

No. 650,616.

Patented May 29, 1900.

F. SALOMON.

AUTOMATIC MEASURING CORK AND RECORDING DIAL.

(Application filed Feb. 23, 1899.)

(No Model.)

Fig. 3.

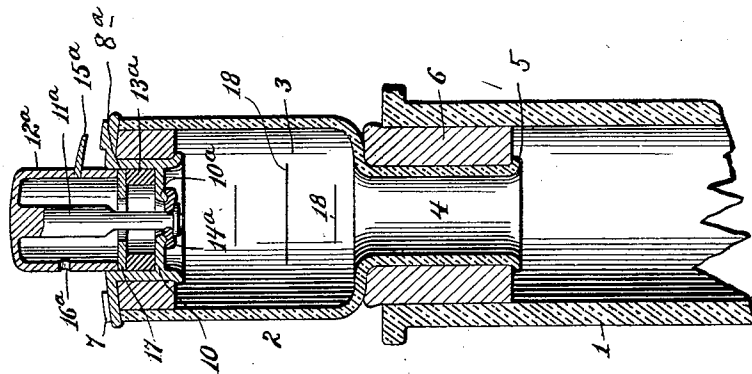


Fig. 2.

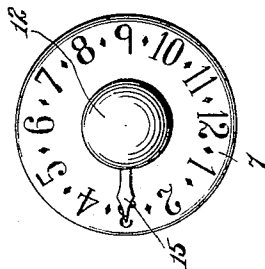
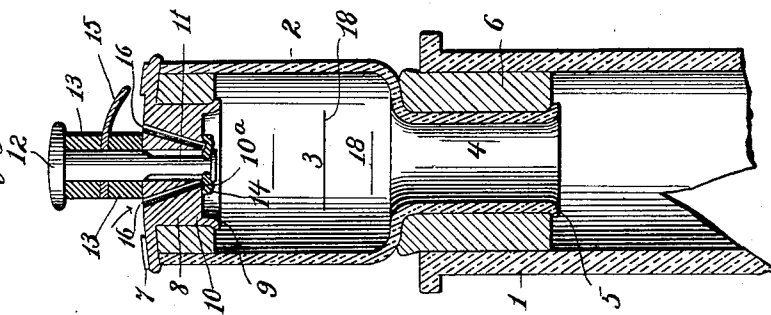


Fig. 1.



WITNESSES:

E. C. Wurdeman
H. J. Knott

INVENTOR
Ferdinand Salomon
BY
John A. Rennie
ATTORNEY.

UNITED STATES PATENT OFFICE.

FERNAND SALOMON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
GEORGE W. EVANS, TRUSTEE, OF ERIE, PENNSYLVANIA.

AUTOMATIC MEASURING-CORK AND RECORDING-DIAL.

SPECIFICATION forming part of Letters Patent No. 650,616, dated May 29, 1900.

Application filed February 23, 1899. Serial No. 706,573. (No model.)

To all whom it may concern:

Be it known that I, FERNAND SALOMON, of Philadelphia, of the county of Philadelphia and State of Pennsylvania, have invented a certain new and Improved Automatic Measuring-Cork and Recording-Dial, of which the following is a specification.

My invention relates to an improved construction of automatic measuring-cork and recording-dial designed for use in connection with bottles or other vessels containing medicines or other liquids; and one object of my invention is to provide in a simple, inexpensive, and effective manner a device of this character which when in position in the neck of the bottle will not only serve as a stopper or cork for the same, but will also accurately measure each dose of the contents thereof automatically, thus successfully guarding against the mistakes which often occur by pouring the medicines into spoons or other vessels whose sizes may vary.

A further object of my invention is to provide in connection therewith a recording-dial which may be used by the invalid or attendant to indicate the last time the dose was administered or the time at which the next dose should be taken, the said dial being so arranged as to be readily referred to at all times.

A further object of my invention is to provide means whereby the device may be used to dispense a lesser dose than its maximum capacity when so desired.

My invention further consists of the novel features of construction and arrangement of parts, all of which will be hereinafter fully described, and particularly pointed out in the appended claims.

