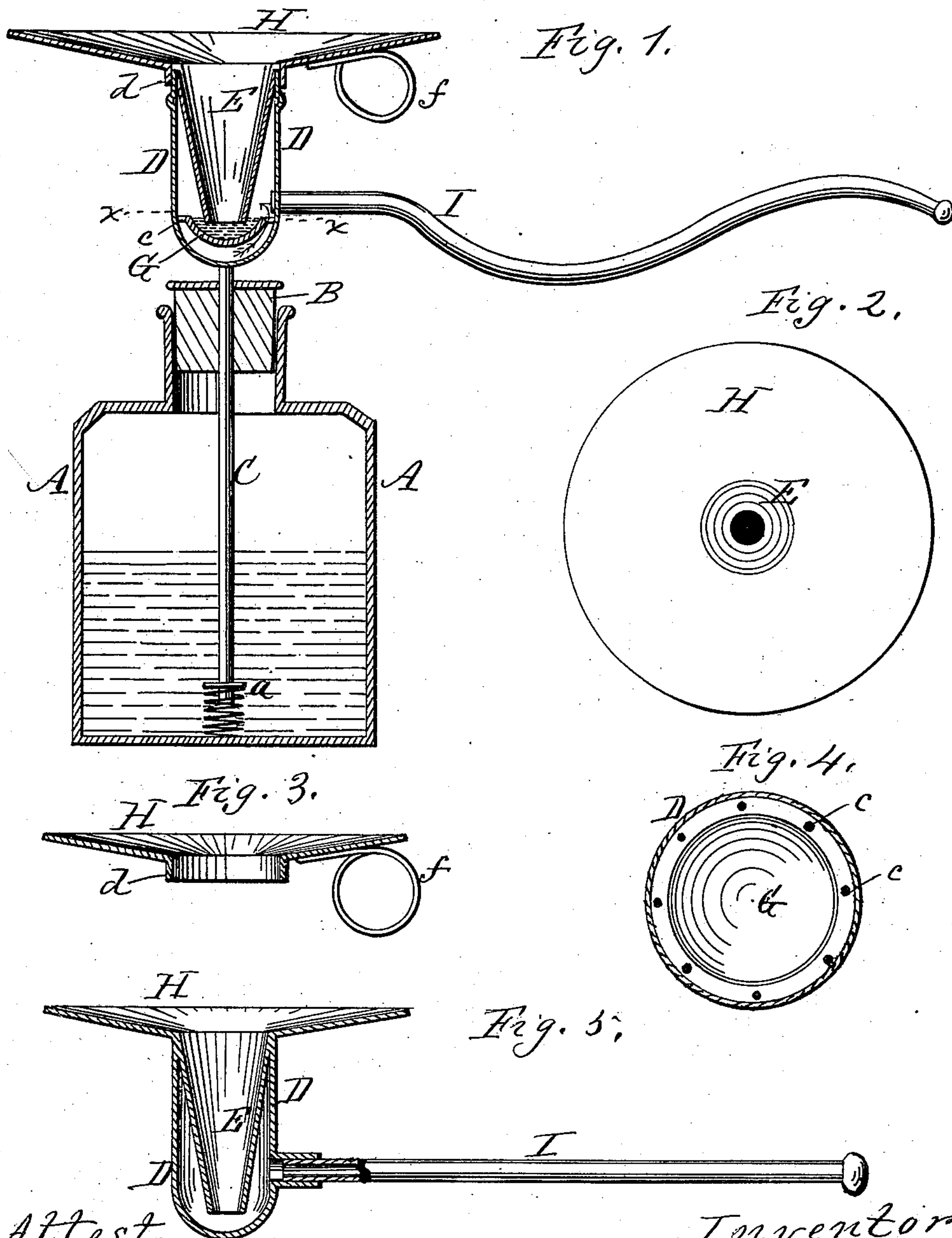


(No Model.)

W. S. FICKETT.
BUBBLE BLOWER.

No. 294,728.

Patented Mar. 4, 1884.



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WILLIAM S. FICKETT, OF ROCHESTER, NEW YORK.

BUBBLE-BLOWER.

SPECIFICATION forming part of Letters Patent No. 294,728, dated March 4, 1884.

Application filed August 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. FICKETT, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Devices for Blowing Bubbles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the apparatus. Fig. 2 is a plan of the top bowl or disk. Fig. 3 is a vertical cross-section of the same. Fig. 4 is a cross-section in line *xx* of Fig. 1, enlarged. Fig. 5 is a longitudinal sectional view, showing a modification.

My improvement relates to toy devices for blowing bubbles; and it consists in the construction and arrangement hereinafter more fully described and claimed.

In the drawings, A shows a bottle or other receptacle, in which is placed the liquid for producing the bubbles.

B is a cork or other stopper, which fits in the mouth of the same, and is capable of being moved up and down freely.

