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(71) Applicant *(for all designated States except US)*: **WHAM-O, INC.** [US/US]; 5803 Christie Avenue, Emeryville, CA 94608 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **FITZGERALD, David, J.** [US/US]; 907 Marin Avenue, Hayward, CA 94541 (US).

(74) Agents: **MCCORMACK, John, M.** et al.; Kolisch Hartwell, P.C., Suite 200, 520 S.W. Yamhill Street, Portland, OR 97204 (US).

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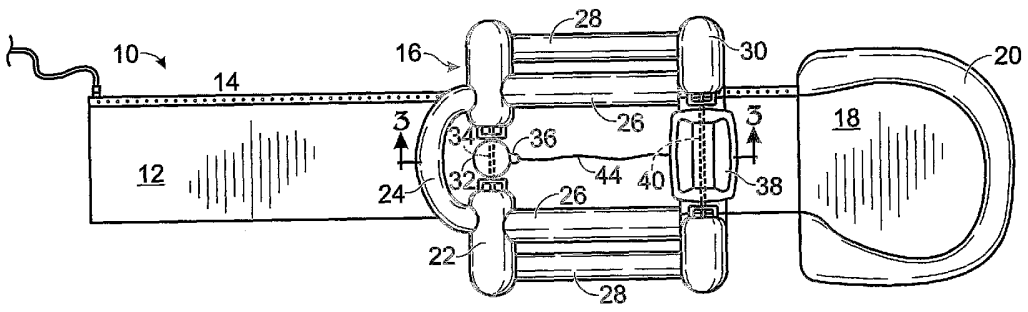
(54) Title: CHILDREN'S TOY WATERSLIDE



(57) Abstract: The present invention includes a children's toy waterslide incorporating a sliding surface, an obstacle region, a splash zone, and an obstacle or obstacles. The sliding surface extends through the obstacle region and into the splash zone. Water may be sprayed along the length of the sliding surface by a sprinkler tube. The obstacle or obstacles may be placed on or over the sliding surface in the obstacle region. The obstacle may be a "limbo stick" bar, a water tunnel with dump bucket, and/or inflatable bowling-pin-type objects.

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CHILDREN'S TOY WATERSLIDE

Cross-Reference to Related Applications

This application claims priority to U.S. Provisional Patent Application Serial No. 60/356,452, filed February 11, 2002 and entitled "Children's Toy Waterslide".

Field of the Invention

The present invention relates generally to children's toy waterslides. More specifically, the invention relates to children's toy waterslides having obstacles and tunnels included along the waterslide path.

Background of the Invention

Children's toy waterslides are well known in the art. For example, Wham-O, Inc.'s SLIP'N SLIDE® waterslide has been used for years by children to cool off, in an entertaining way, on warm summer days. Conventional waterslides may become dull after repeated use.

Adding obstacles to a waterslide may enhance the play value of the slide. Such a water slide should be enjoyable to use, provide play value and be safe to operate. The toy should not require complicated instructions or operation.

Summary of the Invention

The present invention includes a children's toy waterslide incorporating a sliding surface, an obstacle region, a splash zone, and an obstacle or obstacles. The sliding surface extends through the obstacle region and into the splash zone. Water may be sprayed along the length of the sliding surface by a sprinkler tube. The obstacle or obstacles may be placed on or over the sliding surface in the obstacle region. The

obstacle may be a "limbo stick" bar, a water tunnel with dump bucket, and/or inflatable bowling-pin-type objects.

Brief Description of the Drawings

Fig. 1 is a plan view of a children's toy waterslide according to one embodiment of the present invention.

Fig. 2 is a end view of the s toy of Fig. 1, showing the entrance of an obstacle tunnel.

Fig. 3A is a cross-sectional side view of the obstacle tunnel taken along Line 3-3, showing a trigger paddle interconnected with a dump bucket.

Fig. 3B is the cross-sectional view of Fig. 3A, showing a child entering the obstacle tunnel.

Fig. 3C is the cross-sectional view of Fig 3A, showing a child traveling through the obstacle tunnel triggering the trigger paddle and dumping the dump bucket.

