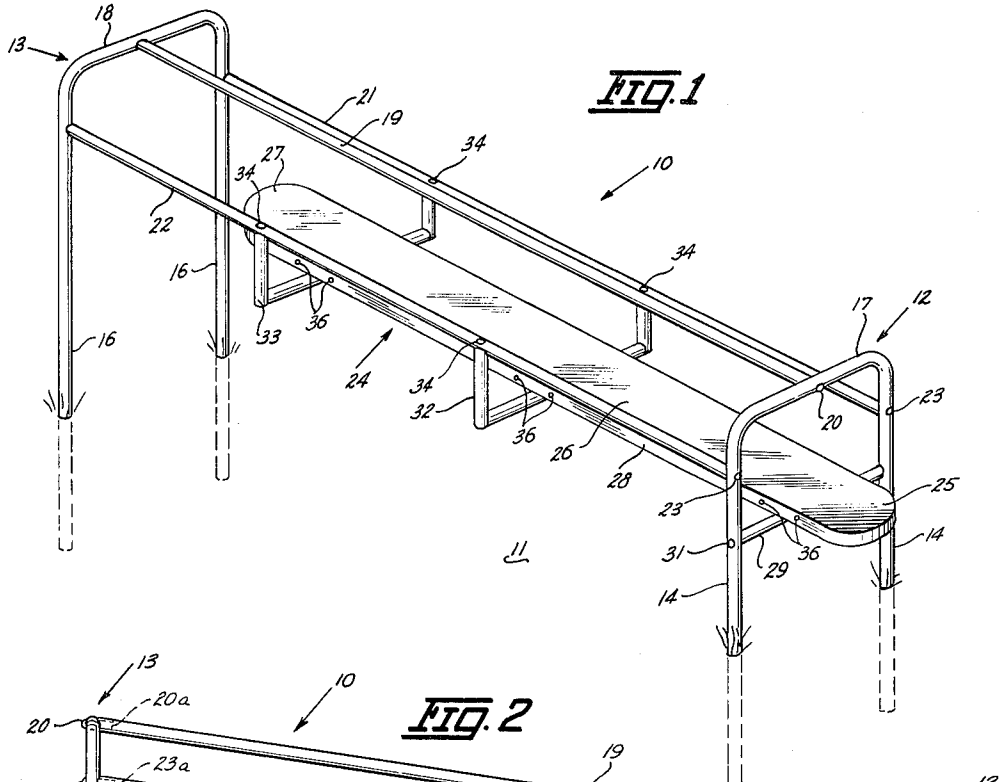
C. W. AHRENS

3,211,452

OBSTACLE COURSE PLAYGROUND EQUIPMENT

Filed Nov. 7, 1962

3 Sheets-Sheet 1



INVENTOR.
CLAUDE W. AHRENS
BY *Rudolph R. Powell*
ATTORNEY.

