March 10, 1964 C. FELTMAN 3,123,936

HAND OPERATED TOY ELECTRIC BUBBLE BLOWER THAT IS HELD IN HAND TO OPERATE

Filed April 27, 1961

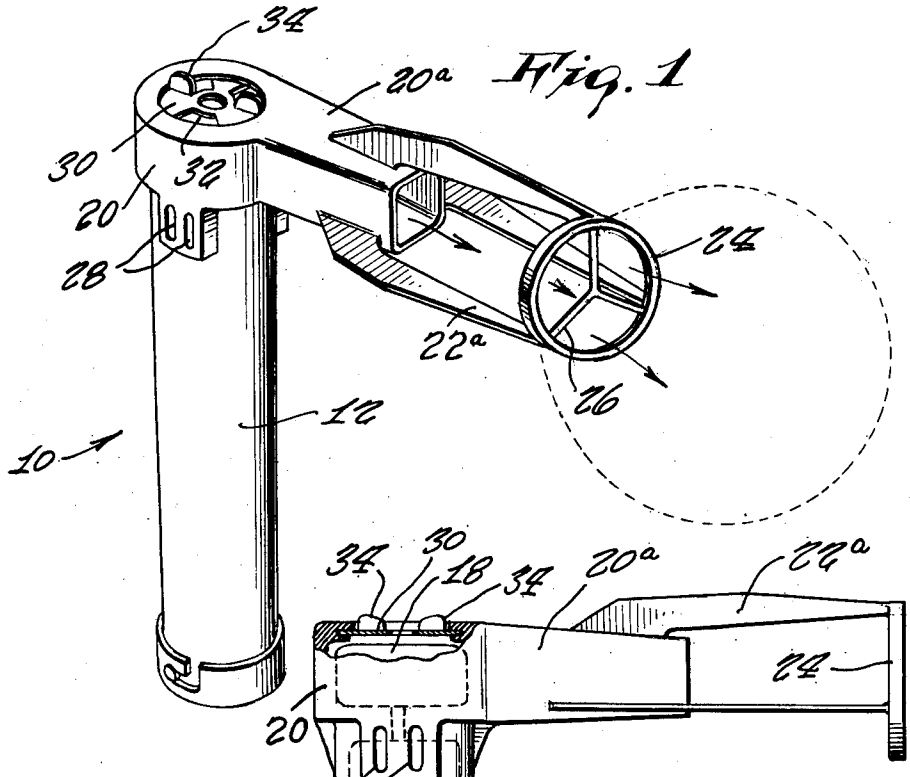


Fig. 1

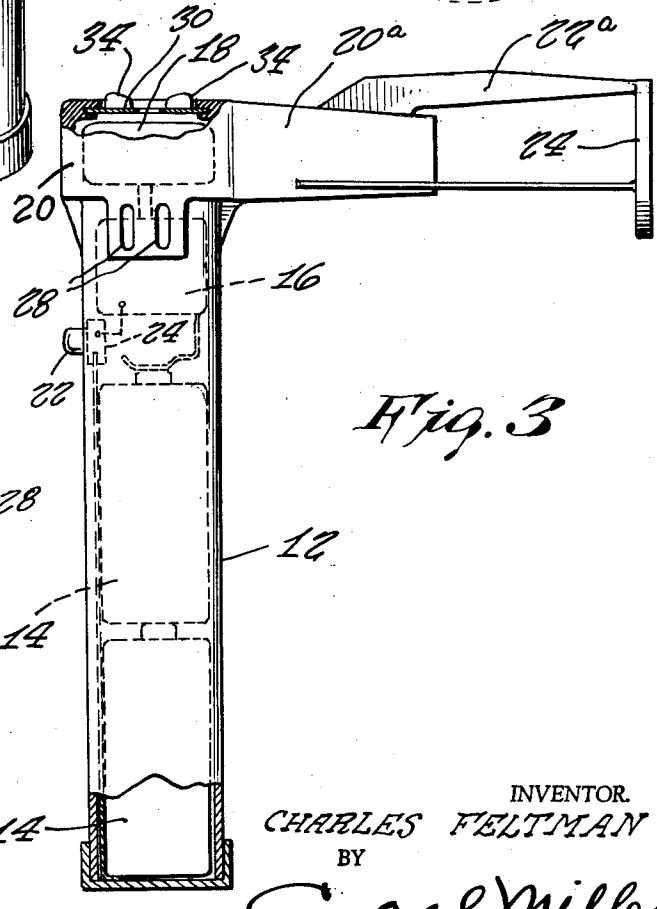


Fig. 3

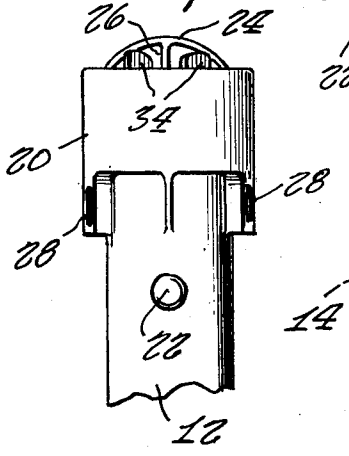


Fig. 2

INVENTOR.
CHARLES FELTMAN
BY
Carl Miller
ATTORNEY

United States Patent Office

3,123,936
Patented Mar. 10, 1964

3,123,936

HAND OPERATED TOY ELECTRIC BUBBLE BLOWER THAT IS HELD IN HAND TO OPERATE

Charles Feltman, 1478 Fernwood Ave., Lakewood, N.J.