Fig. 4 is a n and view of the obstacle tunnel of Fig. 3A, showing the exit of the obstacle tunnel.

Fig. 5 is a plan view of a children's toy waterslide according to one embodiment of the present invention, showing a "limbo stick" obstacle.

Fig. 6 is a side view of a "limbo stick" obstacle of Fig. 5.

Fig. 7 is an end view of the "limbo stick" obstacle of Fig. 6.

Fig. 8 is a plan view of a children's toy waterslide according to one embodiment of the present invention, showing a set of inflatable obstacles.

Fig. 9 is a side view of the waterslide of Fig. 8.

Detailed Description and Best Mode of the Invention

A children's toy waterslide constructed according to the present invention is shown in Fig. 1, and indicated generally at 10. Waterslide 10 includes a sliding surface 12, a sprinkler tube 14, an obstacle tunnel 16, and a splash zone 18. Sliding surface 12 may be a long narrow sheet of plastic, in the range of 15-25 feet in length and in the range of 25-40 inches wide. For example, sliding surface 12 may be around 22 feet long and 33 inches wide. Sliding surface 12 may be made of any suitable plastic material, such as polyvinylchorhide, polyethylene, polypropylene, etc.

Sprinkler tube 14 extends along one of the long sides of sliding surface 12 and may be configured with a hose fitting to attach a water supply. Sprinkler tube 14 may include a series of spaced-apart apertures that allow water to spray out of the tube when under pressure. The water being sprayed out of the sprinkler tube makes the sliding surface 12 slippery enhancing the play value of the water slide. For example, sprinkler tube 14 will be formed integrally with sliding surface 12.

In the embodiment shown in Figs. 1-4, sliding surface 12 extends through obstacle tunnel 16 and into splash zone 18. An end bumper 20 surrounds splash zone 18. Splash zone 18 slows a sliding child down near the end of the waterslide because water pools in this area. This deeper water slows down a slider. End bumper 20 may be inflatable and may provide cushion to a slider, as the slider enters the splash zone. Preventing a slider from sliding off the end of waterslide 10, enhances the play value of the waterslide.

Obstacle tunnel 16 may be positioned over a portion of sliding surface 12 prior to the splash zone 18 of the waterslide. Obstacle tunnel 16 includes a front tunnel support

22, a front-tunnel-support connector 24, upper tunnel rails 26, lower tunnel rails 28, and rear tunnel support 30. Obstacle tunnel 16 may be positioned over a portion of sliding surface 12 and extends lengthwise along waterslide 10. Front tunnel support 22 is positioned so that a slider enters the tunnel from this end, and includes two sides interconnected by front-tunnel-support connector 24. Positioned between the two sides of front tunnel support 22, a trigger paddle 32 hangs from a trigger pivot rod 34. Trigger pivot rod 34 may be supported by front tunnel support 22. Trigger paddle 32 extends down into the path of travel of a slider using waterslide 10 leaving a gap of around 5 inches between the bottom of trigger paddle 32 and the sliding surface, as best shown in Fig. 2. Trigger pivot rod 34 may be positioned at a height of around 18-22 inches above the ground. Trigger paddle 32 includes a cord connection point 36 positioned above trigger pivot rod 34 on trigger paddle 32. Connection point 36 moves toward the front of obstacle tunnel 16 as trigger paddle 32 moves toward the rear because connection point 36 is positioned above trigger pivot rod 34.

As shown in Fig. 2, front tunnel support 22 may have an overall height in the range of 20-26 inches and an overall width in the range of 35-50 inches. For example, the overall height of front tunnel support 22 may be around 24 inches and the overall width may be around 45 inches.

Fig. 1 illustrates front tunnel support 22 linked to rear tunnel support 30 by the upper and lower tunnel rails. Specifically, upper tunnel rails 26 extend between upper portions of the front and rear tunnel supports. In the same manner, lower tunnel rails 18 extend between lower portions of the front and rear tunnel supports.