Oct. 12, 1965

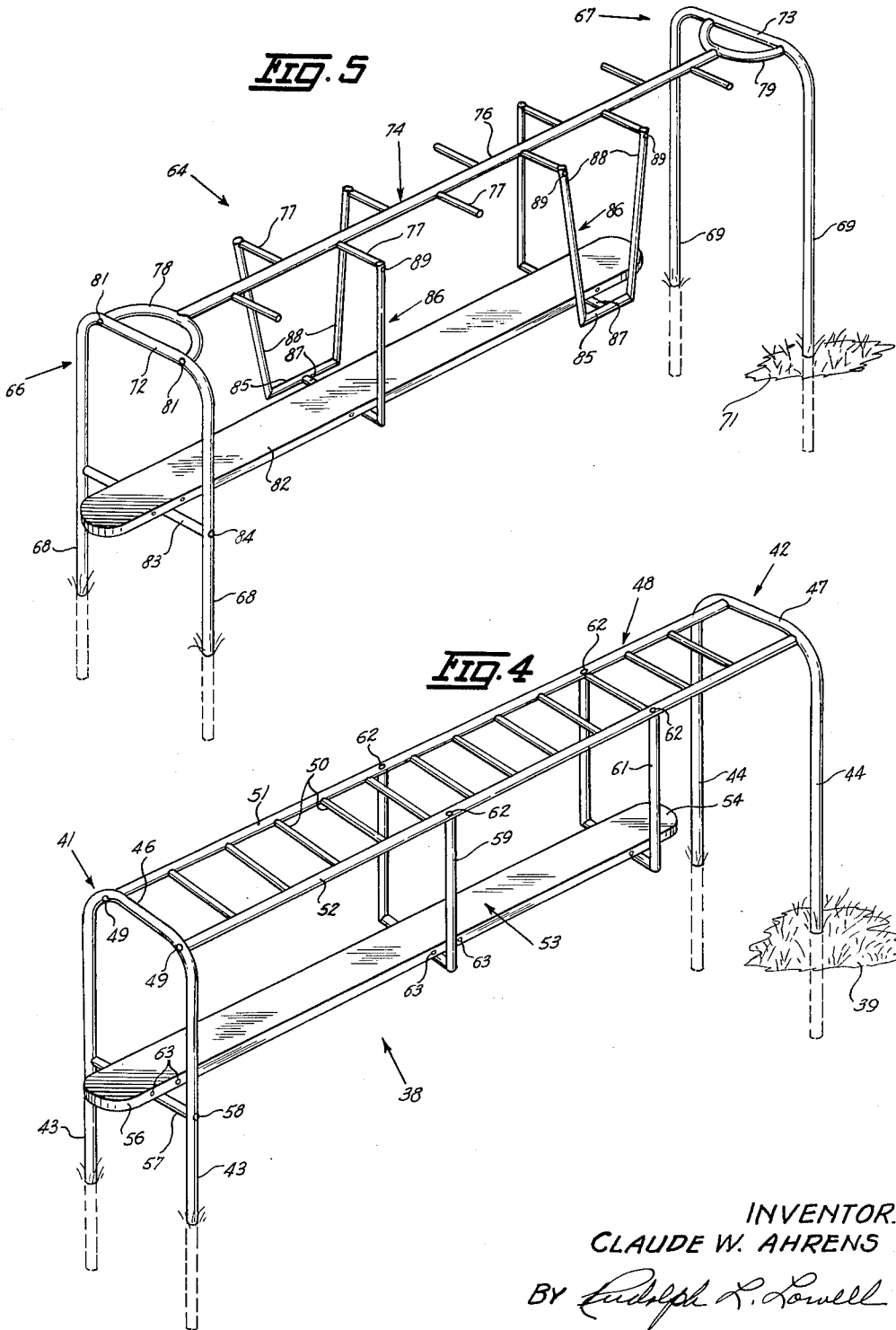
C. W. AHRENS

3,211,452

OBSTACLE COURSE PLAYGROUND EQUIPMENT

Filed Nov. 7, 1962

3 Sheets-Sheet 2



INVENTOR.
CLAUDE W. AHRENS
BY *Rudolph R. Lowell*
ATTORNEY.

