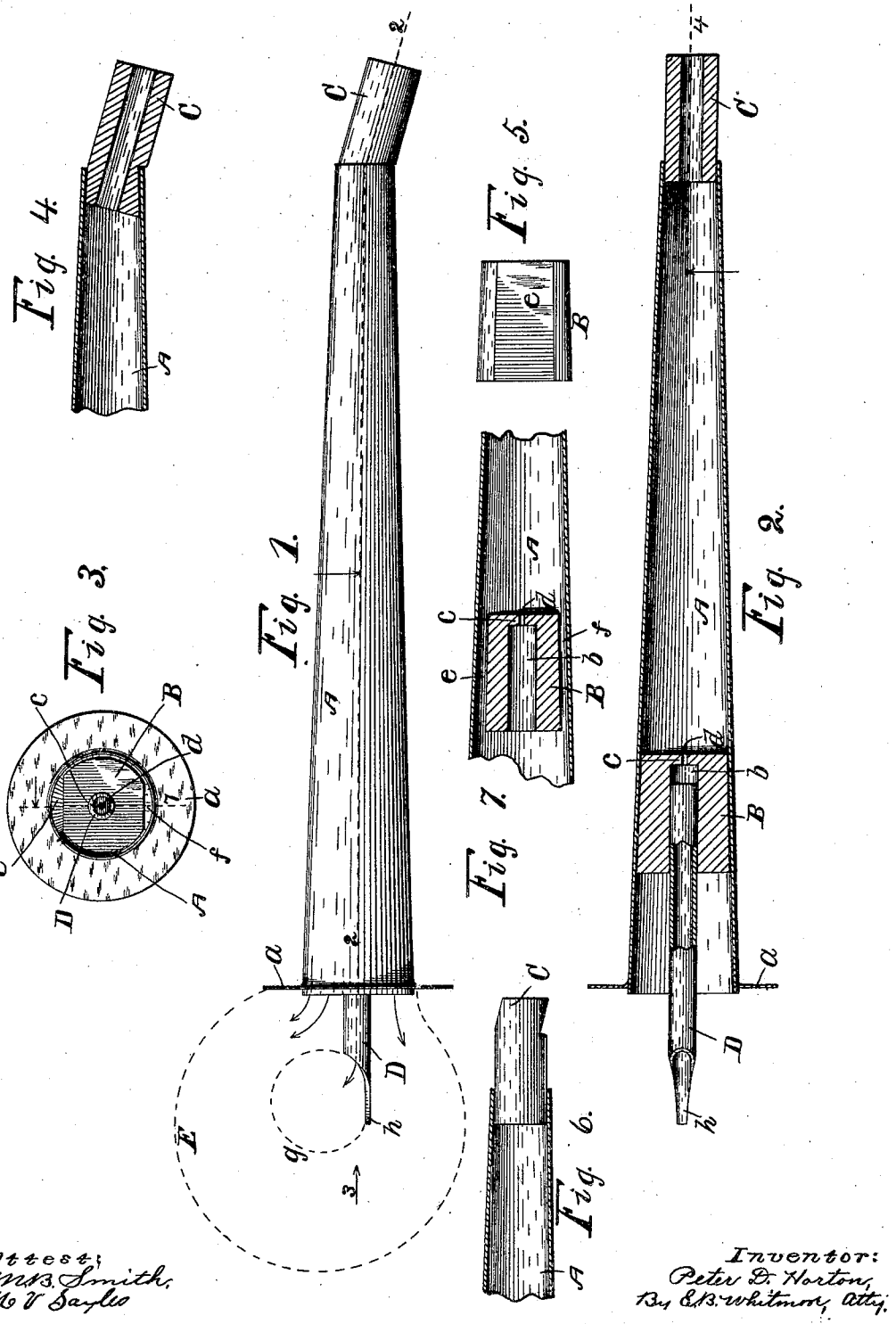
No. 770,288. PATENTED SEPT. 20, 1904.

P. D. HORTON.

BUBBLE BLOWER.

APPLICATION FILED SEPT. 30, 1903.

NO MODEL.



Attest:
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No. 770,288. Patented September 20, 1904.

UNITED STATES PATENT OFFICE.

PETER D. HORTON, OF NEWARK, NEW YORK, ASSIGNOR OF ONE-HALF TO GEORGE HORTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

BUBBLE-BLOWER.

SPECIFICATION forming part of Letters Patent No. 770,288, dated September 20, 1904.

Application filed September 30, 1903. Serial No. 175,227. (No model.)

To all whom it may concern:

Be it known that I, PETER D. HORTON, of Newark, in the county of Wayne and State of New York, have invented a new and useful Improvement in Bubble-Blowers, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is an improved bubble-blower, the same being a toy for blowing multiple soap-bubbles simultaneously, one small one or a series of small ones within an outer large one, the invention being hereinafter fully described, and more particularly pointed out in the appended claims, reference being had in this specification to the accompanying drawings, forming a part thereof.

