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BALLOON REPLACING APPARATUS FOR AN AMUSEMENT SYSTEM

Filed Nov. 25, 1966

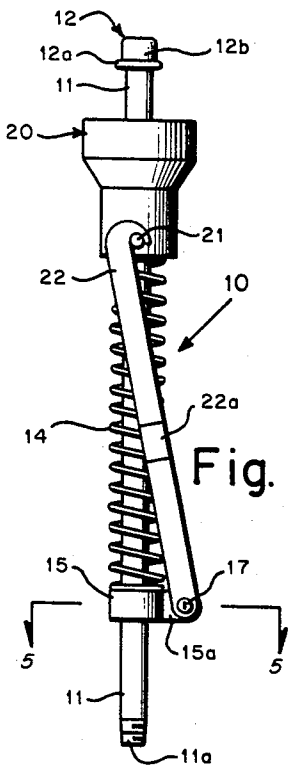


Fig. 2

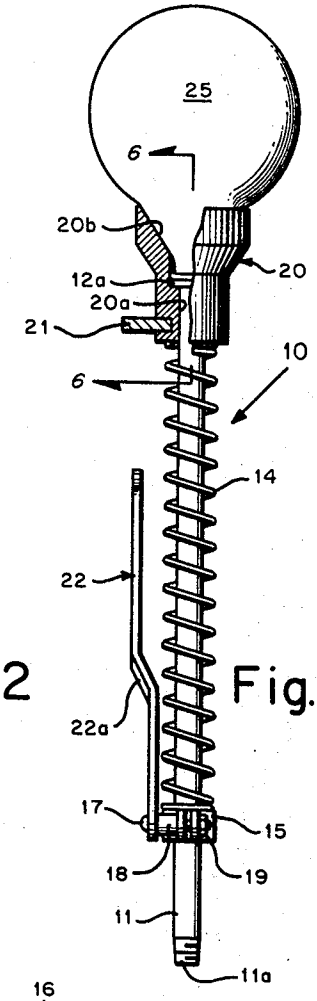


Fig. 4

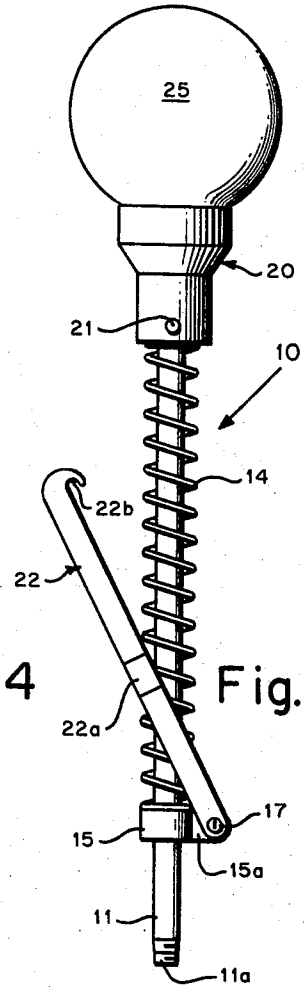


Fig. 3

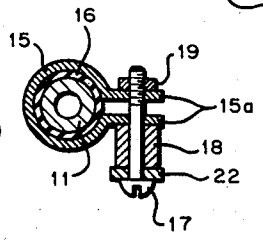


Fig. 5

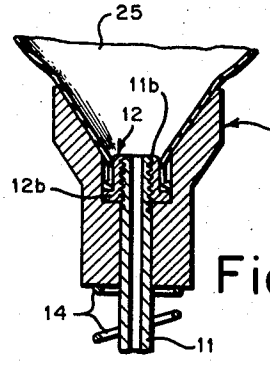


Fig. 6

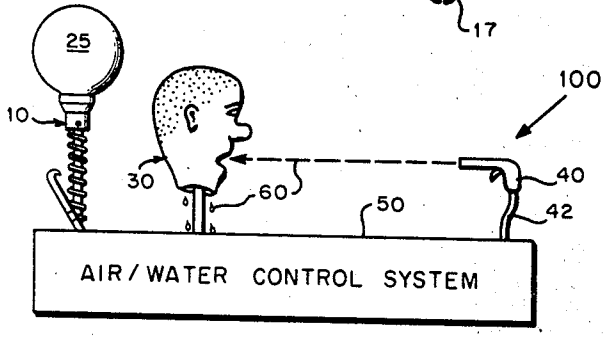


Fig. 1

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BALLOON REPLACING APPARATUS FOR AN AMUSEMENT SYSTEM

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Continuation-in-part of application Ser. No. 520,962, Jan. 17, 1966. This application Nov. 25, 1966, Ser. No. 596,835