Oct. 12, 1965

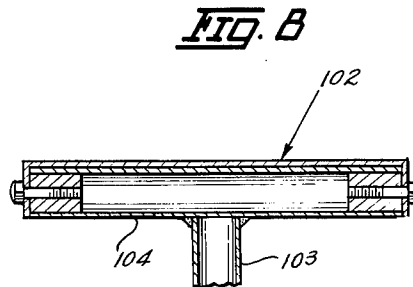
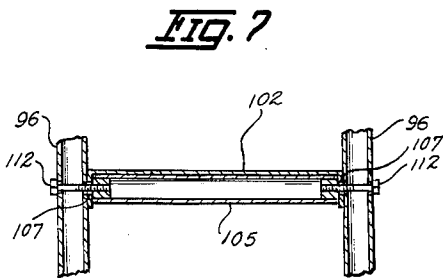
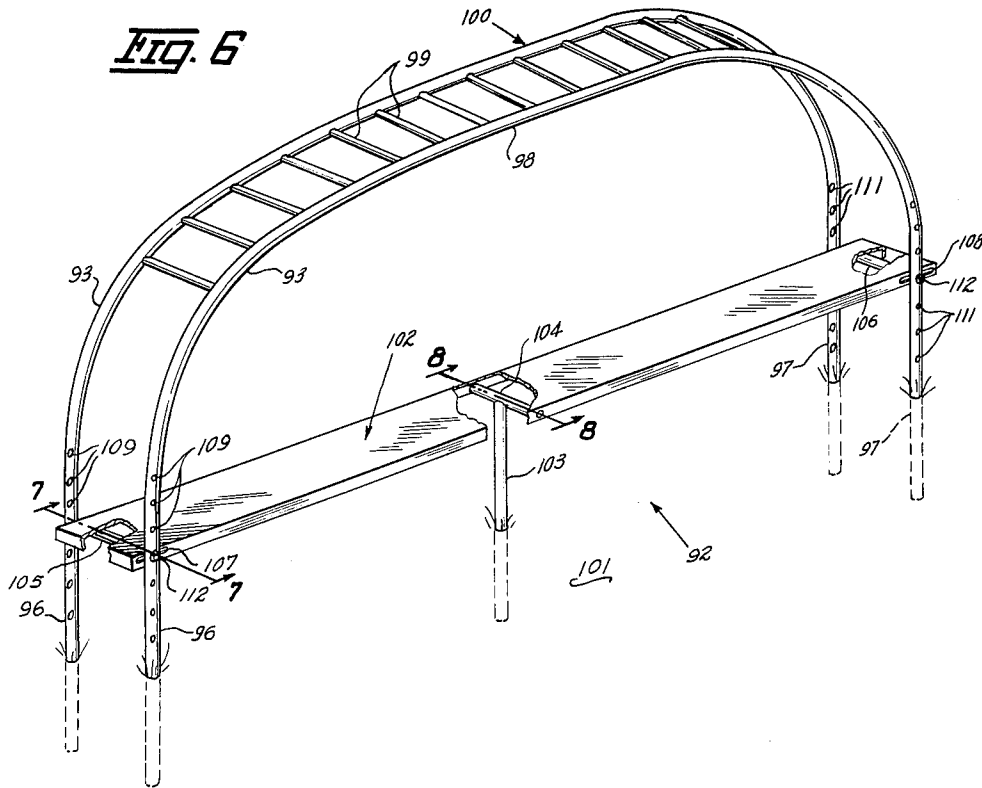
C. W. AHRENS

3,211,452

OBSTACLE COURSE PLAYGROUND EQUIPMENT

Filed Nov. 7, 1962

3 Sheets-Sheet 3



INVENTOR.
CLAUDE W. AHRENS
BY *Rudolph L. Lowell*
ATTORNEY

1

3,211,452
OBSTACLE COURSE PLAYGROUND EQUIPMENT
Claude W. Ahrens, Grinnell, Iowa
Filed Nov. 7, 1962, Ser. No. 236,040
3 Claims. (Cl. 272-58)

This invention relates to obstacle course playground equipment and more particularly to a playground equipment which is traversed by a combination pull and crawl movement.

It is the object of the present invention to provide improved pull and slide playground equipment which is anchored to a supporting surface and has elongated hand rail means spaced above and extended in the direction of the supporting surface and an elongated board or chute positioned below and intersecting the vertical plane of the hand rail means.

Another object of the invention is to provide playground equipment which is usable as classroom equipment in a physical education program.

Still another object of the invention is to provide versatile pull and slide playground equipment which can be used by children of different ages and physical development.

An additional object of the invention is to provide a pull and slide playground equipment which is secured to the ground with a minimum number of footings.

A further object of the invention is to provide safe pull and slide playground equipment for children which has the characteristics of minimizing the child's fear of falling and keeping the child out of dirt.

