

No. 847,218.

PATENTED MAR. 12, 1907.

A. WILKIN.
DROP REGULATING BOTTLE.
APPLICATION FILED NOV. 6, 1906.

Fig. 1

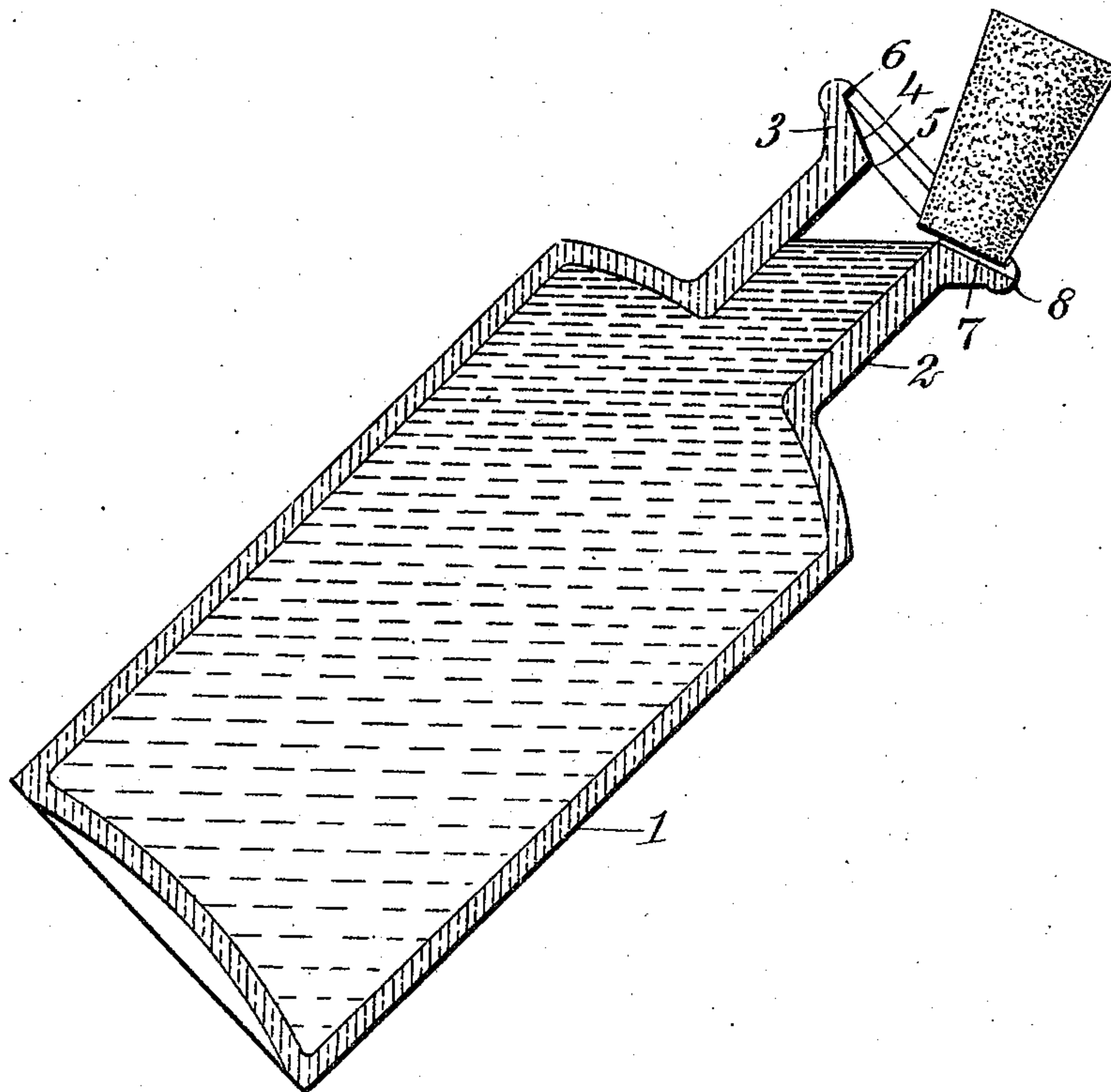
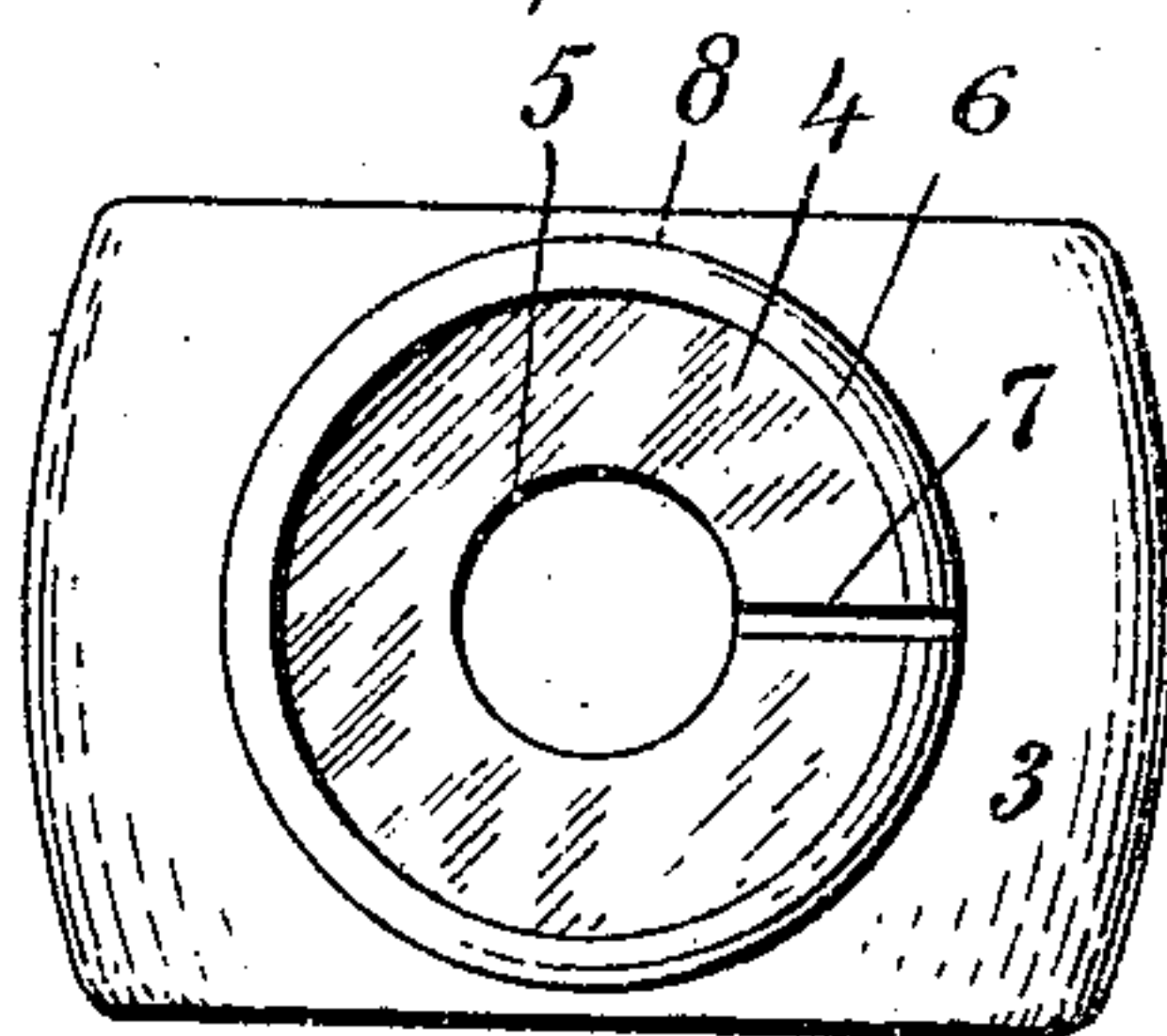


