

June 19, 1923.

1,459,642

J. TURNER, JR

LIQUID DROPPER

Filed July 24, 1922

Fig. 1

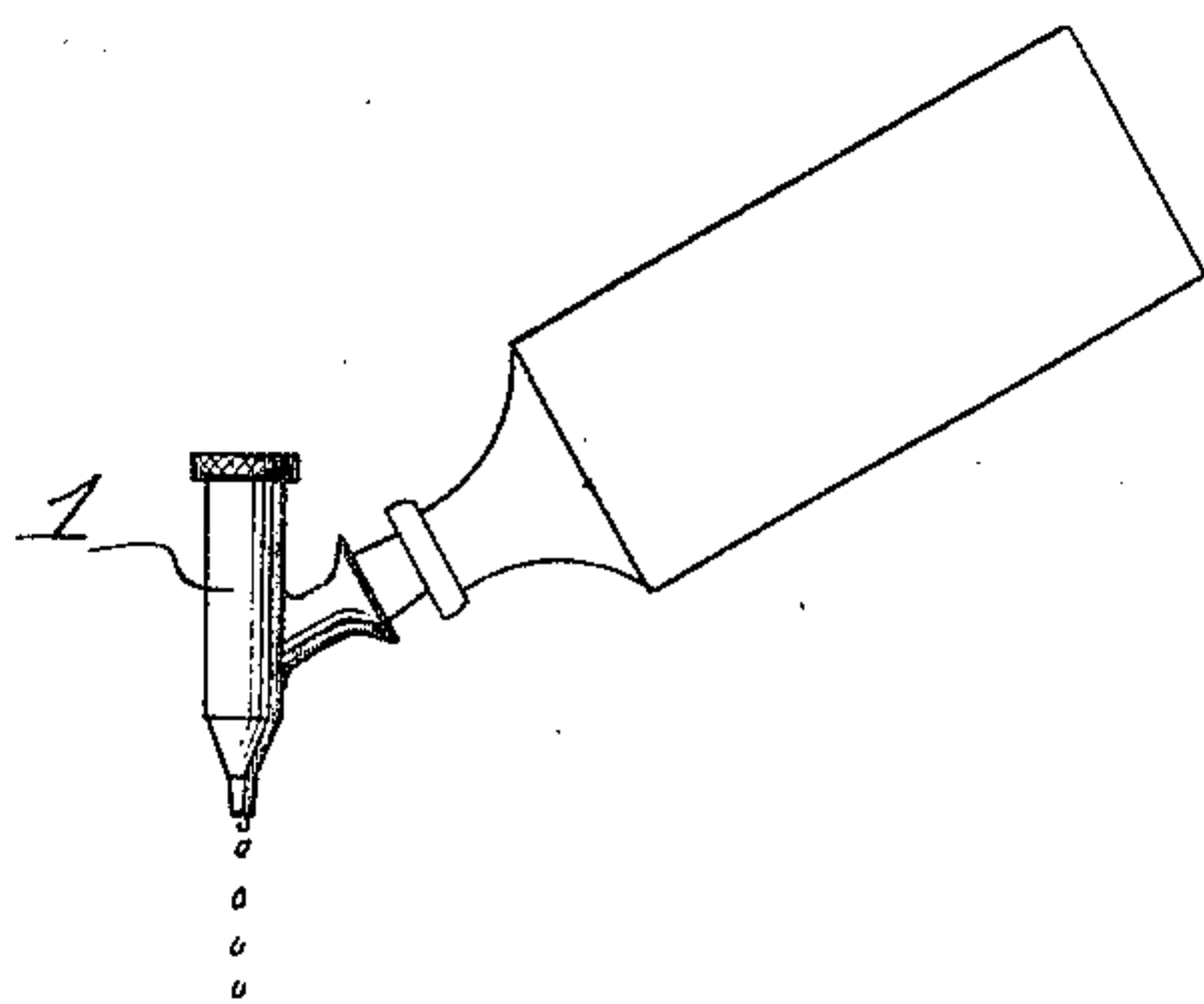


Fig. 2