Another object of this invention is to provide durable pull and slide playground equipment which is economical in cost and simple and rugged in construction.

The exact nature of the invention as well as other objects and advantages thereof will be readily apparent from a consideration of the following specification relating to the annexed drawing in which:

FIGURE 1 is a perspective view of the playground equipment of the invention;

FIGURE 2 is a side elevation view of the playground equipment of FIGURE 1;

FIGURE 3 is an enlarged sectional view taken along the line 3-3 of FIGURE 2;

FIGURE 4 is a perspective view of a modification of the playground equipment shown in FIGURE 1;

FIGURE 5 is a perspective view of another modification of the playground equipment shown in FIGURE 1;

FIGURE 6 is a perspective view of a further modification of the playground equipment shown in FIGURE 1;

FIGURE 7 is a sectional view taken along the line 7-7 of FIGURE 6; and

FIGURE 8 is a sectional view taken along the line 8-8 of FIGURE 6.

Referring to the drawing, there is shown in FIGURES 1 and 2 playground pull and slide equipment 10 fastened or anchored to a supporting surface 11, such as the ground, by means of footings. The equipment 10 has a pair of inverted U-shaped end frames 12 and 13 which are longitudinally spaced from each other and extend in an upward direction. Legs 14 and 16 of the respective end frames 12 and 13 project downwardly into the supporting surface 11 and are anchored thereto. The upward extent of the end frame 13 above the supporting surface 11 is about twice the upward extent of the end frame 12, so that the base section 17 of the end frame 12 is at a lower elevation than the base section 18 of the end frame 13.

2

An elongated hand grip means 19, such as a rail or pulling bar, extends between the end frames 12 and 13 and is connected by means of bolts 20 at each of its ends to the center portions of the base sections 17 and 18 of the respective end frames 12 and 13. The bolts 20 extend through openings in the base sections 17 and 18 and are threaded into plugs 20a secured to the opposite ends of the hand rail 19.

A pair of side rails 21 and 22 extend between the end frames 12 and 13 substantially parallel to the hand rail 19. Each of the respective ends of the side rails 21 and 22 are secured by bolts 23 to an upper portion of the legs 14 and 16 of the respective end frames 12 and 13 adjacent the respective bases 17 and 18. The bolts 23 extend through openings in the legs of the end frame and are threaded into plugs 23a secured to the ends of the respective side rails 21 and 22.

An elongated board or chute 24 is suspended between the hand rail 19 and the supporting surface 11 and extends along the vertical plane of the hand rail. The board 24 is substantially parallel to the hand rail 19 and is about three-quarters the length thereof and terminates short of the end frame 13. The distance between the hand rail 19 and board 24 is sufficient to permit a person to lie on the board and grip the hand rail, preferably between 20 to 24 inches. The board 24 is preferably of a Fiberglas construction having a flat top 26, semicircular ends 25 and 27, and downwardly projected peripheral edges 28. The board 24 is supported on the end frame 12 and the side rails 21 and 22 by means of a transverse bar 29 extended between and connected by means of bolts 31 to the legs 14 of the end frame 12 and longitudinally spaced U-shaped members 32 and 33 which are secured by means of bolts 34 to the side rails 21 and 22. The bolts 34 extend through openings 35 in the rails 21 and 22 and are threaded into plugs 39a secured in the legs of the U-shaped members 32 and 33. The lower end 25 of the slide board 24 extends through the end frame 12 toward the supporting surface 11, preferably about one foot.

The slide board 24 is fastened to the transverse bar 29 and the U-shaped members 32 and 33 by means of angle brackets 36. As shown in FIGURE 3, the angle brackets 36 are secured by means of welds to the bottom or base of the U-shaped members 32 and 33 and have upwardly projected flanges which are secured by means of bolts 37 to the downwardly projected edges 28 of the sliding board 24.

