July 4, 1961 D. A. POLZIN 2,990,645

TOY WHALE

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Fig. 1

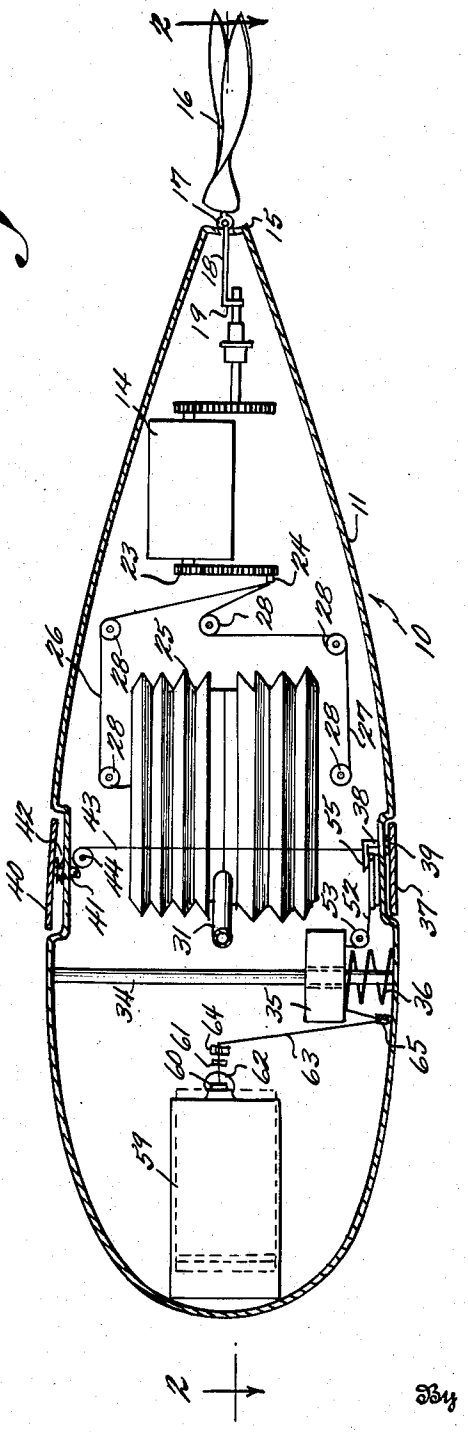
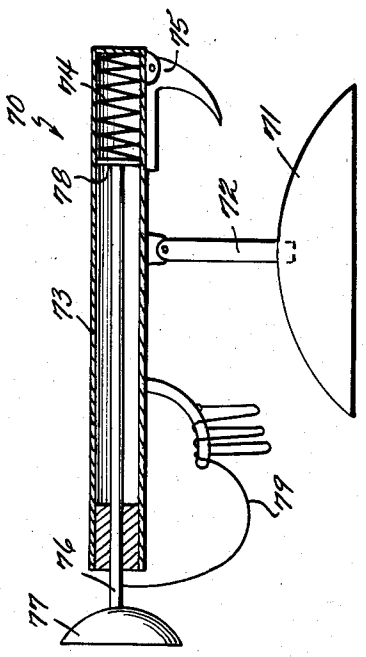