C is a vertical tube, which is fast in the stopper, the upper end projecting above the stopper, and the lower end resting a little distance above the bottom of the bottle and resting on a spiral or other spring, *a*, of such power as to throw the tube and the cork up, when the cork is released by the hand of the operator. When the cork is pressed down, the liquid will be forced up through the tube, owing to the condensation of the air. When released again, the liquid will fall in the tube, except the small quantity for forming the bubble, as will be directly described.

D is a chamber attached to the top of tube C, and into which the tube opens. The bottom of the chamber is closed, also the top, with the exception that a cone, E, is attached to the top, said cone being open at both ends, the small end extending down nearly to the bottom of the chamber, as shown in Fig. 1.

G is a bowl-shaped diaphragm or cup between the end of the cone and the bottom of the chamber, leaving a jacket-space, *b*, through which the liquid can flow upward. The cup is provided with a series of perforations, *c c*, near its edges, through which the liquid passes

into the cup. The end of the cone enters into the cup, and when the latter is filled there is just enough of the liquid resting above the end of the cone to form the bubble. Whatever surplus of the liquid is raised will flow back through the perforations when the pressure is removed.

H is a wide disk on top of the chamber D, the sides being made flaring, so that as the liquid is thrown up into the bubble the surplus will fall back on the disk, and will be blown out again and assist in forming the bubble till it is all used up.

I is a hollow tubular stem, flexible or otherwise, through which air is blown to form the bubble.

The disk H may be stationary on the chamber or removable; but in the form of apparatus shown in Fig. 1 it is preferably removable, having a flange, *d*, that fits outside or inside the chamber, and being provided with a handle, *f*, so that when the bubble is formed the disk can be lifted off away from the chamber, and can be carried around with the bubble adhering.

The operation is as follows: To charge the cup G, the cork is pressed down into the neck of the bottle, thereby causing the liquid to flow up tube C into and through the space *b* and the perforations *c c*, filling the cup, as before described. The cork is then released, and the surplus liquid will flow back, leaving the cup filled. Air is then blown in through the stem I, and acting upon the liquid in the cup, the liquid is forced up through the cone E, and then is spread to the outer edge of the wide disk H, where the bubble is formed. One important advantage results from the use of the wide disk H: The bubble has a wide base, so that the bubble can be blown standing up, instead of down, as where an ordinary device, like a pipe, is used, and therefore of much larger size, so that it can be carried around a room without dropping off, and such surplus liquid as remains runs back and down over the sloping sides, and it is not therefore a weight and impediment to the bubble, and the latter will last much longer.

In Fig. 5 is shown a hand-instrument, consisting of the chamber, the cone, the wide disk, and the stem. In this case the disk may be

made fast to the chamber, and the liquid in small quantity is turned down the cone for forming each bubble. The action is the same as in the device before mentioned, those parts only being left out which adapt it to the use of the bottle.

The bubble, when blown, can be readily disengaged from the disk by simply giving the device a quick movement sidewise. The bubbles blown by this instrument can be made of much larger size than by the common device, being frequently made two feet in diameter.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device for blowing bubbles, the combination of the chamber for holding the liquid, the cone resting in the chamber and reaching nearly to its bottom, the wide disk at the top of the chamber, and the stem opening into the chamber above the liquid for blowing air to produce the bubble, as set forth.

2. In a device for blowing bubbles, the combination of the exterior holding-chamber, the perforated cup in the bottom of the chamber, the cone resting in the chamber and its bottom passing below the top of the cup, the flaring disk at the top of the chamber, and the stem opening into the chamber above the cup, as set forth.

3. The combination of the exterior chamber, the perforated cup in the bottom of the chamber, the cone passing through the chamber, its lower end resting below the top of the cup, the flaring disk at the top of the chamber, the stem

opening into the chamber above the cup, and the tube attached to the chamber and passing down into the bottle or other supply-reservoir, as set forth.

4. In a device for blowing bubbles, the combination of the stopper resting in the mouth of the bottle, the tube attached to the stopper and passing down into the bottle, and an attachment at the top of the tube for blowing and forming the bubble, as set forth.

5. In a device for blowing bubbles, the combination of a stopper resting in the mouth of the bottle, a tube attached to the stopper and passing down into the bottle, and a spring at the bottom of the tube for producing the reaction of the parts, as specified.

6. In a device for blowing bubbles, the disk at the top of the attachment, forming a wide base for the bubble, and provided with sloping sides for discharging surplus liquid, as set forth.

7. In a device for blowing bubbles, the combination, with the chamber for receiving and holding the liquid that forms the bubble, of a disk at the top of the chamber, which is removable, and is provided with a handle, whereby it may be removed from the chamber with the bubble adhering, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM S. FICKETT.

Witnesses:

R. F. OSGOOD,

P. A. COSTICH.