In use, the child sits on the lower end 25 of the slide board 24 with his back toward the end frame 12. The hand rail or pulling bar 19 is gripped with the hands. A hand-over-hand pulling action moves the body up the slide board 24. When the child has pulled himself up to the end frame 13 his feet will swing to the ground since he has pulled himself off the upper end 27 of the slide board 24. During the upward movement the child may place his legs over the slide rails 21 and 22 and utilize his hands and legs in a type of backstroke crawl to move himself longitudinally on the playground equipment 10.

Referring to FIGURE 4, there is shown a modified form of playground equipment 38 anchored to a supporting surface 39, such as the surface of the ground. The equipment 38 has a pair of similar inverted U-shaped end frames 41 and 42 which are longitudinally spaced in a face-to-face relationship. The legs 43 and 44 of the respective end frames 41 and 42 extend downwardly into the supporting surface 39 and position the respective base sections 46 and 47 above the supporting surface 39.

A horizontal ladder 48 having rungs 50 extends between the end frames 41 and 42 and is secured thereto by means of bolts 49 which extend through the base sections 46 and 47 and threadably engage plugs in the ends of the side rails 51 and 52 of the ladder 48. The ends of the ladder 48 may be welded to the respective base sections 46 and 47 of the end frames 41 and 42.

An elongated board or chute 53 having semicircular ends 54 and 56 is positioned between the horizontal ladder 38 and the supporting surface 39 and extends through the end frame 41 substantially parallel to the ladder 48 and terminates in a semicircular end 54 short of the end frame 42. The slide board 53 is similar to the slide board 24. The longitudinal extent of the board 53 is about three-quarters of the length of the ladder 48.

The sliding board 53 is supported above the supporting surface 39 by a transverse bar 57 secured by means of bolts 58 to the legs 43 of the end frame 41 and laterally spaced U-shaped members 59 and 61 secured by means of bolts 62 to the side rails 51 and 52 of the ladder 48. The position of the sliding board 53 on the transverse bar 57 and the U-shaped members 59 and 61 is maintained by the brackets 63 which are similar to the brackets 36 shown in FIGURE 3.

The playground pull and slide equipment 64 shown in FIGURE 5 has a pair of laterally spaced and vertically extended inverted U-shaped end frames 66 and 67 having their respective legs 68 and 69 anchored in a supporting surface 71. The end frames 66 and 67 project upwardly from the supporting surface 71 substantially the same distance and thereby position their respective base sections 72 and 73 the same distance above the supporting surface 71. A hand ladder 74 having a central bar 76 extends in the direction of the supporting surface 71 between the end frames 66 and 67. A plurality of hand rungs 77 are secured to and project laterally from the center bar 76. Alternate hand rungs 77 project in opposite directions and lie in a common horizontal plane. The ends of the center bar 76 are secured to the base sections 72 and 73 of the inverted U-shaped end frames 66 and 67, respectively, by means of semicircular rings 78 and 79. The ends of the center bar 76 are welded to each ring 78 and 79 the ends of each ring being secured by means of bolts 81 to the base section to thereby hold the hand ladder 67 in a substantially horizontal position. The semicircular rings 78 and 79 increase the radius of the torsion force applied to the hand ladder 74 and thereby distribute the stresses in the connection between the ladder and end frames 66 and 67.

An elongated board or chute 82 similar to slide board 24 is positioned below the ladder 74 in the vertical plane formed by the hand ladder 74 when it is secured to the end frames 66 and 67. The slide board 82 is held substantially parallel to the hand ladder 74 by means of a transverse bar 83 secured by bolts 84 extending through the legs 68 of the end frame 66 and hangers 86. Each hanger has a T-shaped base 87 which extends in a horizontal plane under the board 82 so that cross-arm 85 of the T-base 87 is disposed to one side of the board 82 in a longitudinally extended position. Legs 88 are secured by welds to the free ends of a T-shaped base 87 and project upwardly adjacent the outer ends of selected groups of three hand rungs 77. Bolts 89 secure the legs 88 of a hanger to the corresponding group of three hand rungs 77. Brackets 91 similar to the bracket 36 shown in FIGURE 3 secure the board 82 to the transverse bar 83 and the T-shaped base 87 of the hangers 84 and 86.