Rear tunnel support 30 provides a platform for dump bucket 38. Dump bucket 38 is configured to pivot about a dump-bucket pivot rod 40. Dump-bucket pivot rod 40 extends through dump bucket 38 and is supported on each end by rear tunnel support 30. Fig. 4 shows rear tunnel support 30 supporting dump-bucket pivot rod 40. Dump bucket 38 includes a dump-bucket connection point 42 positioned on the underside of the dump bucket below where pivot rod 40 extends through dump bucket 38.

A cord 44 connects from connection point 36 on trigger paddle 32 to dump-bucket connection point 42 on the bottom of dump bucket 38, as shown in Figs. 1, 3A, 3B, and 3C. Dump-bucket 38 may be tipped over by a pulling force applied to dump-bucket connection The length of cord 44 is sized to include a certain amount of slack between trigger paddle 32 and dump bucket 38. A child sliding through obstacle tunnel 16 travels at a speed in the range of 2 to 10 miles per hour. The slack in cord 44 provides a delay between a child's impact with trigger paddle 32 and the pulling of cord 44 to dump the contents of bucket 38. The delay enables the child to slide through the tunnel and arrive directly below the bucket as its contents pour out, dunking or soaking the child from above.

Obstacle tunnel 16 is configured to dump water onto a slider, as best illustrated by the cut away views of Figs 3A-3C. Fig. 3A shows obstacle tunnel 16 prior to a slider entering the tunnel. Trigger paddle 32 hangs essentially straight down toward the ground. Cord 44 connects trigger paddle 32 with dump bucket 38 with a slight amount of slack.

A sliding child enters obstacle tunnel 16 at the front tunnel support 22, as shown in Fig. 3B. The slider impacts trigger paddle 32 upon entering obstacle tunnel 16

causing the trigger paddle to swing up rearwardly out of the sliders path. The up rearward swing of trigger paddle 32 causes cord 44 to tighten and pulls on bucket connection point 42.

The slider continues through obstacle tunnel 16 as trigger paddle 32 continues to swing up out of the slider's path. After the slack has been removed from cord 44 it pulls on bucket connection point 42, causing the lower portion of bucket 38 to move and tipping bucket 38 over. Obstacle tunnel 16 and cord 44 are sized in length so that the contents of bucket 38 spill out at the rear of obstacle tunnel 16 at approximately the same time as a child is exiting the tunnel, as best shown in Fig. 3C. Obstacle tunnel 16 may range in length from 25-50 inches, and may be around 41 inches in length.

Turning to Fig. 5, another embodiment of a waterslide according to the present invention is shown, indicated generally at 50. Waterslide 50 includes a slide surface 52 and a sprinkler tube 54 extending through an obstacle 56 into a splash zone 58. An end bumper 60 cushions a slider as they reach the end of waterslide 50.

In the embodiment depicted in Fig. 5, obstacle 56 includes a "limbo stick" or stick 62 extending across slide surface 52 in a slider's path. Obstacle 56 also includes vertical support members 64 and stick holders 66. Stick 62 is sized to fit on vertical support members 64 and extend across slide surface 52. Support members 64 and stick holders 66 positioned on each side of slide surface 52 support distal ends of stick 62, as shown in Fig. 5.

Vertical support members 64 may have three different sets of stick holders 66 extending rearward and slightly upward from vertical support members 64, as shown in

Figs. 6 and 7. Each set of stick holders 66 may be positioned to hold stick 62 at a different height above slide surface 52.

This construction enables children to compete with one another to see who can slide on waterslide 50 underneath stick 62 without knocking the stick off stick holders 66. As a child travels along waterslide 50 between vertical support members 64, the goal is to remain low enough to slip under stick 62. Stick 62 may be knocked off stick holders 66 without knocking over vertical support members 64 because the stick rests on the backside of vertical support member 64. As a child moves under stick 62 any contact with the stick will cause it to move upward and rearward dislodging the stick from holders 66. Children can then reposition stick 62 to a lower set of stick holders 66 and continue competing.

