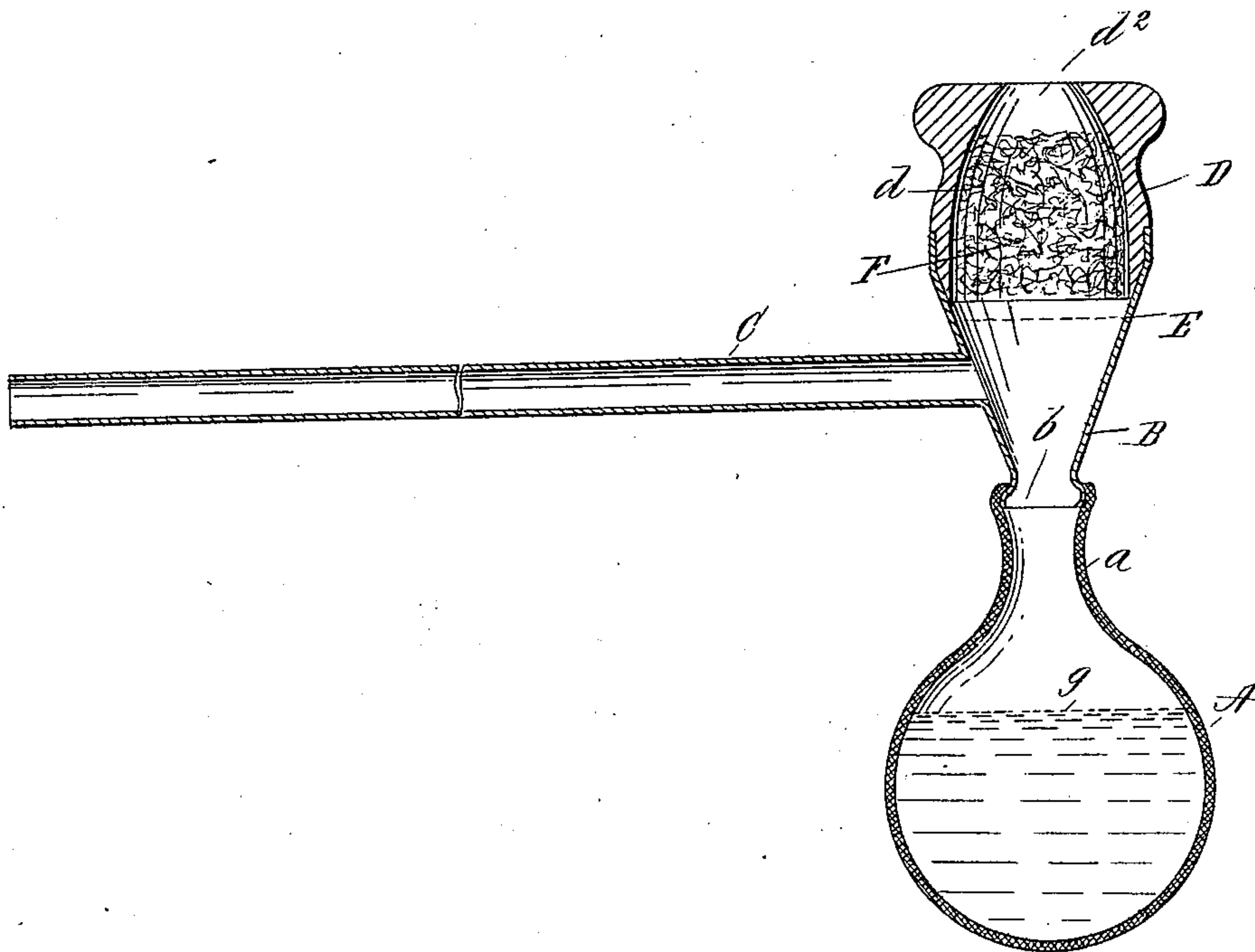


(No Model.)

J. C. DAUGHERTY.  
TOY FOR MAKING SOAP BUBBLES.

No. 565,332.

Patented Aug. 4, 1896.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JESSE C. DAUGHERTY, OF LIMA, OHIO.

## TOY FOR MAKING SOAP-BUBBLES.

SPECIFICATION forming part of Letters Patent No. 565,332, dated August 4, 1896.

Application filed January 31, 1896. Serial No. 577,490. (No model.)