Fig. 2



WITNESSES

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ALFRED WILKIN, OF NEW YORK, N. Y.

DROP-REGULATING BOTTLE.

No. 847,218.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed November 6, 1906. Serial No. 342,200.

To all whom it may concern:

Be it known that I, ALFRED WILKIN, a citizen of the United States, and a resident of the city of New York, New Brighton, borough of Richmond, in the county of Richmond and State of New York, have invented a new and Improved Drop-Regulating Bottle, of which the following is a full, clear, and exact description.

10 This invention relates to certain improvements in bottles, and more particularly to means whereby the contents may be removed therefrom in drops of uniform size.

15 The object of the invention is to provide a simple and efficient means of the character above referred to and in which the inclination of the bottle does not affect in any way the size of the drops.

20 In the filling of prescriptions it is very important that the pharmacist or physician shall know the exact size of the drops of liquids employed and that he shall be able to withdraw any given number of drops of uniform size. It is well known that the size of a drop is chiefly dependent upon the surface tension of the liquid, but that the rate at which the drops are formed is dependent upon the size of the opening. In my improved device the size of the opening is uniform, but is so formed that when the bottle is closed the passage forming the opening is exposed throughout its entire length.

30 Reference is to be had to the accompanying drawing, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, in which—

40 Figure 1 is a longitudinal section through a bottle having my improved dropping means, and Fig. 2 is a plan view of the top thereof.

45 The bottle differs in no way from the ordinary bottle as far as the construction of the body and neck are concerned. The body 1 may be of glass or any other suitable material and the neck 2 of any suitable size or length. At the outer end of the neck 2 is an outwardly-divergent flange 3, forming a mouth, and the inner surface of this mouth is conical and at an obtuse angle to the neck of the bottle. The conical surface 4 is straight and joins the neck along a line 5. At the outer end of the conical surface is a vertical shoulder 6, having an inner surface parallel to the inner wall of the neck of the bottle. The neck and vertical flange 6 are

provided with a groove 7 of uniform width throughout its length and of a depth depending upon the nature of the liquid which it is designed to store within the bottle. This groove extends from the neck of the bottle to the outer edge of the lip 8 and constitutes the channel through which the liquid may be withdrawn.

60 In the use of my improved bottle the cork after being removed is placed against the conical surface 4 of the lip and directly over the groove 7. The outer edge of the cork rests against the vertical flange or shoulder 6 and is thus prevented from becoming accidentally displaced while the contents are being dropped from the bottle. Upon inclining the bottle the contents flow beneath the cork and through the groove 7 to the lip 8, where they form drops of uniform size. The area of the adhesion-surface being constantly the same and independent of slight differences in the inclination of the bottle, uniformity in the operation is thus secured.

75 The vertical flange 6 at the outer edge of the mouth prevents the edge of the cork from protruding beyond the edge of the lip of the bottle, and as the edge of the cork is thus held in the same position whenever the liquid is decanted there is no liability of the size of the drops varying. As the width of the conical surface 4 is less than the diameter of the cork, a portion of the cork will extend beyond the line 5, and by pressing downward on the cork a portion thereof may be compressed into the rear end of the groove, and thus serve to control the rate of flow through said groove. The inclination of the conical mouth 4 is preferably such that the top of the cork when held in the position shown in Fig. 1 will be at the proper angle in respect to the bottle-neck, whereby both the bottle and the cork may be held in one hand while the liquid is being measured out in drops, thus leaving the other hand entirely free for holding the receiving-glass or mixing or stirring the contents thereof.

95 I am aware that bottles have been formerly constructed in which there was a groove provided in the lip of the bottle; but I claim that I am the first to construct a bottle in which this groove is of uniform width throughout its length and in connection with which a vertical flange is formed, whereby the cork may be employed to close the upper side of the groove and whereby the position of the cork may be controlled, so as to prevent its interfering with the adhesion-surface

adjacent the outlet of the groove. I am also aware that bottles have been formed with apertures in the wall of the bottle-neck whereby the size of the drops may be controlled; but my improved construction is vastly superior to this in that when the cork is inserted in my improved bottle the bottle is tightly closed, and as the groove is normally open throughout its length it may be readily cleaned. Furthermore, when it is desired to pour the contents of the bottle rather than remove the contents in the form of drops the groove interferes in no way with the normal operation of the bottle, as would an aperture in the neck of the bottle. My improved construction does not in any way render the bottle more liable to breakage nor does it materially add to the expense or skill required in the construction thereof.

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

1. A bottle having a flaring mouth, said mouth being provided with a radial groove of uniform width extending entirely across.

2. A bottle having a cylindrical neck and flaring mouth, said mouth being provided with a groove of uniform width and extending from the inner surface of said neck to the outer edge of said mouth.

3. A bottle having a flaring mouth, and an

annular flange surrounding the outer edge of said mouth, said mouth and flange being provided with a radial groove.

4. A bottle, comprising a neck, a flaring mouth, and a cylindrical shoulder surrounding the outer end of said mouth, there being provided a radial groove extending from the inner surface of said neck to the outer edge of said shoulder.

5. A bottle, comprising a neck, a flaring mouth having a conical inner surface, and a vertical flange surrounding the outer edge of said mouth, said mouth and flange being provided with a radial groove of uniform width extending from the inner surface of the neck to the outer edge of the flange.

6. A bottle having a cylindrical neck, a flaring mouth provided with a conical inner surface, and a flange surrounding the outer edge of said mouth and having a cylindrical inner surface, said mouth and flange being provided with a groove of uniform width extending from the inner surface of the bottle-neck to the outer edge of the flange.

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

ALFRED WILKIN.

Witnesses:

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