Fig. 5



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Fig. 2

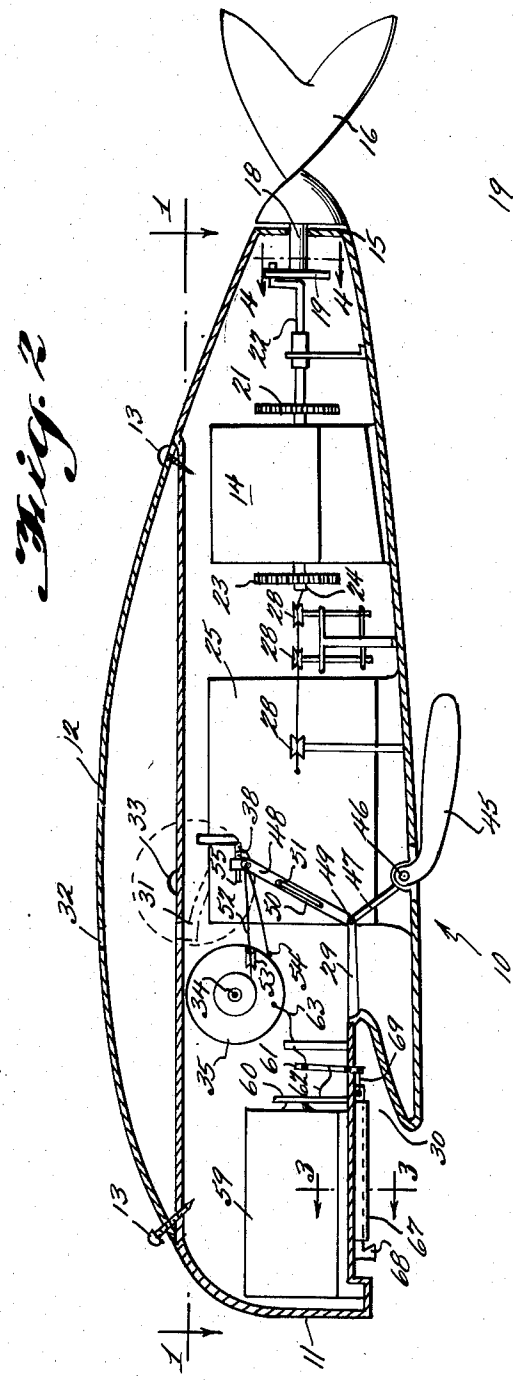


Fig. 4

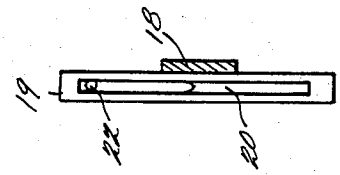


Fig. 3

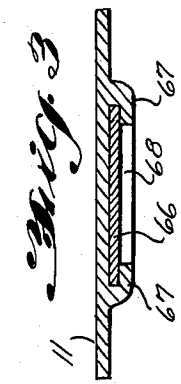
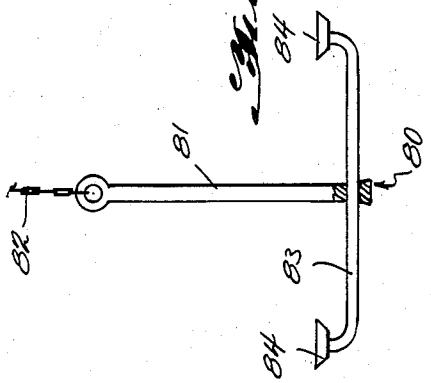


Fig. 6



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United States Patent Office 2,990,645 Patented July 4, 1961

2,990,645

TOY WHALE

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Filed June 11, 1959, Ser. No. 819,669
4 Claims. (Cl. 46—243)

The present invention relates to a toy whale of the animated variety.

The primary object of the invention is to provide an animated toy whale having means to simulate the action of a live whale.

Another object of the invention is to provide a toy whale of the class described above having means to cause the whale to simulate the action of a whale when harpooned.

A further object of the invention is to provide a toy whale having power driven means for causing the whale to move through the water and to alternately dive and surface while moving through the water.

A still further object of the invention is to provide a toy whale of the class described above which is inexpensive to manufacture, simple to use and which will provide entertainment for children over a long period of time.

Other objects and advantages will become apparent in the following specification when considered in light of the attached drawings, in which:

FIGURE 1 is a top plan view of the mechanism of the invention with the body shown in section, taken along the line 1—1 of FIGURE 2 looking in the direction of the arrows;

FIGURE 2 is a longitudinal vertical section taken along the line 2—2 of FIGURE 1, looking in the direction of the arrows;

FIGURE 3 is an enlarged fragmentary vertical sectional view taken along the line 3—3 of FIGURE 2, looking in the direction of the arrows;

FIGURE 4 is an enlarged fragmentary vertical sectional view taken along the line 4—4 of FIGURE 2, looking in the direction of the arrows;

FIGURE 5 is a side elevation shown partially in section of a harpoon throwing accessory used with the toy whale; and

FIGURE 6 is a side elevation partially in section of a hook accessory used with the toy whale.