As shown in Figs. 8 and 9, another embodiment of a waterslide according to the present invention is shown, indicated generally at 70. Waterslide 70 includes a slide surface 72 and a sprinkler tube 74 extending through a set of obstacles 76 into a splash zone 78. An end bumper 80 cushions a sliding child who reaches the end of waterslide 70.

The set of obstacles 76 may be inflatable bowling-pin-type like bodies. The set of obstacles 76 may be arranged to form an obstacle course that a child may slide through. Obstacles 76 may include indicia printed thereon so that they resemble asteroids or other objects, such as characters, or animals, etc. A child may position obstacles 76 anywhere along slide surface 72. A sliding child then acts as a human bowling ball traveling along waterslide 70. The child may attempt to knock down all of the obstacles 76, or may try to avoid the obstacles during travel down along waterslide 70.

It is believed that the disclosure set forth above encompasses multiple distinct inventions with independent utility. While each of these inventions has been disclosed in its preferred form, the specific embodiments thereof, as disclosed and illustrated herein, are not to be considered in a limiting sense as numerous variations are possible. The subject matter of the inventions include all novel and non-obvious combinations and sub-combinations of the various elements, features, functions and/or properties disclosed herein. Where claims recite "a" or "a first" element or equivalent thereof, such claims should be understood to include incorporation of one or more such elements, neither requiring, nor excluding two or more such elements.

It is believed that the following claims particularly point out certain combinations and sub-combinations that are directed to one of the disclosed inventions and are novel and non-obvious. Inventions embodied in other combinations and sub-combinations of features, functions, elements and/or properties may be claimed through amendment of those claims or presentation of new claims in this or a related application. Such amended or new claims, whether they are directed to a different invention or directed to the same invention, whether different, broader, narrower or equal in scope to the original claims, are also regarded as included within the subject matter of the inventions of the present disclosure.

We claim

1. A children's waterslide comprising:

a sliding surface dimensioned with a long dimension for children to slide along having a front end where children enter the waterslide, a middle portion where children slide along the waterslide, and an end portion where children stop;

a sprinkler tube extending along one side of the long dimension configured to spray water along the length of the sliding surface providing a shallow layer of water thereon;

an obstacle region positioned within the middle portion and configured to provide children with a break-away obstacle to contact while sliding along the water slide; and

a splash zone configured to slow a sliding child down.

2. The children's waterslide of claim 1, wherein the sprinkler tube includes a hose fitting to attach a water supply.

3. The children's waterslide of claim 2, wherein the includes a series of spaced-apart apertures that allow water to spray of the tube when under pressure and coat the sliding surface with a thin layer of water to enhance the slippery nature of the waterslide.

4. The children's waterslide of claim 1, wherein the splash zone includes a pool of water deeper than the shallow layer along the length of the waterslide.

5. The children's waterslide of claim 4, wherein the splash zone includes an inflatable bumper configured to provide containment for the pool of water and to provide cushion to a sliding child.

6. The children's waterslide of claim 1, wherein the obstacle region includes a tunnel positioned over a part of the middle portion of the sliding surface.

7. The children's waterslide of claim 6, wherein the tunnel includes:

a front tunnel support configured to support the tunnel and provide a tunnel entrance for children to slide through;

a rear tunnel support configured to support the tunnel and provide a tunnel exit for children to slide through; and

a plurality of tunnel rails connecting the front tunnel support and the rear tunnel support.

8. The children's waterslide of claim 7, wherein the tunnel includes:

a trigger paddle pivotally mounted to the front tunnel support on a pivot rod and configured to extend down into the path of travel of a sliding child;

a dump bucket pivotally mounted on a bucket pivot to the rear tunnel support and configured to store water for dumping on a sliding child as they exit the rear tunnel support; and

a cord connecting a connection point on the trigger paddle above the pivot rod to a connection point on the dump bucket below the bucket pivot configured to cause the dump bucket to pour water out when the cord is pulled.

9. The children's waterslide of claim 8, wherein the cord is dimensioned to include slack between the trigger paddle and the dump bucket and the slack is adjusted to time the dump of the dump bucket to coincide with the sliding child passing beneath the dump bucket.

