

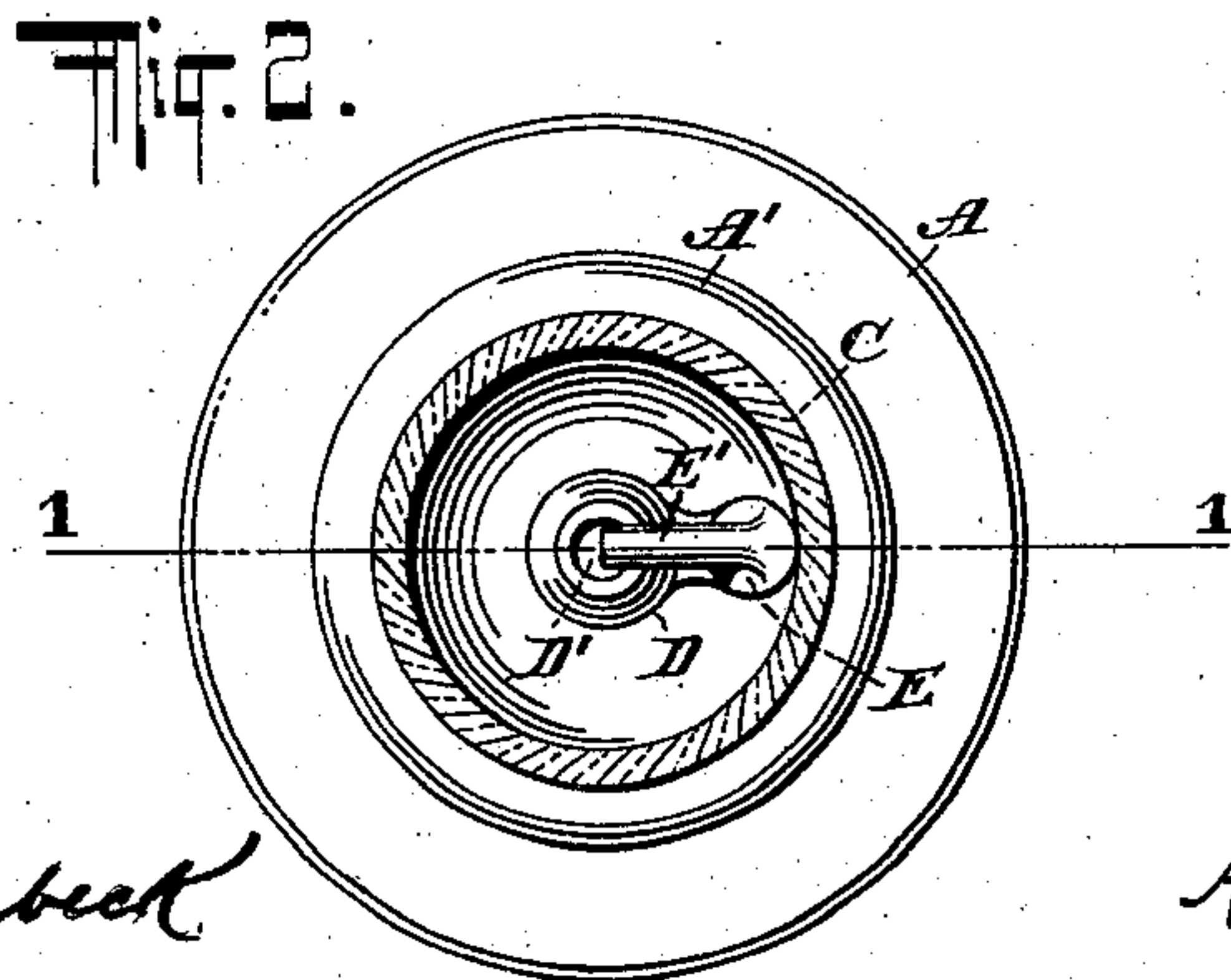
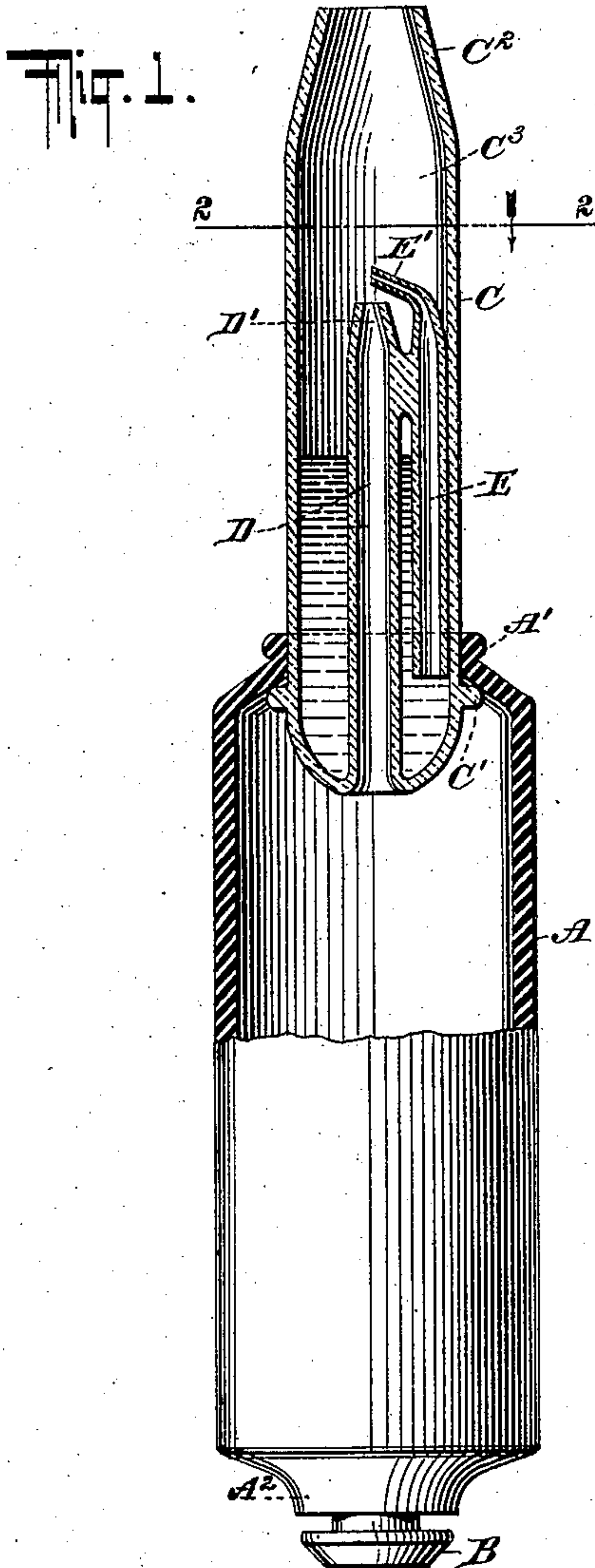
No. 712,213.