The playground equipment 92 shown in FIGURE 6 has a pair of parallel inverted U-shaped side rails 93 defining downwardly directed legs 96 and 97 interconnected with a relatively flat and elongated base 98. The legs 96 and 97 extend downwardly and are anchored in the supporting surface 101 and hold the side rails 93 in a fixed lateral relationship with respect to each other. A plurality of

rungs 99 extend between and are connected by welds to the side rails 93 along the base section 98 thereby forming a horizontal extended ladder 100.

A substantially flat board or seat 102 is adjustably positioned under the rungs 99 above the supporting surface 101. As shown in FIGURE 8, the center section of the board 102 is pivotally supported on the top of an upwardly extended T-shaped member 103 which has its lower end secured in the supporting surface 101. The head 104 of the T engages the lower surface of the board 102 and functions as a pivot therefor.

As shown in FIGURES 6 and 7 the outer ends of the board 102 are fastened to the legs 96 and 97 by rods 105 and 106 which extend through longitudinal slots 107 and 108 in the sides of board 102 and the holes 109 and 111 in the respective legs 96 and 97. The rods 105 and 106 are held in their position by nuts 112 which are flush with the threaded end of the rods. In order to adjust the angular position of the board 102 the rods 105 and 106 are removed and are subsequently inserted into a new hole 109 and 111 which corresponds to the desired angular position. The board 102 is adjustable to reversely inclined positions to vary the vertical distance between the ladder 100 and the board 102 along the longitudinal extent of the equipment. In use the board 102 provides a support for the child which extends in the direction of the ladder.

While there have been shown, described, and pointed out the fundamental novel features of the invention as applied to the preferred embodiment, it will be understood that various omissions, substitutions, changes in form, and details of the apparatus illustrated may be made by those skilled in the art, without departing from the spirit of the invention. It is intended to be limited only as indicated by the scope of the following claims.

I claim:

1. Playground apparatus adapted to be attached to a supporting surface comprising:

(a) a pair of substantially parallel inverted U-shaped side rails defining downwardly directed legs adapted to be secured to the supporting surface and a relatively flat and elongated base,

(b) a plurality of spaced rungs extended between and connected to the side rails along the base thereof,

(c) elongated board means positioned below and in the vertical planes of said rungs above said supporting surface,

(d) support means pivotally connected to the midsection of said board means to permit angular movement thereof about a horizontal axis,

(e) and means securing said board means to at least one pair of adjacent legs of the side rails to hold the board means in an adjusted angular position.

2. Playground apparatus adapted to be attached to a supporting surface comprising:

(a) a pair of substantially parallel inverted U-shaped side rails defining downwardly directed legs adapted to be secured to the supporting surface and a relatively flat and elongated base,

(b) a plurality of spaced rungs extended between and connected to the side rails along the base thereof,

(c) elongated board means positioned below said rungs above said supporting surface, and

(d) means securing opposite ends of said board means between opposed adjacent legs of said side rails to hold the board means in an adjusted position whereupon said spaced rungs extend transverse of the longitudinal axis of said board means.

3. The playground apparatus defined in claim 2 including:

(a) support means connected to said board means to permit angular movement thereof about a horizontal axis.

(References on following page)

5

References Cited by the Examiner

UNITED STATES PATENTS

D. 176,999	3/56	Ahrens	-----	272—60
D. 197,522	2/64	Ahrens	-----	34—5
759,296	5/04	Morairty	-----	272—69
897,722	9/08	Day	-----	272—57
1,406,765	2/22	Shackle	-----	272—56.5

6

1,707,854	4/29	Hanlon	-----	272—57
1,744,494	1/30	Trzesniewski	-----	272—1
2,017,885	10/35	Acheson	-----	272—69

OTHER REFERENCES

5 Westward Magazine, published by Kaiser Steel Corporation, January 1958, page 44.

RICHARD C. PINKHAM, *Primary Examiner.*