March 15, 1960 A. P. FULTON 2,928,205

BUBBLE PRODUCING TOY

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Fig.1.

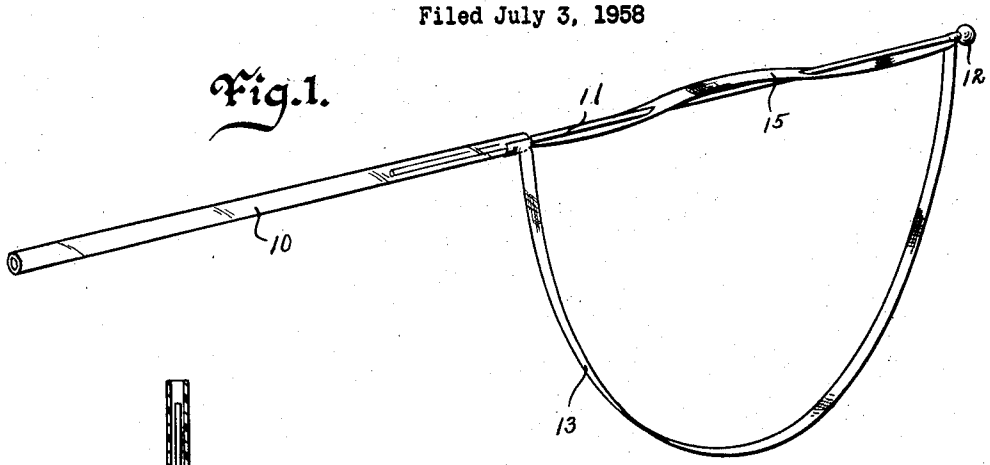


Fig.2.

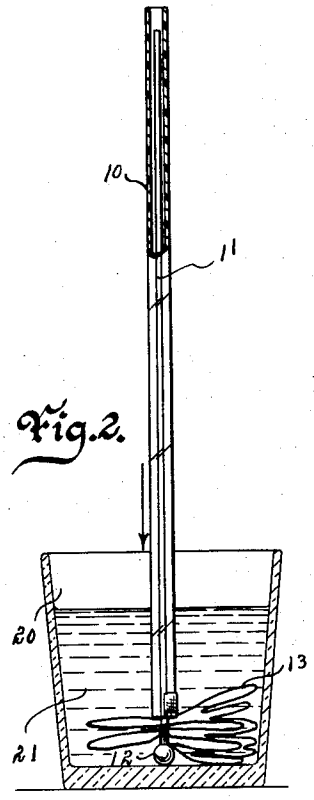
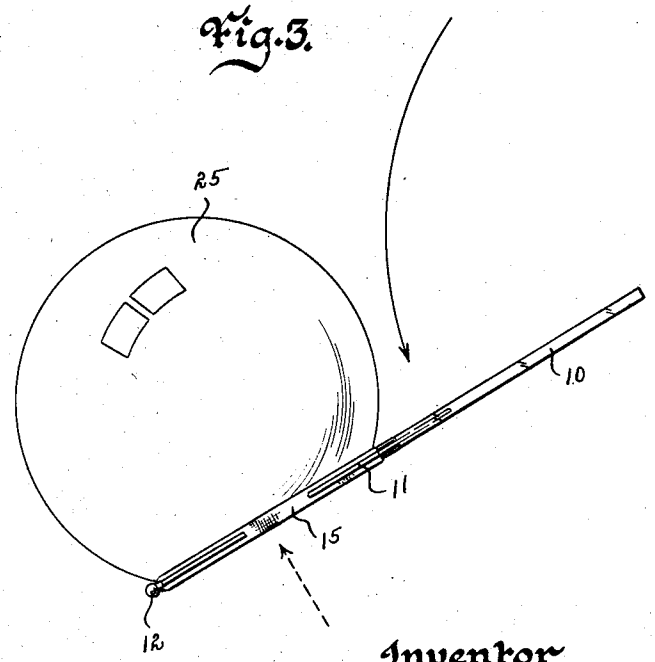


Fig.3.



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BUBBLE PRODUCING TOY

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2 Claims. (Cl. 46—6)

The invention relates to a bubble producing toy and more particularly to one that may be expanded into a bubble producing condition by automatic action through the operation of gravity to its component parts.

The most common method of producing soap or like bubbles is by manually blowing through a stem pipe or like. Obviously the bubble solution often gets into the mouth of the user and the size of the bubble is small and uniform. Furthermore, the conditioning of the bubble producing device is time-consuming and complicated.

Therefore, one of the principal objects of my invention is to provide a bubble producing toy that is manually operated and thus does not require the use of either the user's mouth or lungs.

A further object of this invention is to provide a bubble producing toy that utilizes gravity forces to place the device into operation.

A still further object of this invention is to provide a bubble producing device that may be reconditioned for bubble production from a shallow container of bubble fluid.