10. The children's waterslide of claim 1, wherein the obstacle region includes:

a pair of vertical supports members positioned on either side of the sliding surface having a plurality of stick holders positioned at discrete location on the supports; and

a horizontal stick configured to rest on the stick holders at a selected discrete location.

11. The children's waterslide of claim 10, wherein the stick holders extend rearward and slightly upward from the vertical support members.

12. The children's waterslide of claim 11, wherein the plurality of stick holders includes three stick holders on each vertical support member at different heights above the sliding surface.

13. The children's waterslide of claim 1, wherein the obstacle region includes a plurality of obstacles configured for positioning within the obstacle region at any location therewithin.

14. The children's waterslide of claim 13, wherein the plurality of obstacles are inflatable.

15. The children's waterslide of claim 14, wherein the plurality of obstacles are bowling-pin-type bodies.

16. The children's waterslide of claim 14, wherein the plurality of obstacles include indicia printed thereon to make the obstacles resemble asteroids.

17. The children's waterslide of claim 14, wherein the plurality of obstacles include indicia printed thereon to make the obstacles resemble animals.

18. The children's waterslide of claim 14, wherein the plurality of obstacles include indicia printed thereon to make the obstacles resemble a fictional character.

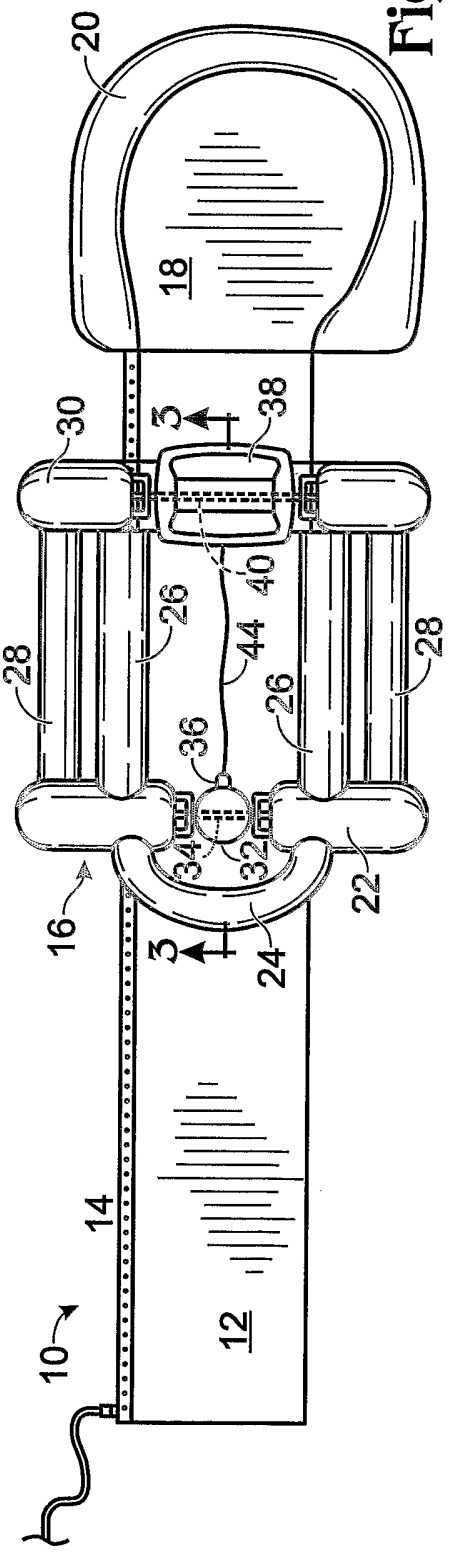