6 Claims. (Cl. 273—101)

ABSTRACT OF THE DISCLOSURE

A water gun system for a plurality of players including a target and an inflatable balloon, each associated with a different player. Each of the balloons is mounted on an associated pipe and a balloon changing mechanism is used in the rapid replacement of a balloon that has been broken.

This is a continuation-in-part of application Ser. No. 520,962, filed Jan. 17, 1966, now Patent No. 3,336,030.

In amusement systems of the type in which many people participate, the players pit their skill one against another. Ordinarily, some goal is accomplished by the winner and the obtaining of the goal should be exciting to the participants as well as those watching the game. This excitement should build up until, at a dramatic close, one of the players wins. Balloon games achieve this excitement in which each of the players inflates an individual balloon attempting to break his balloon first. Each of the players has a gun, as for example a water gun, and he aims his gun toward an associated target. When the target is struck the balloon associated with that player is inflated.

More particularly, a target and an inflatable balloon are associated with each player. Fluid pressure means is connected by an individual fluid connection to each of the balloons and controlled by a valve for providing fluid pressure to inflate each of the balloons. A water gun is provided for each of the players with each gun being adapted to be equally spaced from the associated target. A source of water under pressure is supplied to each water gun so that each player controls a stream of water which he directs at his associated target. When a water stream strikes a target, a switch is actuated which opens the associated valve to allow fluid pressure to inflate the balloon. In this manner, each of the balloons is inflated with each player trying to explode his balloon first.

After one of the balloons has exploded, the game is terminated and fluid pressure is released from each of the balloons. However, before a new game may be started, the exploded balloon must be replaced by an attendant. It has been found that such balloon replacement has been relatively time consuming. It is very important that this balloon be replaced as rapidly as possible so that another game may immediately begin.

Accordingly, an object of the present invention is an amusement system in which balloons are adapted to be inflated each by a different player and in which the balloons may rapidly be replaced at the end of each game.

In accordance with the present invention, there is provided a water gun system for a plurality of players having a target and a balloon assembly for each player. Each player has a water gun and directs a stream of water at his target. Each balloon assembly includes (1) a fluid connection leading to a compressed air outlet for receiving the mouth of a balloon and (2) a funnel having a hollow conical shaped portion to provide a shoulder support for the balloon as it is inflated and a tube opening to slidably engage the fluid connection. The funnel is spring biased in the direction of the outlet to provide a snug fit over the balloon mouth. Latch means is provided to hold the funnel clear of the outlet when the funnel is manually pulled against the spring bias to allow the balloon to be replaced and for thereafter releasing the funnel.

For a more detailed disclosure of the invention and for other objects and advantages thereof, reference is to be had to the following detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a pictorial view of a water gun system;

FIGS. 2–4 illustrate in more detail differing side views of the balloon assembly and changing apparatus of FIG. 1 embodying the present invention;

FIG. 5 is a top view of the balloon assembly of FIG. 2 taken along lines **5—5**; and

FIG. 6 illustrates in detail and cutaway the funnel shaped balloon holder of FIG. 3 taken along lines **6—6**.

Referring now to FIG. 1, there is shown an amusement system **100** having an air control and a water control system **50** to provide air under pressure to balloons **25** mounted on an assembly **10** and water under pressure by way of conduits **42** to water guns **40**. While only a single water gun **40** and a single balloon **25** have been illustrated in FIG. 1, it will be understood that a plurality of such assemblies are provided as shown and described in more detail in Patent No. 3,336,030.

