

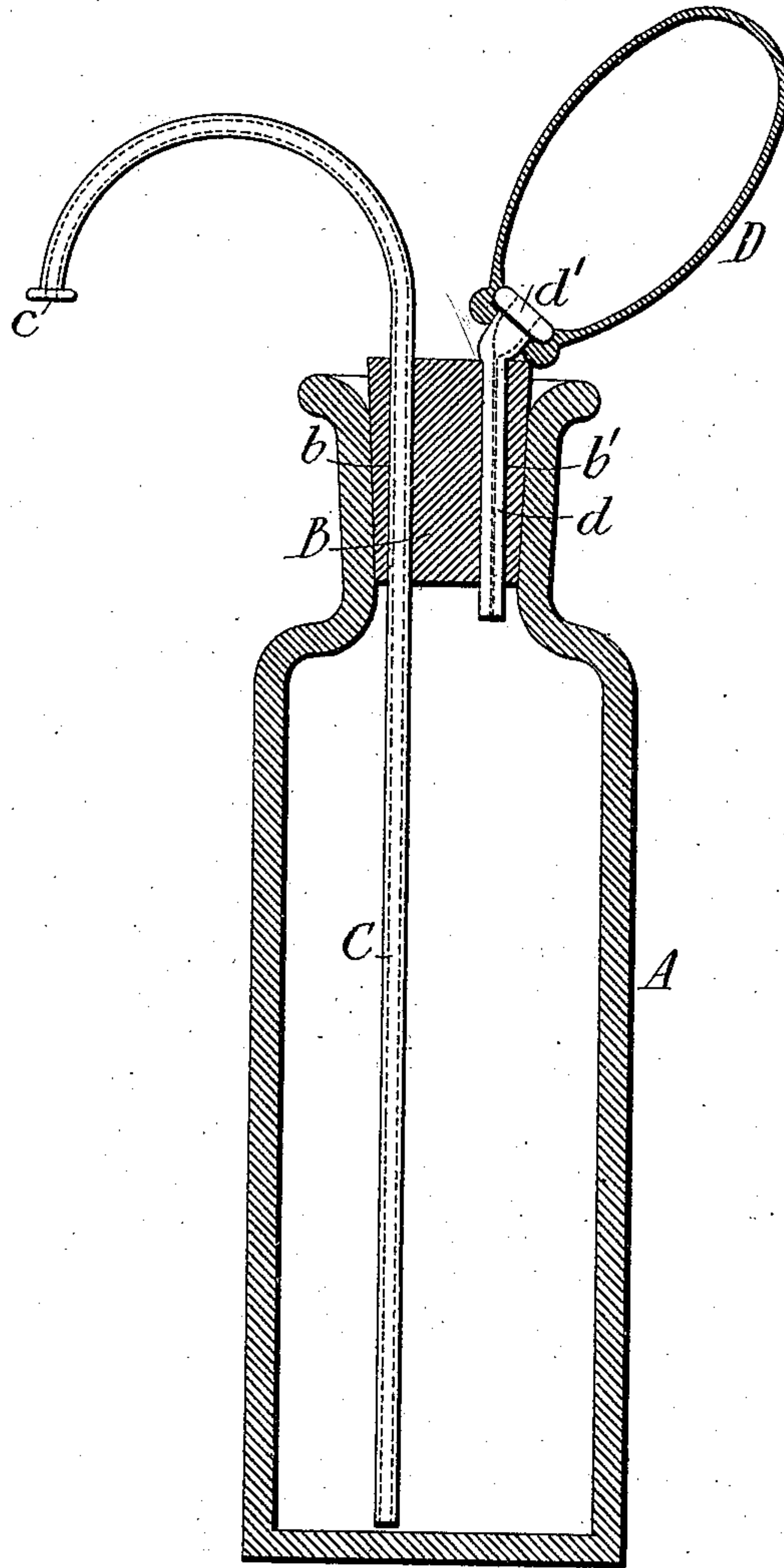
No. 688,544.

Patented Dec. 10, 1901.

W. B. PITTS.
LIQUID DROPPER.

(Application filed Feb. 13, 1900.)

(No Model.)



Witnesses
Chas. M. Ewen
J. K. Sedney

Inventor
William B. Pitts
By *W. B. Dudley* *Co.*
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM B. PITTS, OF ATLANTA, GEORGIA.

LIQUID-DROPPER.

SPECIFICATION forming part of Letters Patent No. 688,544, dated December 10, 1901.

Application filed February 13, 1900. Serial No. 5,074. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. PITTS, a citizen of the United States, residing at 45 East Cain street, Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Liquid-Droppers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

15 This invention is directed to improvements in devices for dropping liquids such as medicinal compounds, and has for its object the production of a simply and inexpensively constructed appliance by the operation of which 20 drops or minims of correct and regular size may be formed without the necessity of delicate manipulation.

The nature of my invention will be readily comprehended by reference to the following 25 detailed description and to the accompanying drawing, in which is shown in vertical sectional view a liquid-dropper embodying my invention.

Referring to the said drawing by letter, A 30 denotes a liquid-receptacle having a contracted upper portion or neck, in which is removably inserted a stopper B, preferably of rubber. In the stopper are longitudinal openings, one of which, *b*, receives a tube C, of 35 siphon form, in that its upper portion beyond the stopper is curved, and at the discharge end of this tube is a bead *c*, having a lower extended flat surface, the size of which is such that under capillary attraction liquid will adhere until the formation of a drop approxi- 40 mating in measurement one minim. The long leg of the siphon is preferably of such a length as will permit of its being lowered to the bottom of the receptacle, whereby the latter may 45 be exhausted without the necessity of its being inverted. By reason of the length of said leg also and the facility of adjustment it may be used with receptacles of differing depths. The other stopper-opening *b'* receives a tube 50 or stem *d*, on the upper end of which is a head

d', affording means for air-tight connection with a compressible bulb D, preferably of rubber. The aperture of the stem *d* is of exceedingly small diameter—say one one-hundredth of an inch—and is therefore relatively much 55 smaller than the diameter of the tube C. The minuteness of this stem-aperture has the effect of limiting the admission of air to the receptacle above the liquid by the compression of the bulb and likewise has the effect of 60 limiting the speed of liquid discharge from the receptacle, the result being that drops of correct and regular size are slowly formed and may be counted with reduced liability of error.

By the use of my improved appliance I am enabled to form drops which are perfect according to the requirement of the *United States Pharmacopeia*, which is sixty (60) drops to 70 the fluid dram or four hundred and eighty (480) drops to the fluid ounce, such result being due to the restricted air-inlet, which, as above stated, so controls the admission of air that the liquid discharge is limited to drops of correct and uniform measurement. 75

Inasmuch as the tube C is liquid-sealed, the stopper acts as a closure for the receptacle and excludes air from the contents when the appliance is not in use.

I claim as my invention— 80

A liquid-dropper comprising a receptacle for the liquid, a stopper, a siphon-shaped tube leading through the stopper into the lower portion of the receptacle, said tube having at its extreme outer or discharge end an 85 enlargement providing an extended flat surface for the formation of the drop, and a compressed-air-inlet tube leading into the upper portion of the receptacle through the stopper, said air-tube having a minute aperture of the 90 described diameter, whereby the admission of air to the receptacle and the liquid discharge therefrom are limited, as set forth.

In testimony whereof I affix my signature in presence of witnesses.

WILLIAM B. PITTS.

Witnesses:

V. M. HYATT,
J. M. HUNNICUTT,
B. W. PARKER.