*To all whom it may concern:*

Be it known that I, JESSE CARTER DAUGHERTY, a citizen of the United States, and a resident of Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Toys for Making Soap-Bubbles, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to toys, and to that class thereof which are adapted for use in making soap-bubbles, smoke-rings, &c., a further object being to provide a device of this class whereby soap-bubbles may be readily made in any size and quantity and by means of which smoke-rings may be similarly formed; and with these and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, said drawing being a central section of my improved device.

My improved soap-bubble and smoke-ring forming device comprises, as shown in the drawing, four separate parts, which consist of a flexible reservoir or rubber bulb A, a hollow funnel-shaped body portion B, which is conical or pipe-shaped in form and which is composed of metal or any preferred material, and both ends of which are open, and to which is secured a hollow stem C and a hollow cap D, which is preferably composed of wood, and which is provided with a conical opening *d* therethrough, the base of which is directed downwardly and the apex upwardly.

The smaller end of the hollow funnel-shaped body portion B is directed downwardly and provided with an annular flange *b*, and the flexible reservoir or bulb A is provided with a neck *a*, which is connected therewith, and the larger end of the funnel-shaped body portion is directed upwardly and the end of the cap D, which is preferably composed of wood, is inserted thereinto.

In order to form soap-bubbles, the flexible bulb or reservoir A is contracted or squeezed

by the hand, so as to expel the air therefrom, and the end of the stem C is inserted into the solution from which the bubbles are formed, and then by removing the pressure from the bulb said solution will flow thereinto and fill the same to the desired extent. By means of this arrangement it will be seen that I dispense with the practice of "dipping" each time that it is desired to form a bubble, and in this operation the small hole or opening at the top of the cap B is closed by the thumb or finger. When this is done, the operator, by pressing gently upon the bulb or by placing the finger over the hole at the top of the cap D and tilting the instrument, will cause the solution to ascend or drop into the chamber within the central funnel-shaped body portion B, and when the pressure is removed from the bulb the contents will resume the position shown in the figure and leave a fine film at the dotted line E, and by blowing gently into the stem the film will be carried up through the small hole or opening *d*<sup>2</sup> at the top of the cap D and the bubble will be formed thereon.

This bubble can be made of any desired or reasonable size and be removed from the cap at will by merely shifting or gently moving the blower to one side, and this can be repeated until the contents of the bulb are exhausted.

As a modification of this operation, and also of the construction, I may place within the cap D or the conical chamber formed therein a number of curled hairs, as shown at F, and then by squeezing the bulb, as hereinbefore described, the contents thereof will be caused to rise and mingle with the meshes of hair, and by blowing quickly through the stem a large number of little bubbles, the size of peas or larger, will separate and float off into the air, and this may be repeated until innumerable bubbles are visible to the eye, thus producing a very beautiful effect.

In order to produce the largest size bubble possible, it is only necessary to follow the first method of operation, and as soon as the bubble appears at the top of the cap to invert the blower or device by holding the bulb in the hand and allowing the nipple or neck *a*



to bend over so as to close the passage there-through, thus breaking off the flow of water, at the same time blowing gently into the stem.

5 A chain of united bubbles may be readily made by placing an extra amount of hair within the cap D and allowing the water or other material to slightly flow through the blower, and at the same time gently blow into the stem.

10 In order to make smoke-rings, the air is first squeezed out of the bulb A, as hereinbefore described, and the mouth is filled with smoke and applied to the stem, the finger being at the same time placed over the hole  $d^2$  in the cap D, and by releasing the bulb the smoke is drawn thereinto, and then by gently pumping or alternately squeezing and releasing the bulb the smoke-rings will be formed and pass out at the opening  $d^2$ .

20 This device is exceedingly simple in construction and may be easily operated by a child, and the advantages and utility thereof will be apparent to all those familiar with such devices.

Having fully described my invention, I 25 claim as new and desire to secure by Letters Patent—

In a soap-bubble and smoke-ring former, the combination of a funnel-shaped body portion, a hollow stem connected therewith, a 30 flexible bulb connected with the smaller end of said body portion, and a hollow cap, connected with the larger end of said body portion, said cap being provided with a central opening which is conical in form, and the 35 base thereof being directed downwardly, and said cap being also provided with curled hair or similar material, which is placed therein, substantially as shown and described.

In testimony that I claim the foregoing as 40 my invention I have signed my name, in presence of the subscribing witnesses, this 21st day of January, 1896.

JESSE C. DAUGHERTY.

Witnesses:

CHARLES A. HIATT,  
HOWARD B. HOVER.