Filed Apr. 27, 1961, Ser. No. 105,953
1 Claim. (Cl. 46—6)

This invention relates to toys and more particularly to a bubble forming device.

It is an object of the present invention to provide a bubble blowing device which is power operated, but which is hand held and operated.

Still another object of the present invention is to provide a power operated bubble blower which can be conveniently adjusted to provide for the blowing of the multiplicity of small size bubbles or a single large bubble.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein:

FIGURE 1 is a perspective view of a bubble blower made in accordance with the present invention in actual use;

FIGURE 2 is a fragmentary rear elevational view of certain parts of the device shown in FIGURE 1; and

FIGURE 3 is a side elevational view, with parts broken away, showing the device shown in FIGURE 1.

Referring now to the drawing, a bubble blower 10 made in accordance with the present invention is shown to include a main sleeve 12 having an interior compartment within which a plurality of dry cells 14 may be removably supported for energizing a small electric motor 16 having a shaft and a set of impeller blades 18 disposed within a casing 20 secured to the upper end of the sleeve 12. A thumb operated switch 22 mounted upon the sleeve 12 controls the opening and closing of the circuit through the dry cells 14 and motor 16, to control operation of the impeller blades 18 during use.

A lateral projecting air conduit 20*a* on casing 20, communicating with the impeller blades 18 is provided with an open frame structure 22*a* that supports a substantially annular ring 24 having a plurality of angularly related vanes 26 in the path of air blown outwardly through the casing 20 by the blades 18.

The sides of the motor housing are provided with two pairs of permanent vents 28, for providing a minimum amount of air to the interior thereof. The outlet of air is controlled by a valve plate member 30 commonly known as an inexpensive adjustable vent.

Plate 30 has a plurality of ports or openings 32 and is rotatably supported in the casing 20 for adjustment in accordance with the relative alignment or misalignment of ports 32 with similar ports (not shown) in casing 20 by means of rotation through upwardly projecting stops 34. When the vents 32 are completely closed, all of the

air entering the interior of the housing of the blower through the inlet vents 28, is directed outwardly through the air conduit 20*a* of casing 20 toward the frame 24 upon which a film of bubble forming liquid may be suspended, whereby a large quantity of small bubbles will be formed. However, when the vents 32 are completely opened, most of the air from the blower will pass outwardly through the vents 32 to atmosphere, thus providing for only a minimum amount of air passing through the air conduit 20*a* of casing 20 toward the frame 24, thus facilitating the formation of a single large bubble in the manner shown in FIGURE 1. It will thus be recognized that the size of the bubbles can be readily controlled simply by adjusting the position of the valve plate 30.

While this invention has been described with particular reference to the construction shown in the drawing, it is to be understood that such is not to be construed as imparting limitations upon the invention, which is best defined by the claim appended hereto.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A bubble blower comprising an elongated sleeve member dimensioned to be held in the hand and adapted to house a plurality of batteries, an electric motor positioned within the upper end of said sleeve member, a switch mounted on said sleeve member positioned to be operated by the thumb for opening and closing the circuit through the batteries and the motor, a casing fixedly secured to the upper end of said sleeve, an impeller mounted on a vertical axis within said casing and drivingly connected to said motor, air inlet openings in said casing located beneath said impeller, an adjustable vent in said casing above said impeller, an air discharge conduit laterally projecting from one side of said casing and on the side of said sleeve member opposite to the side thereof on which said switch is mounted, an open frame structure mounted on the terminal end of said air conduit, and a multi-vaned ring element on which a film of a bubble forming liquid is adapted to be suspended, supported by said frame structure in axially spaced relation to the terminal end of said air conduit, whereby adjustment of said vent will regulate the amount of pressurized air supplied to said air conduit by said impeller, and thereby control the quantity and size of bubbles formed.

References Cited in the file of this patent

UNITED STATES PATENTS

1,545,732	Bonyata	July 14, 1925
2,305,382	Hagopian	Dec. 15, 1942
2,410,682	Richardson	Nov. 5, 1946
2,547,825	King	Apr. 3, 1951
2,829,285	Steiner et al.	Apr. 1, 1958
2,882,643	Jianas et al.	Apr. 21, 1959
2,991,575	Pearson	July 11, 1961
3,011,287	Goldfarb	Dec. 5, 1961