Figure 1 represents a vertical central section taken through the neck of a bottle, showing my invention applied thereto. Fig. 2 represents a plan view thereof. Fig. 3 represents a vertical central section taken through the neck of a bottle, showing a slightly-modified form of my invention applied thereto.

Similar reference-numerals indicate corresponding parts in all figures of the drawings.

Referring to the said drawings, 1 designates the neck of a bottle, and 2 designates my improved automatic cork and recording-dial, the same being shown in position in said neck.

3 designates a reservoir or chamber having a downwardly-projecting reduced extension or neck 4, preferably made integral therewith, and having its extremity outwardly flared to form a surrounding flange 5, as clearly shown.

6 designates a collar which is fitted over the neck or extension 4 of the reservoir 3, the internal diameter of which is approximately the same as the external diameter of the neck or extension 4, so that after the collar has been forced over the flange 5 it will snugly fit the neck and be held there against displacement by said flange 5.

The collar 6 will of course be made of cork, rubber, or other analogous material capable of expansion and contraction, so that the same may be inserted in the neck of a bottle whose diameter may be somewhat less than that shown.

7 designates a cap adapted to cover upper extremity of the reservoir 3, said cap being provided with a depending annular flange 8, the lower end of which is outwardly flared to form a surrounding flange 9, and the interior of said flange 8 is provided with an annular flange 10, having a centrally-located orifice therein, the outer wall of which forms a valve-seat 10*, as clearly shown in Figs. 1 and 3.

11 designates a valve-stem which projects up through an orifice in cap 7, the same being provided at its upper extremity with an enlarged head 12, between which and the cap 7 a divided rubber cushion 13 is interposed.

The lower end of the valve-stem 11, which passes through the orifice adjacent the valve-seat, is provided with a washer 14, which through the action of the rubber cushion 13 is held normally seated upon the valve-seat 10*, and thus the air is excluded from the interior of the bottle, and its deteriorating effects upon the medicines therein contained is minimized.

The top of the cap 7 is marked so as to represent the dial of a clock, and a finger 15 is interposed between the two sections of the rubber cushion 13, the outer point of which is curved downwardly, so as to lie in close proximity to the dial-figures of the cap. The finger 15 is formed with an enlarged body having a perforation therein, so that it may be slipped upon the valve-stem, and the pres-

sure exerted upon the said finger by the abutting edges of the spring-cushion 13 will serve to retain it in any position it may be placed. Thus by moving said finger in one direction 5 or the other it will point to any of the numerals desired, and so indicate the hour at which the last dose of medicine had been administered or the time at which the next dose should be taken.

10 16 designates air-vents which communicate with the interior of the flange 8, through which air is admitted to the valve-seat 10^a and to the interior of the reservoir 3 after a downward pressure has been exerted upon 15 the head 12 to unseat the valve 14.

In Fig. 3 I have shown a slightly-modified form of my invention; but it will be observed that the reservoir, the depending neck or extension 4 thereon, and the collar 6 are precisely similar to those described with relation 20 to Fig. 1. The cap 7 in this instance, however, is provided with an annular cavity 8^a, adapted to receive therein a hollow cap or button 12^a, from which a valve-stem 11^a projects, the 25 lower end of which is provided with a washer 14^a, adapted to normally rest upon the valve-seat in a manner similar to that described with relation to Fig. 1. 13^a designates a cylindrical rubber cushion interposed between 30 the flange 10, wherein the valve-seat 10^a is formed, and a washer 17, the latter being disposed between the upper end of the cushion 13^a and the lower end of the cap or button 12^a, the effect of which is to keep said cap or button 35 elevated and the valve 14^a normally seated, as will be obvious. 16^a designates an air-vent formed in the body of the cap or button 12^a, by which air will pass into the reservoir when the said cap or button 12^a is moved 40 to unseat the valve. The finger 15^a is fastened to the cap or button 12^a, so that when the latter is turned said finger will move with it and point to the desired hour of the cap, as will be clearly understood. The fingers 15 45 15^a, respectively, will act as a stop to limit the downward movement of the valve-stem 11 and 11^a.