Figure 1 is a side elevation of the bubble-blower as in use. Fig. 2 is an axial section on the broken dotted line 2 2 in Fig. 1, the inner tube being only partly in longitudinal section. Fig. 3 is a front end view of the bubble-blower, seen as indicated by arrow 3 in Fig. 1. Fig. 4 is an axial section of parts at the rear end of the device, taken on the dotted line 4 in Fig. 2, further showing the form of the mouthpiece. Fig. 5 is a plan of the cork detached. Fig. 6 is an axial section of a part of the barrel at the rear end thereof, taken on the dotted line 4 in Fig. 2, showing the mouthpiece reversed. Fig. 7 is an axial section of a part of the barrel and the contained cork, taken on the vertical dotted line 7 in Fig. 3.

Referring to the parts shown, A is the body or barrel of the bubble-blower open at both ends and made tapering, as shown, the barrel being usually made of sheet metal, as tin. At its front or flaring end, where the outer bubble E is formed, the barrel is provided with a broad flange or ring *a*, preferably of sheet metal, which may be, if desired, set slightly back from the extreme end of the barrel, as clearly shown in Fig. 1. A mouthpiece or tip C, preferably of yielding or compressible material, as soft wood or cork, is provided for the small end of the barrel A, through which to blow the breath in forming bubbles. This mouthpiece is reversible in the barrel, the opposite sides at one end being cut away and made slanting, as shown in Figs. 4 and 6, to cause the axes of the barrel and of the mouthpiece to intersect and form an angle when said end is inserted in the barrel. This gives the barrel a downward slant or incline when blowing bubbles and avoids the need of bending the head uncomfortably downward in front to give to the barrel a desirable position while the bubbles are forming, or, if it be wished at times to have the mouthpiece coaxial with the barrel, the former will be reversed, inserting its straight or uncut end in the barrel, as shown in Fig. 6.

Within the barrel A, near its front end and fitted to the taper of the barrel, is an elastic body or cork B, not rigidly fixed in place, but longitudinally adjustable in the barrel. This cork or body is hollow or formed with an axial bore or cylindrical cavity *b*, into which is inserted a tube D, at the outer end of which the small inner bubbles *g* are formed. The tube is longitudinally adjustable in the cork and holds to place therein by friction, its outer end projecting beyond the front end of the barrel, as shown. The bore *b* does not extend wholly through the cork, there being a thin wall *c* left at the inner end, pierced by a small axial opening *d* opposite the bore of the tube D, through which opening *d* the part of the breath flows that goes to form the small interior bubbles *g*.

The cork or body B is not a perfect frustum of a cone, it being cut away from end to end at opposite sides to form longitudinal passages *e f* for air flowing from the mouthpiece C to form the outer bubble E. The passage *e* at the upper side of the cork is larger than the passage *f* at the lower side, so that a greater volume of air blown into the barrel will flow to the outer bubble along near the upper wall of the barrel than the lower wall for the purpose of causing said bubble while forming to slightly rise above the end of the tube D, as shown in Fig. 1. In this slightly-elevated position, with its center above the axial line of the barrel, the

outer bubble will be more nearly concentric with the inner bubble g, simultaneously forming at the end of the tube D, with less liability of contact between the bubbles and consequent "mixing" of the films.

The tube D is cut away at its upper side at the outer end, as shown in Fig. 1, to form an extended rest or lodge h for holding and steadying the inner bubble g while forming.

The cork or body B being movable in the barrel admits of its being shifted toward the small end of the barrel, as may be required, to make it tight therein should it become loose from any cause, the tube D being longitudinally adjusted in the cork whenever the latter is thus shifted to maintain a uniformity of projection of the outer end of the tube from the mouth of the barrel A.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A bubble-blower having a barrel, a cork in the barrel, and a tube held by the cork and projecting at the forward end of the barrel, and a reversible mouthpiece at the rear end of the barrel constructed to be engaged in said barrel coaxially therewith or at an angle to its axis.

2. A bubble-blower having a barrel, a cork in the barrel, and a tube held by the cork and projecting at the forward end of the barrel, and a mouthpiece at the rear end of the barrel, having one end provided with slanting sides whereby the axes of the barrel and of the mouthpiece form an angle.

3. A bubble-blower having a tapered hollow barrel open at both ends, a tube extending beyond the end of the barrel and formed with a rest for a bubble, means for holding the tube coaxially within the barrel, and permitting longitudinal adjustment thereof, a mouthpiece at the smaller end of the barrel, and a ring surrounding the opposite end of the barrel.

In witness whereof I have hereunto set my hand, this 24th day of September, 1903, in the presence of two subscribing witnesses.

PETER D. HORTON.

Witnesses:
T. D. PRESCOTT,
FRANCES WRIGHT.