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures, the reference numeral **10** indicates generally a toy whale constructed in accordance with the invention.

The toy whale **10** includes a hollow plastic body **11** simulating generally the shape of the body of a whale. A hollow plastic false top **12** is secured to the top of the whale body **11** by means of screws **13**. An electric motor **14** is mounted in the body **11** in offset relation with respect to the center line thereof near the rear end **15** of the body **11**. A flipper tail **16** is mounted on the end **15** of the body **11** by means of a vertically extending pivot **17**. An actuator arm **18** is fixed to the tail **16** and extends into the body **11**. A yoke **19** is mounted on the inner end of the arm **18** and has a vertically extending slot **20** formed therein. A gear train **21** is connected to the rear end of the motor **14** and has a rearwardly extending crank **22** mounted for rotation thereon. The crank **22** engages in the slot **20** of the yoke **19** so that upon rotation of the gear train **21** the tail **16** is caused to oscillate from side to side on the pivot **17**.

A second gear train **23** is mounted on the forward end of the motor **14** and carries an eccentrically moving tether pin **24** thereon. A bellows **25** is positioned forwardly of the motor **14** and is normally closed by an

internal spring (not shown). A pair of cords **26, 27** are connected to opposite sides of the bellows **25** and are trained over a plurality of pulleys **28** with their opposite ends connected to the tether pin **24**, whereby on rotation of the gear train **23** the bellows **25** is expanded and then permitted to contract alternately. A conduit **29** extends from the bellows **25** to the mouth **30** of the body **11**. A one-way conduit **31** extends from the bellows **25** into the false top **12**. The false top **12** has a port **32** formed centrally therein overlying the one-way conduit **31** and a pair of symmetrically arranged holes **33** positioned on opposite sides of the false top **12** adjacent the body **11**. The port **32** forms a dual purpose since it permits water forced out of the one way conduit **31** into the false top **12** to be squirted outwardly thereof to simulate the spouting of a whale. The openings **33** serve as drain holes to empty any water remaining in the false top **12** and also permits water to enter the false top **12** as the whale submerges. The water thus entering the false top **12** by means of the openings **33** affects the buoyancy of the whale and port **32** also permits air and water to be spouted outwardly therethrough as the whale submerges and the water enters through the openings **33**.

A shaft **34** extends horizontally across the body **11** forwardly of the bellows **25** and has a weight **35** slidably mounted thereon. The weight **35** is normally positioned on the shaft **34** on the opposite side of the body **11** from the motor **14** so as to counterbalance the motor **14** to cause the body **11** to float in an erect position.

A coil spring **36** is held in compressed position by the weight **35**, with the weight **35** in its counterbalancing position.

A trigger plate **37** is mounted in one side of the body **11** on a shaft **38** and is normally urged outwardly away from the body **11** by a coil spring **39**. A second trigger plate **40** is mounted in the opposite side of the body **11** on a shaft **41** and is normally urged away from the body **11** by a coil spring **42**. A cord **43** trained over a pulley **44** connects the shafts **38, 41** so that inward movement of the shaft **41** will cause the shaft **38** to also simultaneously move inwardly. A tripper **45** is secured to the underside of the body **11** by a pivot pin **46**. An arm **47** extends inwardly from the inner end of the flipper **45** and is connected to an elongated link **48** by a pivot pin **49**. The link **48** has an elongated slot **50** formed therein which engages over a mounting pin **51** supported in the body **11**.

A cord **52** is connected to the weight **35** and is trained over a pulley **53** and passes through a bore in the upper end of the link **48** extending to an anchor point **54** adjacent the pulley **53**. A latch **55** is mounted on the shaft **38** and normally retains the link **48** in the position illustrated in FIGURE 2. The compression of the coil spring **36** by the weight **35** maintains the cord **52** taut so that on movement of either of the trigger plates **37, 40** the latch **55** will release the link **48**, permitting the coil spring **36** to move the weight **35** to the same side of the body **11** as the motor **14**. This movement will cause the tripper **45** to be moved outwardly and will simultaneously overbalance the whale body **11**, causing it to float on its side with the motor and weight **35** down.