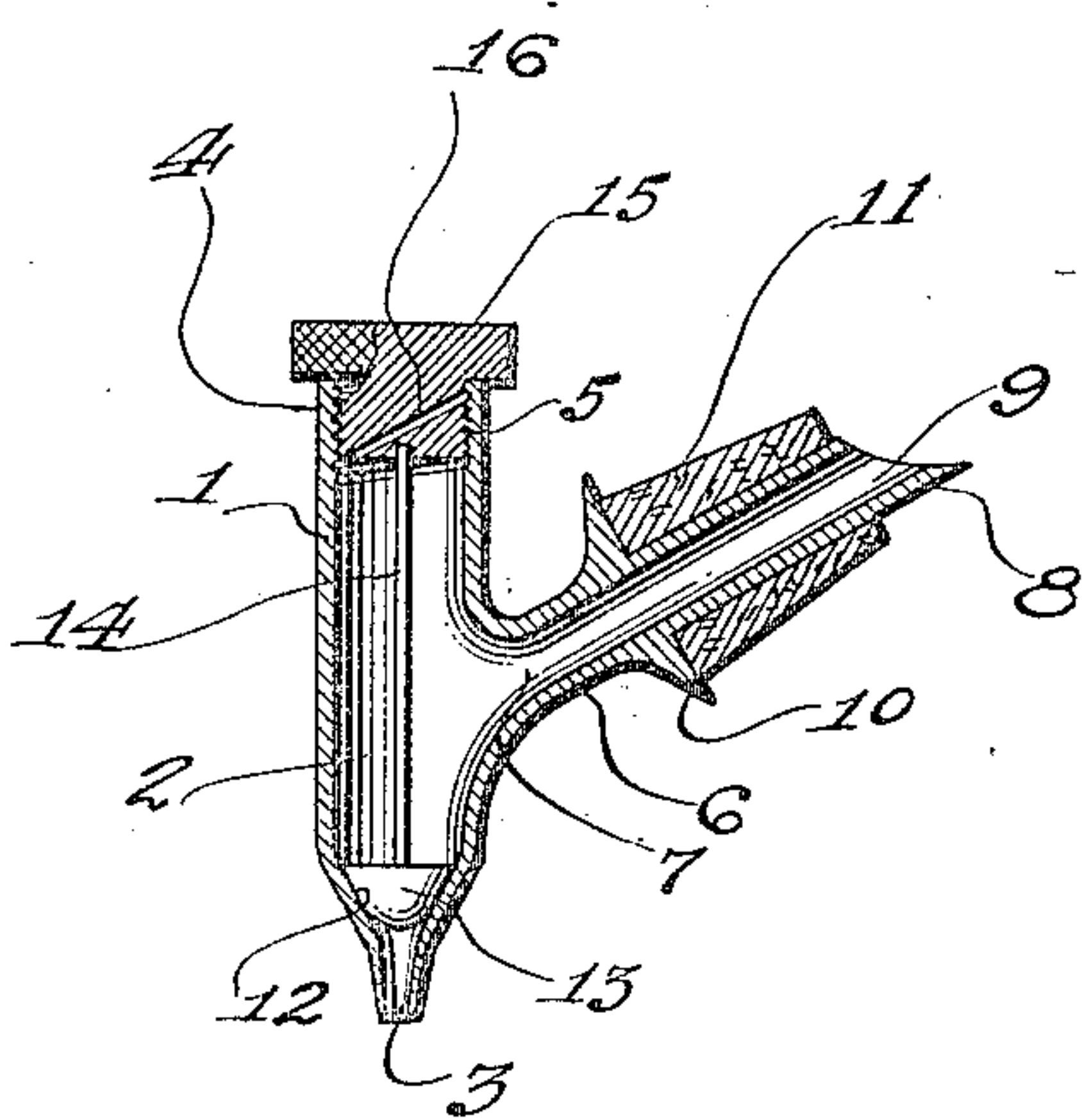
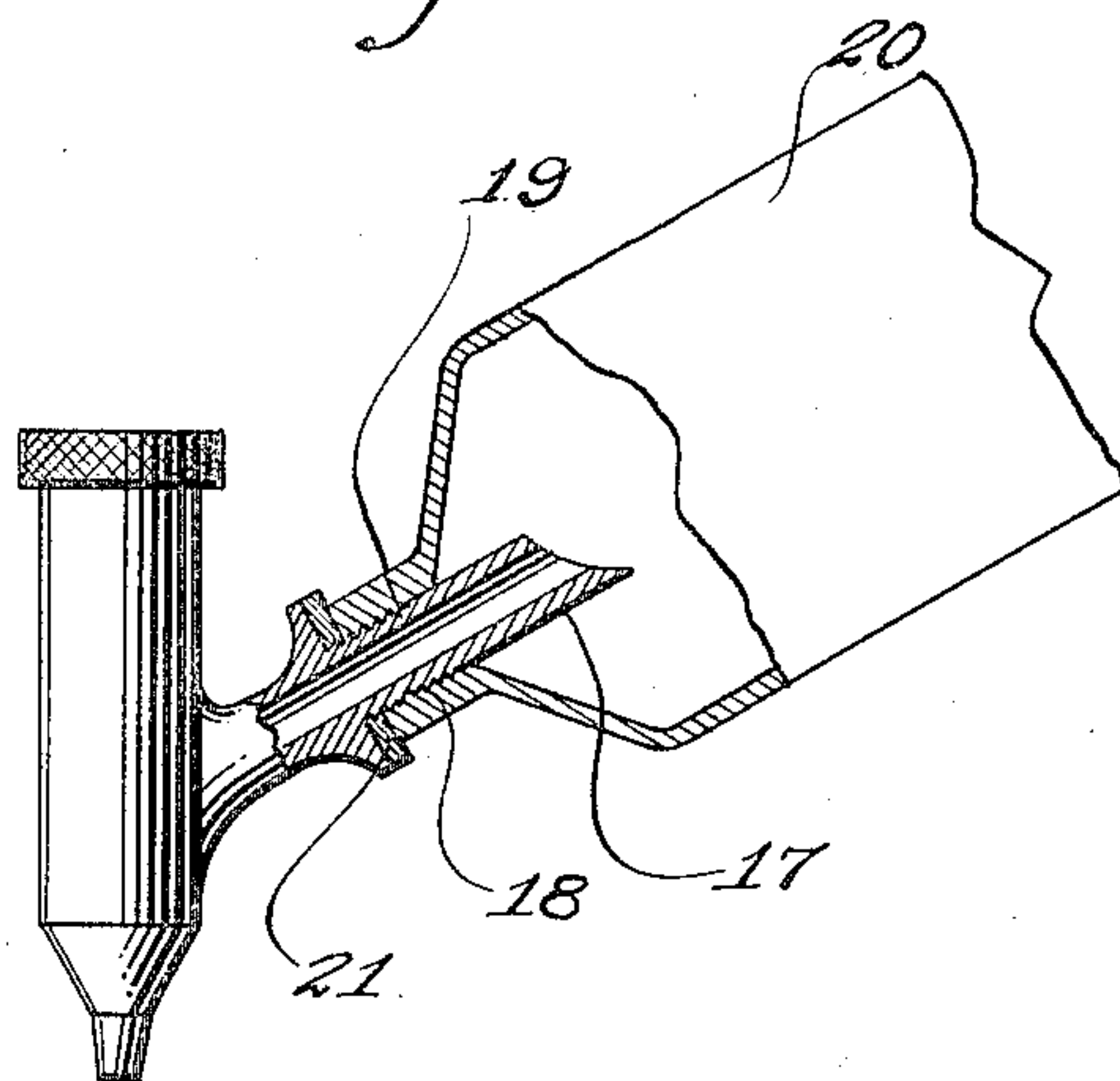


