

No. 721,373.

PATENTED FEB. 24, 1903.

P. D. HORTON,
BUBBLE BLOWER.

APPLICATION FILED, MAY 2, 1901.

NO MODEL.

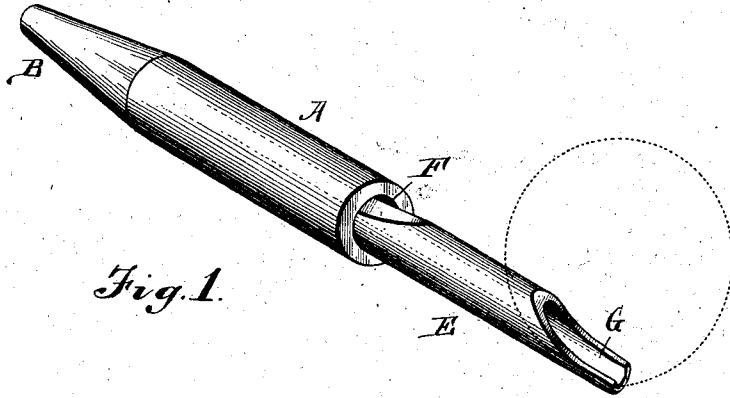


Fig. 1.

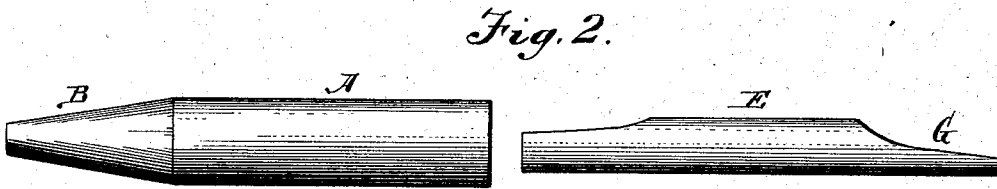


Fig. 2.

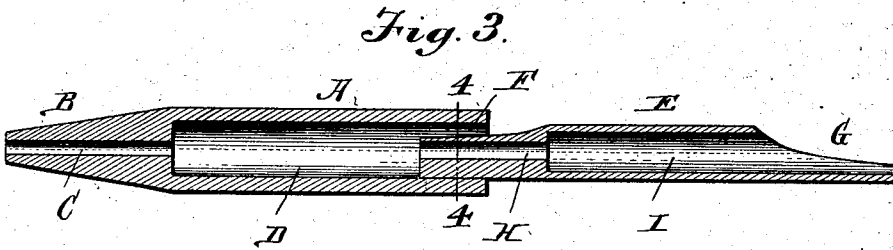


Fig. 3.

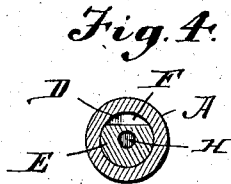


Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

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BUBBLE-BLOWER.

SPECIFICATION forming part of Letters Patent No. 721,373, dated February 24, 1903.

Application filed May 2, 1901. Serial No. 58,533. (No model.)

To all whom it may concern:

Be it known that I, PETER D. HORTON, a citizen of the United States, residing at Newark, in the county of Wayne and State of New York, have invented certain new and useful Improvements in Bubble-Blowers, of which the following is a specification.

This invention relates to an improvement in bubble-blowers; and it has for its object the production of a simple device of this kind which is inexpensive to manufacture and which, owing to its particular construction, permits the same to be made of wood or other similar material.

A further object is to construct a toy of this character which will offer many amusing advantages in use over all other similar devices heretofore patented.

Other objects are to so construct the device that the air blown into the upper end thereof is divided into two currents, one current passing from the mouthpiece to the opposite end of the blower, the function of which is to form and enlarge the bubble, while the other current passes from the mouthpiece through an opening or passage located midway between the ends of the blower and is directed against the bubble to detach or project the same therefrom in its inflated condition. It is also designed to produce a succession of bubbles, the size of which may be varied by the operator, and to produce and join together bubbles of like or different sizes.

The invention consists of two cylindrical telescopic tubes, the inner or smaller tube having its outer end cut away, preferably on a curve, to form a scoop or spoon shaped end, on which the bubble rests while being formed and enlarged, and which is also adapted to catch a bubble on its descent after the same has been projected or detached from the blower. The inner end of this tube is cut away to form an air-passage, through which a current of air is directed against the bubble to detach or project the same. The outer or larger tube has a tapered end which serves as a mouthpiece and a circular air-passage arranged lengthwise through the center of the same and arranged to communicate with the air-passage of the inner or smaller tube.

In the accompanying drawings, illustrat-

ing the invention, Figure 1 is a perspective view of a bubble-blower embodying my invention, and to further illustrate the invention I have shown a bubble in dotted lines. Fig. 2 is a side elevation showing the two cylindrical parts of the device separated. Fig. 3 is a central longitudinal section through the same, showing the two cylindrical parts connected ready for use. Fig. 4 is a cross-section on line 4 4, Fig. 3.

Referring to the drawings in detail, like letters of reference refer to like parts in the several figures.