Each player aims his water gun **40** to direct a stream of water **60** at a tongue in a water intake opening of an associated clown head **30**. The clown heads **30** are rotated from side to side to make it more difficult for the water stream **60** to be directed into the water intake openings.

When the water stream **60** strikes a tongue within the intake opening of clown head **30**, a switch is actuated to energize the air control system **50** to inflate balloon **25** mounted on a balloon assembly **10**. At the end of a game, after one of the players has burst his balloon, the attendant actuates system **50** to remove air under pressure from each of the balloon assemblies **10**. At this time, the broken balloon must be replaced, which is readily accomplished by the attendant by way of a balloon changing mechanism for assembly **10** shown in more detail in FIGS. 2–4.

In FIGS. 2–4, a balloon assembly **10** comprises a hollow vertical feed pipe or fluid connection **11** having a lower threaded portion **11***a* and an upper threaded portion **11***b*. The lower threaded portion **11***a* is adapted to be threadedly coupled to the control system **50** to receive air under pressure. The upper threaded portion **12***b* threadedly engages the inner threads of a ferrule or sleeve **12** with the sleeve forming the upper end of pipe **11**. The outer cylindrical surface **12***b* of sleeve **12** is smooth with the lower surface being formed into a lip **12***a*. The mouth of the balloon **25** is manually fitted over sleeve **12** forming a fluid connection outlet.

More particularly, the outermost end of the balloon mouth forms a lip which may preferably be brought below lip **12***a* or the balloon lip may be brought just above lip **12***a* as illustrated.

It will be understood that as balloon **25** is inflated by compressed air flowing through pipe **11**, the balloon would normally tend to free itself from sleeve **12**. Specifically, as the balloon inflates, the mouth of the balloon tends to expand until the balloon would fly from the tube. However, a funnel shaped retainer cup **20** prevents this action and secures balloon **25** in place.

As shown in FIG. 6, funnel **20** slidably engages pipe **11** with the lower tube portion of the funnel having an inner cylindrically shaped opening **20***a* slightly larger in diameter than the outer diameter of pipe **11**. Opening **20***a* has a diameter less than that of the diameter of lip **12***a* of ferrule **12** and thus, the funnel is stopped and prevented from being removed from balloon assembly **10**. Ferrule **12** is received within an opening in a center

section of funnel **20**, approximately midway between the two ends thereof. The center section opening is cylindrically shaped and axial with the lower opening **20***a* but of larger diameter thereby to receive ferrule **12**. Accordingly, funnel **20** provides an inner annular surface to engage the lower surface of lip **12***a*. Thus, the balloon **25** may be placed below lip **12***a* so that the lip of the balloon is engaged between the lower surface of lip **12***a* and funnel **20**.

The conical shaped inner surface **20***b* of funnel **20** provides a shoulder for the sides of balloon **25** adjacent the mouth of the balloon. In this manner, the balloon is supported in an upright position as it is inflated and is prevented from falling on its side. Without the support of the funnel, the balloon would tend to fall to one side in its expanded state and would be in the way of water stream **60**.

Cup **20** is normally spring biased in an upward direction to engage sleeve **12** by a cylindrically wound spring **14** having an outer diameter less than that of the outer diameter of the lower section of funnel **20**. The upper end of the spring **14** engages the lower end of funnel **20** and the lower end of spring **14** is secured in place by a U-shaped clamp **15** illustrated in FIG. 5. Clamp **15** is secured to pipe **11** by way of a resilient gripping ring **16** disposed between the inner surface of clamp **15** and the outer surface of pipe **11**.

To rigidly secure clamp **15** there is provided bolt **17** received within openings in tabs **15***a* of the clamp. Bolt **17** carries a spacer **18** and is received within an opening at one end of a pivoted catch bar **22** disposed between the bolthead and the spacer. Bolt **17** is secured in place by a nut **19** which is tightened sufficiently to allow restrained movement of bar **22**. Bar **22** intermediate its length has a double bent portion **22***a* which provides an offset so that the upper portion of bar **22** is displaced away from pipe **11** approximately to the outer diameter of the lower cylindrical portion of funnel **20**.

