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TOY PROJECTILE

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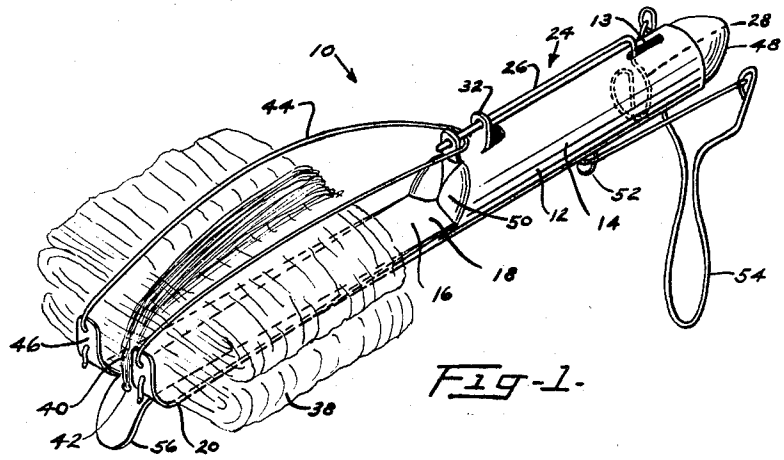


Fig-1-

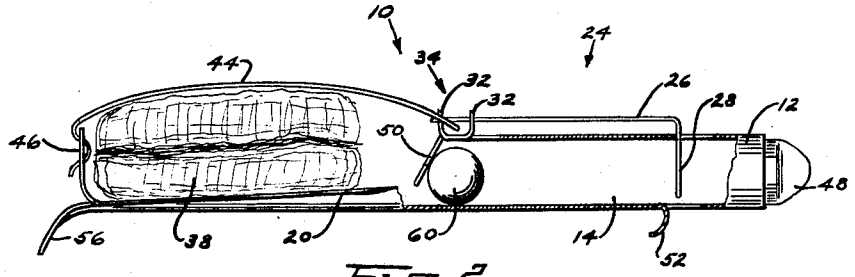


Fig-2-

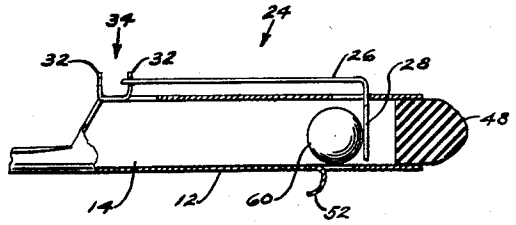


Fig-3-

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TOY PROJECTILE

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3 Claims. (Cl. 46—86)

This invention relates to a toy or similar article and particularly relates to a toy which may be projected into the air and which will descend by means of a parachute.

Many toys have been suggested in the past which can be shot into the air and which will descend by means of a parachute attached thereto. However, in the past, such devices proved very unsatisfactory since the parachute was stored inside the toy and the releasing mechanism for the parachute when the device is at the top of its ascent are complicated and therefore do not operate in a satisfactory manner.

The present toy comprises a substantially cylindrical or tubular shaped front body portion provided with an elongated chamber. A tail portion of substantially the same length as the body is formed at the rear end of the body. A latch member is slidably mounted on the top side of the body with a portion projecting into the chamber. The inner end of the latch cooperates with a keeper on the body. A metal ball is freely movable in the chamber for releasing the latch from the keeper. A parachute is attached to the rear or outer end of the tail by threads or lines. The parachute is folded and disposed or mounted on the tail of the toy, and a cord, clamp or the like secured to projections on the rear of the tail cooperates with the latch for holding the folded parachute on the tail of the toy.

It is an object of this invention to provide in a toy of the projectible type, means for mounting the parachute on the outside of the toy.

It is an other object of the present invention to provide in a toy of the projectile type which will release a parachute just before the top of its ascent.

It is a still further object of this invention to provide a toy of this character which comprises few elements so coordinated to be efficiently and easily operated.

Other and further objects and advantages of this invention will become apparent from the detailed description of the device and the appended claims.

In the drawing forming a part of this application:

Figure 1 is a perspective view showing the toy projectile about to be launched.

Figure 2 is a side view showing the toy, partly in section, and partly in elevation.

Figure 3 is a side view of the toy, in section, parts broken away, and the latch means in released position.

Referring in detail to the drawing, **10** is the toy projectile which comprises an elongated cylindrical body portion **12** at the front of the toy **10** having an elongated chamber **14**. A tail portion **16** is formed at the rear of the toy projectile **10**. The tail **16** consists of a depressed curved in cross-section portion **18** and horizontal projecting fins **20** at each side of the portion **18**.

