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RUBBER OCTOPUS

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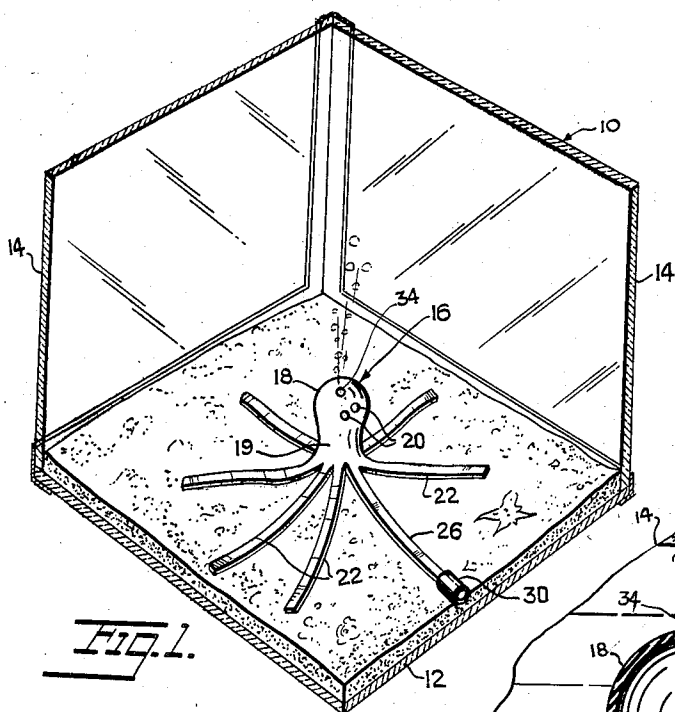


Fig. 1.

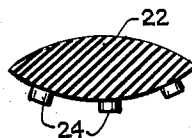


Fig. 4.



Fig. 5.

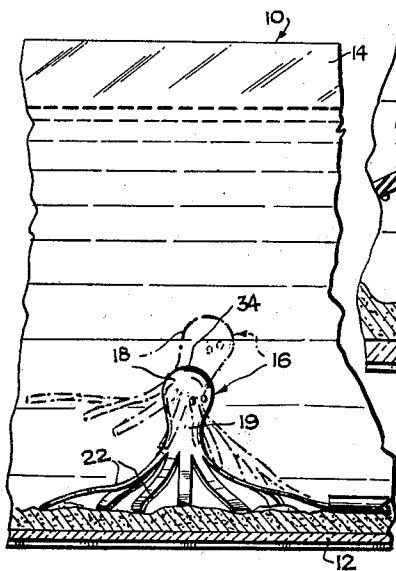


Fig. 2.

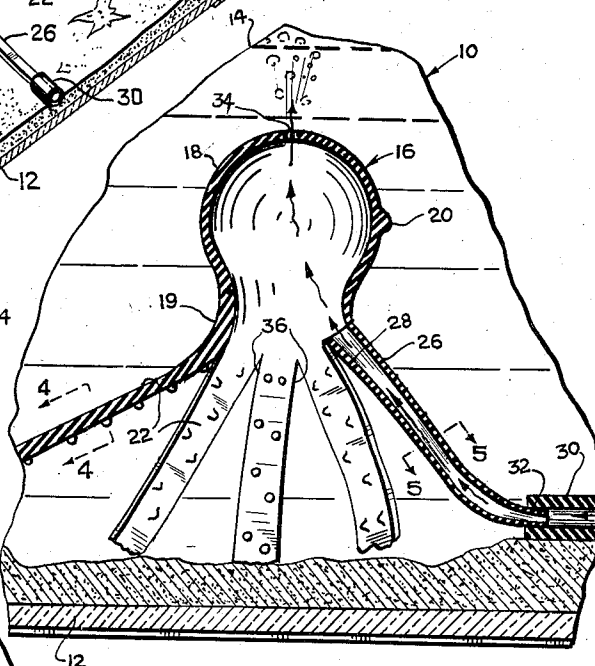


Fig. 3.

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6 Claims. (Cl. 46—92)

The present invention relates to an octopus-simulating article of manufacture that can be used either as a toy, or as a decoration or accessory for an aquarium.

While hereinafter the article will be termed a toy for purposes of convenience, it will be understood that it is not necessarily limited to this use and would ordinarily be kept in an aquarium together with other ornamental objects falling within this general category.

One important object is to provide a toy octopus which not only will simulate a live octopus in appearance, but also will faithfully simulate the movements of the octopus under water.

Another object is to so design the toy octopus that after a predetermined time at the bottom of a water tank, the octopus will slowly rise toward the surface, traveling through a shallow arc upwardly from the bottom a short distance, thereafter to settle to the bottom once again, in further faithful simulation of the activities of a live octopus.