Fig. 1

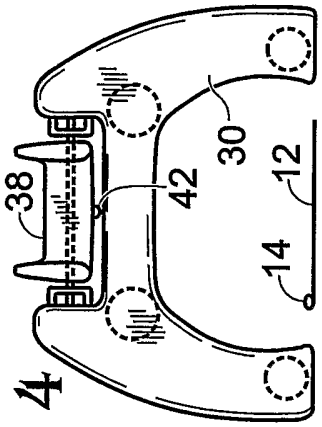

Fig. 4

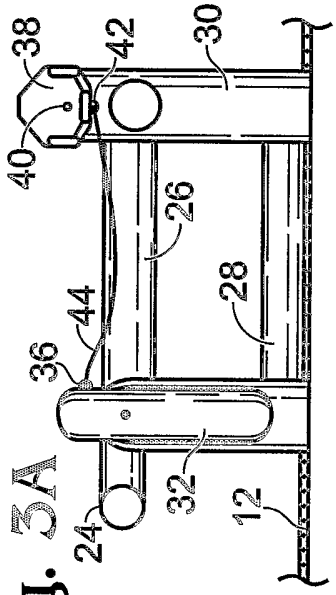

Fig. 3A

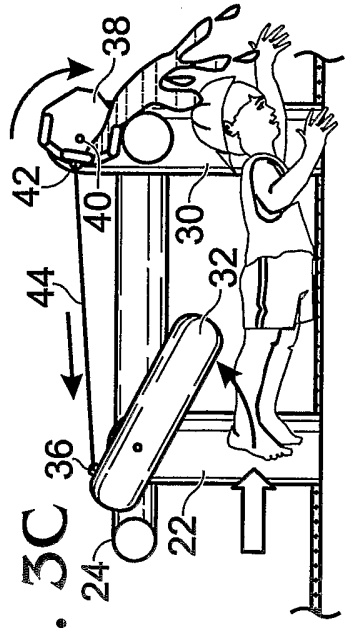

Fig. 3C

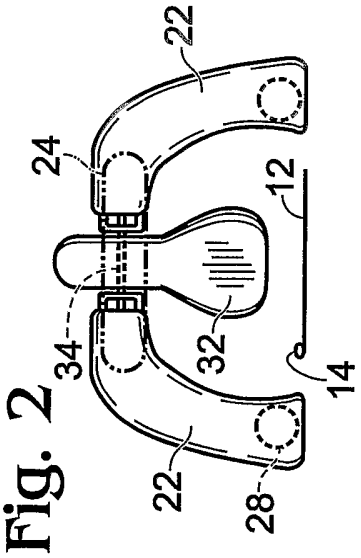

Fig. 2

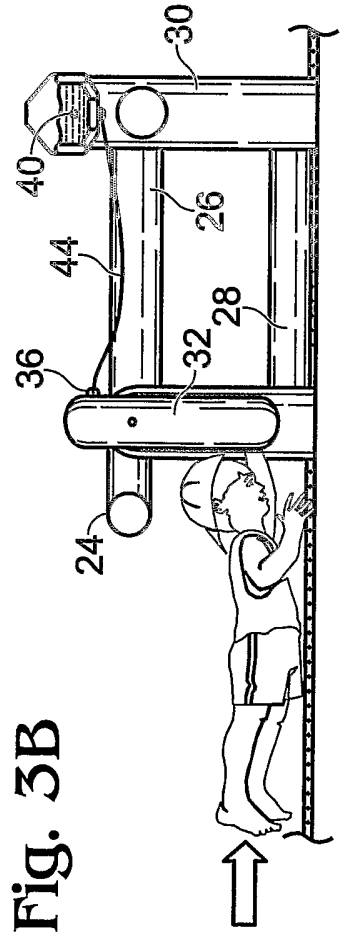

Fig. 3B

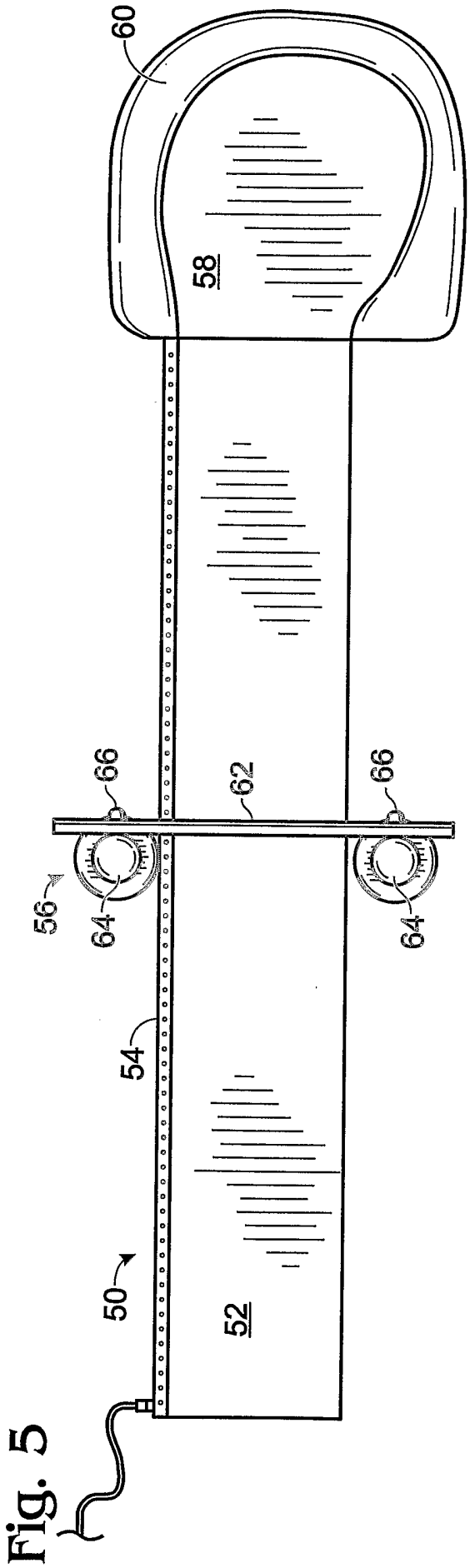

Fig. 5

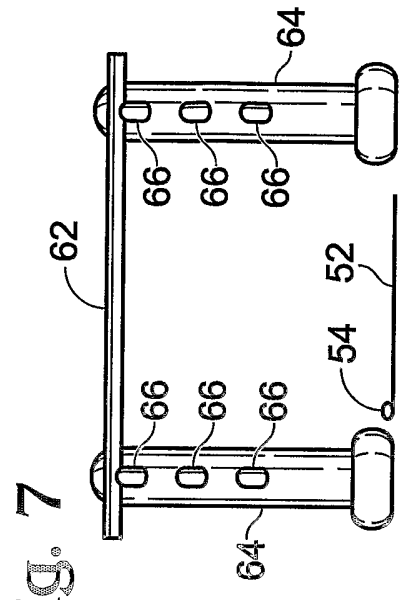

Fig. 7

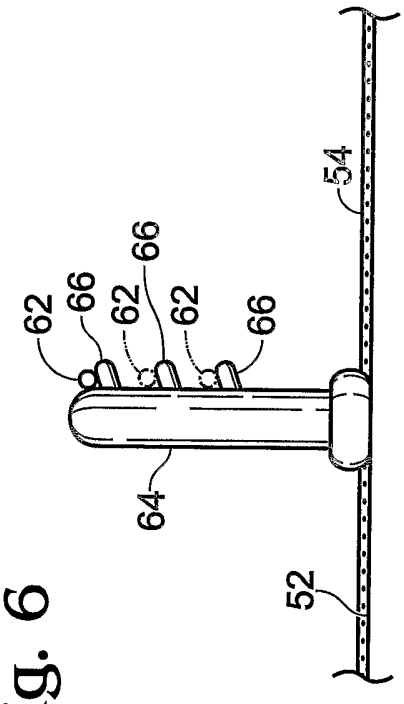

Fig. 6

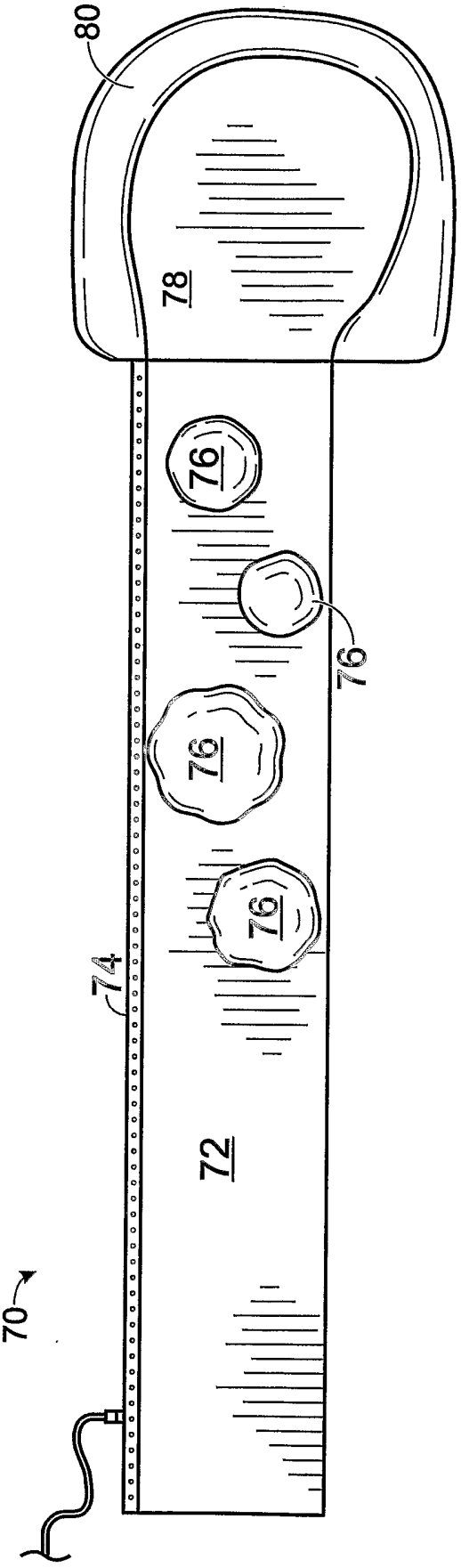

Fig. 8

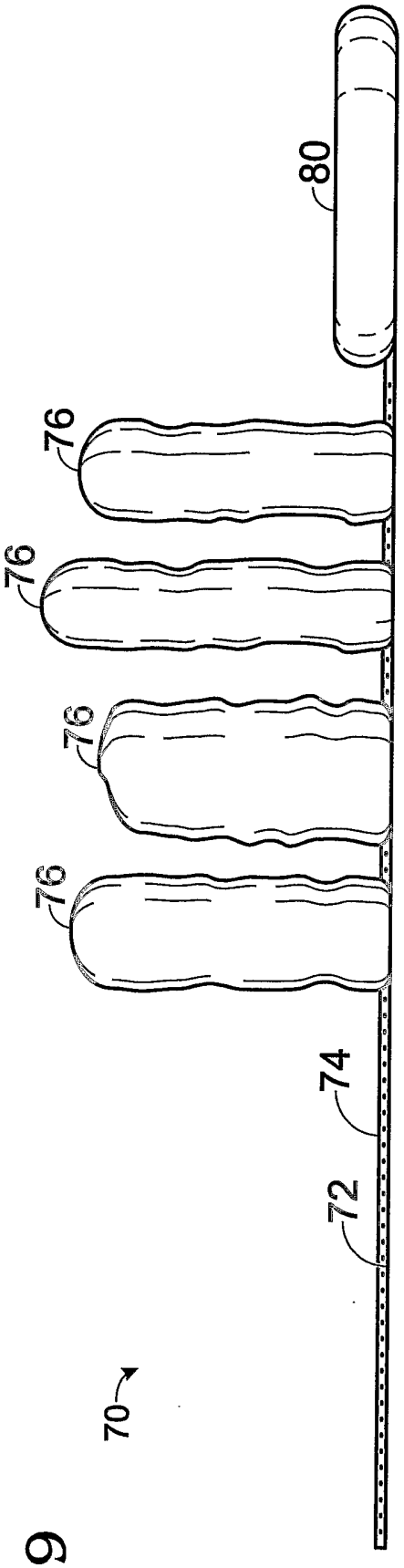

Fig. 9