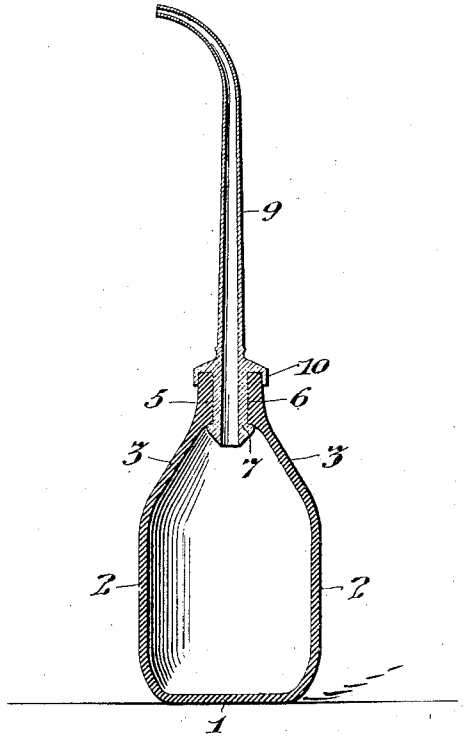
April 1, 1924. 1,488,777

R. L. CLEMENTS

SYRINGE

Filed Sept. 17, 1919



Witness

Elsie F. Jentzsch

Inventor

Ralph L. Clements,

By Clifton C. Callowell

Attorney

Patented Apr. 1, 1924. 1,488,777

UNITED STATES PATENT OFFICE.

RALPH L. CLEMENTS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE S. S. WHITE DENTAL MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

SYRINGE.

Application filed September 17, 1919. Serial No. 324,258.

To all whom it may concern:

Be it known that I, RALPH L. CLEMENTS, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Syringes, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates particularly to that class of syringes adapted for dental use, and commonly known as "chip blower syringes," and is especially directed to the type of syringes having the nozzle directly connected with the syringe bulb, and having a base upon which said bulb may rest when not in use.

Syringes of this class as heretofore constructed are provided with bulbs whose lateral walls are bulged or ovate, and as a consequence the distortion of such ovate walls in compressing the bulb tends to throw the nozzle out of alinement with the normal axis of said syringe bulb, to such an extent as to misdirect the air discharged from said nozzle.

It is the object of my invention to provide a syringe having a bulb of a form convenient to hold, and which may be compressed by the hand of the operator without changing the direction of the nozzle.

Other objects of my invention are to provide a syringe that will afford a steady flow when compressed, and that will quickly refill upon being released.

The form of my invention as hereinafter described, comprises a syringe having a resilient bulb provided with a base upon which it may be supported when not in use, and cylindrical side walls merging into substantially conical walls which terminate in a neck to which the nozzle is directly connected.

My invention also includes all of the various novel features of construction and arrangement as hereinafter more definitely specified.

The accompanying illustration represents a central, longitudinal, sectional view of a convenient embodiment of my invention.

In said illustration, the bulb comprises the base 1, cylindrical side walls 2, which merge into the substantially conical walls 3, terminating in the neck 5, which is provided with an aperture 6 arranged to receive the nipple 7 of the nozzle 9, which may preferably be provided with a flange 10 serving as a cap for said neck 5.

It may be here noted that a syringe bulb of the form contemplated is advantageous in that its cylindrical body is better adapted to conform to the hand of the operator than is the ovate form of syringe bulb heretofore employed.

Furthermore, by reason of its cylindrical form, the bulb may be compressed without changing the direction of the axis of the nozzle. In other words, the axis of the nozzle and the axis of the syringe bulb remain coincident when said bulb is compressed by the hand of the operator, thus insuring that the flow of air or liquid exhausted from said nozzle will be directed upon the exact spot desired.

I do not desire to limit my invention to the precise details of construction and arrangement as herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claims.

Having thus described my invention, I claim:—

1. A syringe having a nozzle, and comprising a flexible bulb composed of a combination of plane, cylindrical and conical walls so correlated that the compression of the bulb may be effected without diverting the direction of the axis of said nozzle.

2. A syringe having a flexible bulb comprising a supporting base, and cylindrical side walls merging into substantially conical walls terminating in a neck, and so correlated that the compression of the bulb may be effected without diverting the direction of the axis of said nozzle.

In witness whereof, I have hereunto set my hand this 16th day of September, A. D., 1919.

RALPH L. CLEMENTS.

Witnesses:
ELSIE F. JENTZSCH,
CLIFTON C. HALLOWELL.