A battery **59** is mounted in the forward end of the body **11** and has a switch connector bar **60** engaging the contact thereof. A pivoted post **61** is mounted in the body **11** and has a tether **62** connected to the switch bar **60**. A cord **63** has one end connected to the post **61** and passes through a pair of guides **64, 65** with its opposite end connected to the weight **35**. Movement of the weight **35**, as described above, upon actuation of the trigger plates **37** or **40**, will move the cord **63** to disengage the switch bar **60** from the battery **59** to deenergize the motor **14**

so as to stop the propelling and pumping action thereof.

A magnetized plate **66** is mounted in the mouth **30** on a pair of angle guides **67** formed integrally with the body **11**. The forward end of the magnetized plate **66** is provided with an undercut depending flange **68**, as best seen in FIGURE 2. The magnetized plate **66** is connected by a tether **69** to the lower end of the post **61** so that on forward movement of the plate **66** the post **61** will be pivoted to move the switch bar **60** out of contact with the battery **59** so as to shut off the motor **14**.

A harpoon gun is generally indicated at **70** in FIGURE 5 and includes a suction cup base **71**, standard **72**, elongated tubular barrel **73**, coil spring **74**, release trigger **75** and a harpoon shaft **76** having a suction cup **77** mounted on its outer end. The harpoon shaft **76** is forced into the barrel **73** against a spring follower **78** and the spring **74** is held compressed by the trigger **75**. Upon release of the trigger **75**, the spring **74** expels the harpoon shaft **76** from the barrel **73** so that if properly aimed, suction cup **77** will strike the trigger plates **37** or **40** to establish the action described above. A tether **79** secures the harpoon shaft **76** to the barrel **73** to permit the harpoon shaft **76** to be retrieved following a shot.

A hook, indicated generally at **80** in FIGURE 6, consists of a shank **81** supported on a line **82** and having a cross bar **83** loosely mounted in the opposite end thereof, terminating in a pair of heads **84** rigidly secured to opposite ends thereof. The hook **80** is adapted to be used in conjunction with the magnetized plate **66** and the heads **84** cooperate with the depending flange **68** to prevent the hook **80** from slipping off of the magnetized plate **66**.

In the use and operation of the invention, the whale **10** is released in a pool of water, such as a bath tub with the motor **14** driving the body **11** forwardly by means of the tail **16** and simultaneously pumping water into and out of bellows **25** to vary the buoyancy of the body **11**, causing the whale to alternately submerge and rise with a weak stream of water being expelled through the hole **32** as the whale rises to the surface, simulating the spouting of a whale. The whale when harpooned will roll over and cease moving in the water. When caught with the hook **80** the whale will stop moving forwardly and can be pulled in similarly to a fish.

Having thus described the preferred embodiments of the invention, it should be understood that numerous

structural modifications and adaptations may be resorted to without departing from the scope of the appended claims.

What is claimed is:

1. A whale simulating toy comprising a hollow body, a motor mounted in said body, propulsion means coupled to said motor, buoyancy varying means positioned in said body and actuated by said motor, spring actuated counterbalancing means mounted in said body, said spring actuated counterbalancing means comprising a horizontal shaft mounted in said body transversely thereof, a weight slidably mounted on said shaft, and a coil spring mounted on said shaft and engaging said weight to move said weight from a balancing position to an overbalancing position at the opposite end of said shaft, a battery for energizing said motor, a switch connecting said battery to said motor, means connecting said switch to said weight, and means actuated from outside said body for releasing said spring to move said weight to overbalance said body and to simultaneously deenergize said motor by the weight pulling the means connected to the switch to actuate the switch to disconnect the battery from the motor.

2. A device as claimed in claim 1 wherein the means for varying the buoyancy of said body comprises a bellows, and means on said motor actuating said bellows to pump water into and out of said bellows.

3. A device as claimed in claim 1 wherein said propulsion means comprises a tail mounted for oscillation on one end of said body and means on said motor for oscillating said tail.

4. A device as claimed in claim 1 wherein a magnetized plate is mounted on said body for sliding movement with said plate being engageable by a hook, and means actuated by movement of said plate for deenergizing said motor.

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