Patented Oct. 28, 1902.

A. H. TATUM.
ATOMIZER.

(Application filed July 31, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT H. TATUM, OF NEW YORK, N. Y., ASSIGNOR TO WHITALL TATUM COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 712,213, dated October 28, 1902.

Application filed July 31, 1902. Serial No. 117,744. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. TATUM, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Atomizers, of which the following is a specification.

My invention relates to atomizers, and particularly to that class in which the receptacle for the liquid to be atomized is made comparatively small, so that it may be received within the bulb which serves to supply the compressed air.

The object of my present invention is to provide a simple device of the above-indicated class which will mix the air and liquid or vapor more efficiently than the usual devices of the same character and which will be capable of being folded into a very compact shape, so that it may be readily carried in the pocket.

One example of my invention is shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of my improved atomizer on line 1 1 of Fig. 2, and Fig. 2 is a sectional plan on line 2 2 of Fig. 1.

The bulb proper, A, is preferably cylindrical and is provided at one end with a suction-valve B of any approved construction. The other end of the bulb has a beaded contraction or mouth A', which serves for connection with the receptacle C. This receptacle is fitted to slide in the bulb and is provided with a collar or bead C', limiting its outward movement. That part of the receptacle C which is upon the inside of or below the bead C' is reduced in diameter gradually and preferably curved, as shown in Fig. 1, so that the receptacle is narrowest at the bottom of the liquid-containing portion, and then expands gradually to the full width, which it attains at or adjacent to the bead C'. One advantage of this construction is that the lower or inner portion of the receptacle being thus contracted can be received within the reduced portion A², generally provided at the end of the bulb adjacent to the suction-valve B. Another advantage of contracting the inner end of the receptacle is that when so constructed said inner portion will contain only a comparatively small amount of liquid and

that therefore practically the entire amount of liquid contained in the receptacle will be discharged by pressing the bulb. When not in use, the receptacle is slid back into the bulb, so that only the extremity of the discharge portion C² will protrude from the bulb, thus protecting the receptacle against breakage and folding the article into a compact shape. The receptacle C, which is generally made of glass, is provided with a central air-discharge tube D, which at a relatively considerable distance from the discharge-orifice C² has a nozzle D'. Between the outer wall of the receptacle and the tube D is formed an annular chamber which serves to receive the perfume, medicament, or other liquid which it is desired to atomize. Into this liquid is arranged to dip the lower end of a liquid-tube E, supported in any suitable manner—for instance, by being fused or soldered to the air-tube D, as shown. The upper end of the liquid-tube E has a laterally-bent nozzle E', which terminates substantially in line with the tube D at a slight distance from the nozzle D' thereof. It will be observed that there is a considerable space between the nozzles D' E' and the discharge-orifice C², thus forming a mixing-chamber C³, in which the air and liquid will be thoroughly whirled together and intermingled before the issue from the outlet or discharge orifice C². Furthermore, when the receptacle C is withdrawn into the bulb A the nozzles D' and E' will be entirely within the bulb and will therefore be fully protected and only the extremity of the discharge portion C² will protrude from the bulb.

Various modifications may be made without departing from the nature of my invention as set forth in the appended claim.

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

An atomizer comprising an air-compressing bulb, a liquid-receptacle arranged to be withdrawn into said bulb and to be projected therefrom, said receptacle being provided with an exterior bead which limits its outward movement, an air-conveying tube located centrally within said receptacle and communicating with the interior of the bulb at the inner end of said receptacle, and a liquid-conveying tube dipping into said recep-

tacle and having a nozzle adjacent to the
outer end of the air-conveying tube, the end
portion of said receptacle from the bead in-
ward being reduced in diameter gradually to
5 the inner end of the air-conveying tube, so
that the width of the liquid-containing por-
tion of the receptacle is practically *nil* at the
inner end of the air-conveying tube.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

ALBERT H. TATUM.

Witnesses:

C. W. LESTER,
EUGENE EBLE.