Another object is to provide a toy octopus as stated that will duplicate the movements of a live octopus by reason of a particular construction which includes the charging of the interior of the article at predetermined, uniformly spaced intervals with air, in a manner such that after a certain quantity of air has been directed into the article, the article will become buoyant, will move upwardly for this reason, will discharge the air in the form of small bubbles through an orifice in its head, and having so discharged the air will lose its buoyancy and slowly return to the bottom.

Still another object is to provide a toy octopus as stated which is adapted to be tethered to, and charged with air by, the conventional aerating hose extending from an ordinary aquarium pump, so that the octopus provides the outlet for air bubbles used for aeration purposes, the pump hose thus having, in addition to its usual function, the function of serving as an anchoring line for the octopus.

Yet another object is to provide a toy octopus as stated that can be manufactured at low cost, from molded rubber or the like.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Figure 1 is a fragmentary perspective view of a fish tank or aquarium, with a toy octopus formed according to the present invention positioned on the bottom thereof.

Fig. 2 is a sectional view through the aquarium showing the octopus in full lines at the bottom of the same, and in dotted lines after it has traveled upwardly to the upper limit of its movement.

Fig. 3 is an enlarged sectional view through the octopus.

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Fig. 4 is a detail sectional view, still further enlarged, through one of the tentacles.

Fig. 5 is a sectional view on line 5—5 of Fig. 3, on the same scale as Fig. 4, through another one of the tentacles.

In the several figures of the drawing, the octopus is illustrated in a conventional aquarium or fish tank generally designated 10, having a bottom 12, and side walls 14. A quantity of sand is deposited upon the bottom in the usual manner and supported upon the sand is a toy octopus 16 formed according to the present invention.

The article is formed of molded rubber, flexible plastic, or the like, and includes a generally globular head 18 merging at its lower end into a neck portion 19 which is reduced in diameter relative to the greatest diameter of the head.

The head, as shown in Fig. 3, is hollow, and is wholly open at its lower end. Formed on the outer surface of the head are protuberances 20, simulating the eyes of the octopus.

Formed integrally with and depending from the neck portions are tentacles 22. These are formed as elongated, highly flexible strips of rubber material, of flattened solid cross section as shown in Fig. 5, and on the underside of the tentacles 22, there are integrally formed protuberances 24, simulating the suction cups of the tentacles of a live octopus.

In addition to the flattened tentacles 22 of solid cross section, there is provided a tentacle 26, which is of tubular formation from end to end thereof, said tentacle 26 being formed open at its opposite ends. The tentacle 26 is of a shallowly elliptical cross section, having a longitudinally and centrally extending bore 28 providing a conduit for air pumped through the conventional outlet tube or hose 30 of an ordinary aquarium air pump, not shown. At its outer end, tentacle 26 has a cylindrical portion 32, adapted to be frictionally engaged in the outlet end of the hose or tube 30 to connect the bore 28 in communication with that of the tube.

The tube may be partially or completely buried in the sand, so as to substantially conceal the same from one viewing the aquarium, and the weight of the tube and the fact that it may be so buried causes the tentacle 26 to be firmly anchored as its outer or inlet end.

At its inner or discharge end, the tentacle 26 opens into the lower end of the head 18 of the octopus. Therefore, when air is pumped through tube 30, it will tend to fill the head 18. In this connection, head 18 has at its upper end a centrally disposed, very small outlet port 34 for air. The size of the port is such that air directed into the head of the octopus while the octopus is in its lower, full line position of Fig. 2, will initially be trapped, forming a pocket of air in the head 18. In this connection, the octopus is ordinarily non-buoyant, and therefore, the pocket of trapped air tends to escape to the surface and in doing so it renders the octopus buoyant, causing the same to rise slowly toward the surface of tank 10.

Since tentacle 26 is tethered to tube 30, the octopus can travel only in a shallow, prescribed arc between its full and dotted line positions, pivoting, in effect, about the connection of tentacle 26 to tube 30.

Thus, the octopus, having traveled upwardly to its maximum extent, is halted due to its connection to the tube 30. The cessation of upward movement of the octopus helps the air gathered in head 18 to escape through the orifice or air outlet port 34, it being noted in this regard that since the head is now tilted, some of the air may escape through the spaces 36 defined between adjacent tentacles of the toy.

Once the air has escaped, the buoyancy of the octopus is lost. It therefore sinks slowly to the bottom, traveling downwardly within the same arc.