A hook or catch **22***b* is formed at the end of catch bar **22** remote from clamp **15** to removably engage a pin or latching member **21** extending from the lower portion of funnel **20**. More particularly, pin **21** extends horizontally from the outer periphery of funnel **20** and as shown in FIG. 2, the pin is grasped or latched by hook **22***b* of bar **22**. In this latched position, funnel **20** is clear of sleeve **12** and held in position so that the balloon **25** may quickly and easily be replaced on sleeve **12** by the attendant. With funnel **20** held clear, the attendant may use both hands in replacing the balloon. In the normal unlatched condition shown in FIGS. 3 and 4, funnel **20** is spring biased to secure balloon **25** in place.

In operation, bar **22** is preferably maintained by bolt **17** in both the latched and unlatched condition in a position at a slight angle with the vertical as illustrated in FIG. 2. Specifically, after a balloon breaks and the game is over, the attendant with one hand by a simple hand movement pulls down funnel **20** on pipe **11**. With a slight twisting motion to the left, pin **21** is latched in hook **22***b* of bar **22**. The attendant then can use both hands to replace the broken balloon after which he unlatches or releases funnel **20** by a slight downward and slight twisting motion of funnel **20** to the right. Thus, in accordance with the invention, by a simple downward and twisting motion of funnel **20**, the funnel is latched and the attendant may rapidly replace the balloon without being concerned with funnel **20**. Then with a slight down and twisting motion of the funnel, it is unlatched and a new game may begin.

With the above understanding of the invention, it will be seen that many modifications may be made. For example, bar **22** instead of being at a slight angle to the vertical may be secured so that it is substantially vertical. The top edge of bar **22** may be slightly bent away from pipe **11** so that funnel **20** may be manually pulled vertically in a downward direction with pin **21** bearing against that bent portion. In this manner, bar **22** is pushed away from pipe **11** until pin **21** is received within hook **22***b*. The funnel may be released in the manner described above or by pulling the end of bar **22** away from pin **21** thus releasing the funnel.

The principles of the invention having now been explained together with modifications thereof, it is to be understood that many more modifications may be made within the scope and spirit of the following claims.

What is claimed is:

1. A water gun system for a plurality of players comprising target means and a balloon assembly for each player,

each balloon assembly including a fluid connection leading to an outlet for receiving the mouth of a balloon,

fluid pressure means connected to each of said target means and balloon assemblies for providing fluid pressure to inflate said balloons,

a water gun for each of said players for supplying under a player's control a stream of water to be directed at the associated target means and for actuating said fluid pressure means to inflate the associated balloon only when said water stream strikes said target means,

each of said balloon assemblies comprising funnel means having an hollow conical shaped portion to provide a shoulder support for said balloon as it is inflated and a hollow tube opening to slidably engage said fluid connection,

means to spring bias said funnel means in the direction of said connection outlet to provide a snug fit over the mouth of said balloon engaging said outlet, and

means for latching said funnel means when said funnel means is manually pulled against said spring bias in a direction away from said outlet to allow said balloon to be replaced on said outlet and for thereafter releasing said funnel means.

2. The water gun system of claim **1** in which said fluid connection comprises a pipe having a lip formed adjacent the outlet thereof for receiving said balloon mouth and said funnel tube opening having a smaller inner diameter than the outer diameter of said lip to provide a stop for said funnel means.

3. The water gun system of claim **2** in which said funnel means has a hollow opening axial with said tube opening and between said conical shaped portion and said tube opening for receiving said outlet lip.

4. The water gun system of claim **3** in which said hollow opening is cylindrically shaped and provides an inner annular surface to engage the lower surface of said outlet lip so that the lip of said balloon is engaged between the two surfaces.

5. The water gun system of claim **1** in which said funnel means includes a latching member and in which said latching means comprises a catch member having one end rigidly secured and the other end shaped to selectively engage and release said latching member.

6. The water gun system of claim **5** in which said catch member comprises a bar having one end secured to said fluid connection and the other end hook shaped to catch said latching member to clear said outlet lip when said funnel means is pulled in a direction away from said outlet.

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