The letter A represents a cylindrical tube having one end tapered, as at B, to form a mouthpiece. Arranged centrally within this cylindrical tube is a circular passage C, which communicates with another circular passage or air-space D of considerably larger diameter, the longitudinal axis of said passages being coincident.

E represents a cylindrical tube the outer diameter of which corresponds with the inner diameter of the passage D, formed in the tube A, and allows the tube E to be inserted therein, as shown in Figs. 1 and 3, whereby the two parts are joined together by frictional contact, which permits of readily adjusting the tube E within the tube A. The inner end of the tube E is cut away to form an opening or air-passage F between the two telescopic parts when inserted one within the other, the function of this passage being to direct a current of air against the bubble when the same has been inflated to the desired size. The outer end of the tube E is also cut away, preferably on a curve, as shown at G, to form a scoop or spoon shaped end upon which the bubble rests while being inflated. This scoop or spoon shaped end is also adapted to catch a bubble on its descent after the same has been detached or projected from the blower. The tube E is provided with a circular air-passage H, extending from the inner end thereof and communicating with another circular air-passage I of considerably larger diameter, which extends to the outer end of the tube, the longitudinal axis of said passages being coincident and arranged in line with the longitudinal axis of the passages in the tube A.

The bubbles are formed on the scoop or spoon shaped end G of the tube E by the air forced into the passages from the open end of the mouthpiece, the spoon-shaped end having been previously dipped into a soapy solution, one drop of which on being deposited in the end of the blower will be sufficient to produce a series of bubbles. When the tubes A and E are joined, a continuous passage is formed, which is reduced in diameter about midway between its ends, so as to check the current of air and cause the same to be divided and directed through the air-passage F and the passage I in the tube E. The operator has full control of the bubble while the same is being inflated or enlarged by placing the index-finger over the air-passage F, which is located on the upper side of the blower midway between its ends, until the bubble has been inflated to the desired size. Then by removing the finger from said air-passage a current of air is directed along the outer surface of the blower and against the bubble at a point where it contacts with the same, which causes the bubble to glide from the scoop or spoon shaped end of the blower. After the bubble has been detached or projected from the blower and all the soapy solution removed therefrom the operator can catch one of the detached or projected bubbles as it descends on the scoop or spoon shaped end of the blower. As this bubble comes in contact with the end of the blower it deposits a film thereon, and as soon as the operator forces a light current of air through the opening in the end of the mouthpiece another bubble will be produced and joined thereto. Thus the second bubble is formed from a portion of the film deposited by the first bubble.

Having thus described my invention, what I claim is—

1. A bubble-blower consisting of a body having a passage arranged lengthwise therein through which a current of air is blown to form and inflate the bubble, a rest or support for the bubble at one extremity of said passage, and an outwardly-opening and forwardly-inclined passage communicating with the first-mentioned passage and being located between the ends of the blower and above said rest and support, said inclined passage being designed to direct a current of air along the outer surface of the blower for the purpose of detaching or projecting the bubble from said rest or support, substantially as set forth.

2. A bubble-blower consisting of a body having a passage arranged lengthwise therein through which a current of air is blown to form and inflate the bubble, a scoop or spoon shaped rest or support for the bubble at one extremity of said passage, and an outwardly-opening passage communicating with the said

passage and arranged to direct a current of air along the surface of the blower, said outwardly-opening passage being located between the ends of the blower for the purpose of detaching or projecting the bubble from said scoop or spoon shaped rest or support, substantially as set forth.

3. A bubble-blower consisting of a body having an air-passage arranged lengthwise therein, a rest or support for the bubble formed by tapering the outer end of said body, and an outwardly-opening air-passage communicating with the said passage and being located between the ends of the blower for the purpose of directing a current of air against the bubble to detach or project the same from said rest or support, substantially as set forth.

4. A bubble-blower consisting of a body having an air-passage arranged lengthwise therein and having said passage reduced in diameter between its ends to check the current of air blown therethrough, a rest or support at the outer end of the passage, and an outwardly-opening air-passage communicating with the said passage at a point between its inner end and the said reduced portion thereof, substantially as set forth.

5. A bubble-blower comprising a body having an air-passage arranged lengthwise therein, a rest or support for the bubble at the outer end thereof, and a second air-passage having its outlet at a point above the bottom of said rest or support, substantially as set forth.

6. A bubble-blower, consisting of a body having a passage arranged lengthwise therein through which a current of air is blown to form and inflate the bubble, a scoop or spoon like rest or support for the bubble at one extremity of said passage, and an air-passage having its outlet between the ends of the blower and being arranged to direct a current of air along the outer surface thereof for the purpose of detaching or projecting the bubble from said scoop or spoon like rest or support, substantially as set forth.

7. A bubble-blower comprising two cylindrical members, one arranged partly within the other and each having a longitudinal air-passage passing centrally through the same, the smaller member having its outer end cut away to form a spoon-shaped rest or support for the bubble and its inner end cut away or tapered to form an air-passage at the point of connection with the larger member for directing a current of air against the bubble to detach or project the same from the said spoon-shaped rest or support, substantially as set forth.

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