A still further object of the invention is to provide a bubble producing toy that is capable of producing a plurality of bubbles from one dipping into the bubble solution.

A still further object of this invention is to provide a bubble producing device that may be collapsed into a compact unit for storage or transportation.

Still further objects of my invention are to provide a bubble producing toy that is economical in manufacture, durable in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangements, and combination, of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in my claims, and illustrated in the accompanying drawings, in which;

Fig. 1 is a side perspective view of my device expanded and ready for use;

Fig. 2 is a side view of my bubble producing toy in contracted condition and being inserted into a container having a bubble solution; and

Fig. 3 is a side view of the device in actual operation with broken lines showing its part positions just prior to its movement into an expanded condition.

In these drawings, I have used the numeral **10** to designate a handle or grip portion which is in the form of an elongated hollow tube. I show this handle to be of transparent material, but it may be of metal, glass, plastic, or like rigid material. Slidably extending into this handle **10** from one end thereof, is a rod **11**. The numeral **12** designates a weight on the free outer end of the rod **10** as shown in Fig. 2. The numeral **13** designates a loop or length of flexible material such as a cord, ribbon, or like, of cotton or like absorbent material. One end of this strand **13** is secured to the free end of

the handle **10** and its other end secured to the free outer end of the rod **11**, as shown in Fig. 1. The numeral **15** designates a like cord, ribbon, or like, but of a length substantially less than the length of the strand **13**. This strand **15** has one end secured to the free end of the handle and its other end secured to the free outer end of the rod **11**. If desired, the strand **13** and strand **15** may be of one continuous piece, but in any event the strands **13** and **15** form a ring wick, as shown in Fig. 1. The length of the portion **15** is substantially less than that of the length of the rod **11**, and inasmuch as it is fastened to the handle **10** and outer end of the rod, it not only serves as a portion of the wick, but acts as a limiting stop to the outwardly sliding action of the rod from the handle. So that the portion **15** will be maintained adjacent the length of the rod when the rod is in an extended position relative to the handle, I have the rod slidably extending through the portion **15** at two points, as shown in Fig. 1. This also aids in holding the rod **11** in an outward position, once it has assumed this position. To use my device, its end carrying the wick is inserted into a container **20** having a bubble solution such as soap or like water **21**. This container may be relatively shallow or in the form of a bottle. If the rod **11** is not first slid backwardly into the handle, it will be so forced and positioned when its free end engages the bottom of the container. This "bunches" the entire wick into the bubble solution, even if the depth of the bubble solution is at a minimum. Next, the device is withdrawn and the telescoped rod within the handle will, by gravity, slide outwardly while the device is raised vertically upwardly from the solution. The bubble cast is made by manually horizontally swinging the arm holding the device in a circular path. With the wick open and air passing through its open condition, bubbles will result. According to the will of the operator either a relatively large bubble **25** or a continuous series of bubbles will be formed and released. In forming a series of large bubbles, the device may be flicked at a right angle to separate the bubbles. After the wick gets dry of solution, it is again inserted into the supply container having the bubble solution. The weight **12** encourages the downward movement of the rod by the force of gravity as it is lifted from the container **21**. During the casting procedure, the wick portion **13** will limit the outward movement of the rod. When contracted, the device requires very little space. by being of elongated construction and of minimum diameter, the device may be inserted into a bottle of bubble solution having a very small neck opening.

From the above it will be seen that when the device is lifted from the container, it will expand, and when placed in a horizontal position the loop **13** will fall downwardly creating an aperture closed with a soap film. The portion **15** of the wick by the rod extending through it, will tend to hold the rod outwardly thereby making possible the casting of the device at various angles to the horizontal. The art of casting bubbles is simple and continuous when one hand is used to hold the container and the other hand manipulates the device. The operation is dip, lift, tilt, and cast.

Some changes may be made in the construction and arrangement of my bubble producing toy without departing from the real spirit and purpose of my invention, and it is my invention to cover by my claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a bubble producing toy, a handle portion, a rigid rod slidably extending into said handle portion, a weight secured to the outer end portion of said rod to

encourage the movement of said rod from said handle when subjected to centrifugal or inertial forces, and a continuous wick strand having no ends and having one point operatively secured to said handle portion and a second point operatively secured to said rod; the length of the wick strand between the two points of the wick strand being less than that of the length of said rod and less than one-half the length of the wick strand.

2. In a bubble producing toy, a pipe handle, a rigid rod having its rear end slidably extending into the forward end of said pipe handle, a weight on the outer end of said rod to encourage the movement of said rod from said handle when subjected to centrifugal or inertial forces, a continuous wick strand having no ends secured at one point of its length to the outer end portion of said rod and a second point of its length secured to the outer end portion of said pipe handle; the length of the wick strand between the two points of the wick strand being less than that of the length of said rod and less than one-half the length of the continuous wick strand.

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