Fig. 3



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JOHN TURNER, JR., OF REXFIELD, IOWA, ASSIGNOR OF ONE-HALF TO WALTER WHITTLE, OF REXFIELD, IOWA.

LIQUID DROPPER.

Application filed July 24, 1922. Serial No. 577,089.

To all whom it may concern:

Be it known that I, JOHN TURNER, Jr., a citizen of the United States, residing at Rexfield, in the county of Monroe and State of Iowa, have invented new and useful Improvements in Liquid Droppers, of which the following is a specification.

This invention relates to a liquid dropper and has for its primary object the provision of a simple device that may be readily inserted into a bottle or other receptacle and will accurately control the dropping or flow of liquid from the receptacle.

An object of the invention is the novel manner of shaping and arranging the various parts so that in the manipulation of the cap the valve may be accurately adjusted and atmospheric pressure controlled.

A feature of the invention is the novel manner of adjusting and seating the valve and cutting off communication with the atmosphere thereby sealing the contents of the bottle.

Besides the above my invention is distinguished in the construction of a device that may be easily and permanently attached to a bottle or receptacle.

With these and other objects in view the invention will be better understood from the following detailed description taken in connection with the accompanying drawing wherein:

Fig. 1 is a side elevation of my improved liquid stopper applied to a bottle.

Fig. 2 is a vertical sectional view.

Fig. 3 is another view of the device showing another form of connection between the device and the receptacle.

Again referring to the drawing illustrating two of the many constructions of my invention the numeral 1 designates a casing shaped to form a chamber 2 and an outlet 3. It will be noted that the casing is provided with an open top portion 4 provided with interior threads 5. A neck 6 projects laterally from the casing and forms the inlet 7 communicating with the chamber. A tube 8 forms the continuation of the neck and the bore 9 thereof is arranged in direct alignment with the inlet 7. A collar 10 is provided so as to limit the movement of the hollow cork 11 on the tube. The casing is contracted adjacent the outlet 3 to form a valve seat 12 coacting with the plug type of valve 13. The stem 14 of this valve is connected

to a cap 15 screw threaded to the open top portion of the casing so as to close the same. For the purpose of providing atmospheric pressure within the casing this cap is provided with a vent 16 which is uncovered as soon as the cap is adjusted in the unseating of the valve 13. I wish it to be understood that the shape and size of the vent 16 may be regulated so as to control the flow of atmospheric pressure into the chamber thereby cooperating with the valve to control the flow of liquid.

In Fig. 3 I have dispensed with the stopper and the tube 17 is provided with threads 18 for screw threaded engagement with the neck 19 of the receptacle 20. A gasket 21 assures tight connection.

From the foregoing description taken in connection with the accompanying drawing it will be apparent that I provide a liquid dropper that is very accurate in its operation and which may be left attached to a bottle or receptacle without any possibility of the contents of the bottle becoming spoiled or evaporating.

It is, of course, to be understood that the invention may be constructed in various other manners and the parts associated in different relations and, therefore, I do not desire to be limited in any manner except as set forth in the claims hereunto appended.

Having thus described my invention what I claim is:

1. A liquid dropper comprising a casing forming a chamber and an outlet in communication with the chamber, a neck projecting laterally from the casing forming an inlet in communication with the chamber, a tube a continuation of the neck and in alignment with the inlet, a stopper fitted on said tube, a valve for the outlet, a cap screw threaded into the casing and having a connection with the valve, said cap having a vent uncovered in the adjustment of the cap.

2. A liquid dropper comprising an open top casing forming a chamber and an inlet and outlet in communication with the chamber, a valve controlling the outlet, a cap threaded to and closing the open top of the casing and operatively connected to the valve and further provided with a vent.

3. A liquid dropper comprising an open top casing forming a chamber and an inlet and outlet in communication with the cham-

ber, a valve controlling the outlet, a cap threaded to and closing the open top of the casing and operatively connected to the valve and further provided with a vent uncovered when said valve is unseated by the cap, and a hollow stopper projecting from the casing.

4. A liquid dropper comprising an open top casing forming a chamber having an outlet at one end, a transversely extending

inlet tube formed upon said casing at one side thereof, an annular abutting shoulder on said inlet tube intermediate its ends, a valve controlling the outlet, a cap threaded to and closing the open top of the casing operatively connected to the valve, said cap provided with a vent.

In testimony whereof I affix my signature.

JOHN TURNER, JR.