A latch means **24** comprises a longitudinal wire **26** extending on the top of the cylindrical body **12** from adjacent the front thereof to adjacent the rear thereof. The front of the wire **26** extends through a hole **13** in the body **12** and terminates in a loop **28** in the chamber **14**. The rear end of the wire **24** extends through aligned

holes in upturned flanges **32** on the body **12** providing keeper means **34**.

A parachute **38** made of polyethylene or any other suitable material is fastened by threads **40** at apertures **42** in the rear of the tail **16** of the toy **10**.

A clamp **44** made of ruber, wire or the like is formed into a loop. The ends of the loop **44** are fastened to upturned ears **46** at the rear of the tail **16**.

A removable rubber nose **48** is mounted in the open front end of the tubular body **12** while the rear end is closed by members **50**.

A launching hook **52** is formed on the bottom of the tubular body **12** adjacent its front end. A slingshot **54** is employed to launch the toy projectile **10**. A depending flange **56** is formed at the rear of the tail **16** of the toy projectile **10**.

A metal ball member **60** is positioned in the chamber **14** of the tubular member **12** and is freely movable therein. Any type of movable weight may be positioned in the chamber **14**.

The parachute **38** is folded compactly together with the threads **40** of the shroud wrapped around the folded parachute **38**. The folded parachute is positioned on the top of the tail **16** of the projectile **10**, see Figure 1. The wire **26** of the latch **24** is moved forward on the toy **10**, see Figure 3, the loop or clamp **44** is slipped over the rear flange **32** of the keeper **34**, and then the wire **26** is moved rearwardly into the hole in the rear flange **32** thus locking the clamp **44**. Now the toy projectile **10** is ready to be launched into the air.

The rubber band of the slingshot **54** is engaged with hook **52**, see Figure 1. One hand of an operator grips the handle of the slingshot **54** while the other hand pulls back on the tail **16** of the toy **10** so that the elastic band is stretched and put under tension. When the tail **16** of the toy projectile **10** is released, the projectile is catapulted into the air and moves upwardly until the toy loses sufficient momentum, then ball **60** rolls or moves upwardly in the chamber **14** of the tubular member **12** until the ball **60** engages the loop **28** of the latch **24** thus moving the wire **26** upwardly disengaging the rear of the wire **26** from the rear flange **32** of the keeper **34** releasing the clamp **44** therefrom. When the clamp **44** is released from the keeper **34**, the folded parachute **38** falls off the tail **16**. The released parachute **38** will now unfurl and lowers th etoy slowly to the ground.

The ball **60** being freely movable in the elongated chamber **14** of the tubular body **12**, with the ball **60** in the rear end of the chamber **14**, and the loop **28** of the latch **34** adjacent the opposite or front end of the chamber **60** when the toy **10** is launched, permits the parachute **38** to be released before the toy **10** reaches the zenith of its flight into the air.

The parachute being disposed on the tail **16** on the outside of the chamber, permits the parachute **38** to unfurl quickly without danger of being tangled with the latch means **34** on the tubular body **12**.

The nose **48** being removable from the front of the body **12**, permits the wire **24** being pulled out of keeper **34**, into chamber **14** through slot **13**, then out the open front end of the body **12**. Thus the ball **60** may be removed from the chamber **14** of the tubular body **12**.

Having thus described the invention, what is claimed is:

1. A toy projectile comprising a hollow elongated body defining a weight confining chamber therewithin, a parachute, a plurality of flexible lines tying said parachute to the tail of the body, retaining means for holding said parachute in a folded condition on the outside of said body to increase the wind resistance of the body during its upward travel through the air, a weight element freely mounted within the chamber of said body, a releasable latch normally holding the parachute retaining means in

retaining position but having a trigger element mounted in the forward portion of said chamber to release said latch when engaged by said weight the resistance of the folded parachute retained on the outside of said body being sufficient to cause relatively rapid deceleration of said body, the inertia of said weight freely housed within said chamber causing the weight to move forward within said body chamber due to said deceleration whereby said weight engages said trigger element with sufficient force to release the latch and said retaining means to release the parachute during the upward travel of the projectile before the same reaches its zenith.

2. The structure set forth in claim 1 and said latch mechanism comprising a sliding pin with the forward portion thereof extending through the wall of said body into said chamber and defining said trigger element and said retaining means being hinged at its rear portion to said body and having a cross element formed at the forward end thereof to underlie said pin when the same is in

latched position but being released by the engagement of said ball against said trigger to project said pin out of engagement with said retaining means and permit the retaining means to swing back on its hinged connection to release said parachute.

3. The structure set forth in claim 1 and said weight comprising a spherical ball freely housed within said chamber.

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