The sequence is repeated continuously, as long as air is supplied. Therefore, it may be observed that the octopus is usable as the outlet for air that is ordinarily supplied from the discharge end of the air tube for the purpose of aerating the aquarium water. It is worth noting, in this regard, that since the octopus travels within an arc, it has the effect of providing an arcuately shifting discharge nozzle or outlet head for the air tube, producing the desirable result of increasing distribution of the air bubbles within the water. This is distinguished from the ordinary arrangement, in which the outlet for bubbles used for aeration pumps remains fixed at all times in a particular location of the tank, until such time as it is positively moved.

The timing and the rapidity of the rising and falling movements of the octopus are adjustably controlled, by using a regulating valve or clamp, not shown, in the air tube. In other words, if rapid up-and-down movement of the octopus is desired, a greater quantity of air would be discharged through the tube. Slower movements of the octopus, correspondingly, are effected by a retardation of the air flow through the tube.

Still another feature of the invention results in the use of the several radially extending tentacles 22. These not only have the function of adding to the lifelike duplication of the figure of a real octopus, but also serve as stabilizing wings or arms, which, extending outwardly from the head, maintain the head in an upright condition and prevent its accidental inversion during its upward and downward movements.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, the other arms being solidly formed from end to end thereof and being of a non-buoyant material, said other arms extending radially from the base of the head to stabilize the head against inversion during its rising and falling movements, the head having an opening at its lower end providing an escape aperture on lateral tilting of the head to a slight extent, responsive to upward movement of the head about the anchored outer end of said one arm, said escape aperture cooperating with the air outlet port to discharge air at the upper limit of the movement of the head.

2. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding

air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, the other arms being solidly formed from end to end thereof and being of a non-buoyant material, said other arms extending radially from the base of the head to stabilize the head against inversion during its rising and falling movements, the head having an opening at its lower end providing an escape aperture on lateral tilting of the head to a slight extent, responsive to upward movement of the head about the anchored outer end of said one arm, said escape aperture cooperating with the air outlet port to discharge air at the upper limit of the movement of the head, said opening extending over the full bottom area of the head.

3. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, the other arms being solidly formed from end to end thereof and being of a non-buoyant material, said other arms extending radially from the base of the head to stabilize the head against inversion during its rising and falling movements, the head having an opening at its lower end providing an escape aperture on lateral tilting of the head to a slight extent, responsive to upward movement of the head about the anchored outer end of said one arm, said escape aperture cooperating with the air outlet port to discharge air at the upper limit of the movement of the head, said opening extending over the full bottom area of the head, the several arms defining spaces therebetween adjacent said opening over the full circumference of the head, through which spaces air escaping through the opening may pass.

4. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, the other arms being solidly formed from end to end thereof and being of a non-buoyant material, said other arms extending radially from the base of the head to stabilize the head against inversion during its rising and falling movements, the head having an opening at its lower end providing an escape aperture on lateral tilting of the head to a slight extent, responsive to upward movement of the head about the anchored outer end of said one arm, said escape aperture cooperating with the air outlet port to discharge air at the upper limit of the movement of the head, said opening extending over the full bottom area of the head, the several arms defining spaces therebetween adjacent said opening over the full

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circumference of the head, through which spaces air escaping through the opening may pass, the connection of said one arm to the air supply source being arranged to limit the upward and downward movement of the octopus to travel in a shallow arc.

5. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, said air outlet port being centered in the upper end of the head, the head having at its base a large bottom opening concentric with the air outlet port, the arms defining spaces therebetween at the base of the head surrounding the large bottom opening, to provide escape passages for air passing out of the head through said opening in tilted positions of the head.

6. A toy octopus for insertion in a water tank, comprising a hollow, bulbous head forming an air chamber, said head having at its upper end an outlet port for air trapped in the chamber, and a plurality of tentacle-simulating arms extending from the base of the head, one

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arm having a longitudinal bore forming an air passage and said passage being in communication with the chamber, said one arm being connectible at its outer end in communication with an air supply source for anchoring said one arm at its outer end and for feeding air through the bore into the chamber to trap the air in the chamber, thus to cause the octopus to rise slowly, following trapping of a predetermined quantity of air therein, toward the surface of the tank, and to settle slowly to the bottom following discharge of the trapped air through said port, the head being formed at its base with a neck of reduced diameter, said neck being wholly open at its lower end, the port being centered in respect to the neck, the arms terminating at their inner ends at the neck, said arms being progressively increased in width toward their inner ends with adjacent arms extending into convergence at the neck to define downwardly opening, substantially V-shaped spaces between said adjacent arms, said spaces forming escape passages communicating with the air chamber through the neck to permit the escape of air from the air chamber in tilted positions of the head.

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