The operation of my invention is as follows: Assuming that the capacity of the reservoir and its depending extension or neck 50 to be one teaspoonful and it is desired that that amount be taken from the bottle, the latter will be inverted so as to allow some of its contents to fill the reservoir, after which 55 the bottle will be moved to assume a vertical position. The liquid which will then be contained in the reservoir will be held there by atmospheric pressure, so that the reservoir may be moved without fear of its contents 60 being displaced. The extremity of the neck or extension 4 may be then held over any suitable receptacle and the stem moved by pressing the head 12 so as to unseat the valve, thus allowing the air to pass through the 65 vents 16 and valve-orifice 10^a into the reservoir and permitting the contents to flow therefrom.

Instead of emptying the contents of the reservoir into a vessel, as just described, it is obvious that the lower extremity of the 70 neck or extension may be inserted into the mouth of the patient and the valve operated to discharge the contents directly from the reservoir, so as to avoid any contact of the 75 medicine with the teeth, a precaution particularly desirable where iron or other injurious ingredients are used in the medicine.

In practice it may be found desirable and even necessary to construct the reservoir 80 large enough to contain a tablespoonful and graduate the same, as shown in the drawings at 18, so as to indicate any fraction thereof.

It will be thus apparent that my invention provides in a very simple and inexpensive 85 manner a device which is particularly well adapted for the purposes intended and one which will insure automatically an equal quantity of medicine at every operation, and it is also apparent that when the device is applied to a bottle it will indicate without 90 any further evidence that the contents of the bottle are intended for internal use, thus avoiding all possibility of frequent and fatal errors in the administration of poisonous 95 medicines intended for external use being given to the patient internally.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

1. An automatic device for bottles and similar vessels, comprising a reservoir adapted 100 to the neck of the bottle and serving as a cork therefor, and said reservoir communicating with the interior of the bottle and adapted to receive a portion of the contents and wherein 105 it is held by atmospheric pressure, and a closure for said reservoir provided with an air-inlet and means for closing and opening the same.

2. An automatic device for bottles and similar vessels, comprising a reservoir adapted 110 to the neck of the bottle and serving as a cork therefor, and said reservoir communicating with the interior of the bottle and adapted to receive a portion of the contents and wherein 115 it is held by atmospheric pressure, a closure for said reservoir formed with an air-inlet which is normally closed and said closure made of a rigid non-compressible material and means for opening said inlet to allow the 120 contents of the reservoir to escape.

3. An automatic measuring device for bottles or similar vessels, comprising a reservoir, adapted to the neck of said bottle and 125 serving as a cork therefor, said reservoir communicating with the interior of the bottle and adapted to receive therein a portion of the contents thereof, and to hold the same by atmospheric pressure, a cap for said reservoir having air-vents therein, and a valve-seat 130 formed thereon, a valve for said seat, and means for keeping said valve normally closed and for controlling the admission of air into the reservoir.

4. An automatic measuring device for bottles or similar vessels, comprising a reservoir, adapted to the neck of said bottle, said reservoir being provided with an extension
 5 or neck, and adapted to receive a portion of the contents of said bottle, wherein it is held by atmospheric pressure, a collar for said extension adapted to fit the neck of the bottle and serve as a cork therefor, a cap for said
 10 reservoir having air-vents therein and a valve-seat formed thereon, a valve for said seat having a stem projecting above the cap, and means for keeping said valve normally seated and for controlling the admission of
 15 air into the reservoir.

5. An automatic measuring device for bottles or similar vessels, comprising a reservoir, adapted to the neck of said bottle and adapted to receive a portion of the contents
 20 thereof, said reservoir being provided with a reduced extension or neck having its end outwardly flared to form a flange, a collar for said extension adapted to fit the neck of the bottle and serve as a cork therefor, a cap
 25 having air-vents therein, and a valve-seat formed thereon, said cap being provided with figures to represent the dial of a clock and with an opening, a valve-stem for said opening, a valve secured to said stem, and adapted
 30 to remain normally seated, a cushion arranged upon said valve-stem whereby the valve is held on its seat and a finger upon said stem capable of rotation to indicate any desired figure or figures on said dial.

35 6. An automatic measuring device for bottles or similar vessels comprising a reser-

voir, adapted to the neck and communicating with the interior thereof, said reservoir being graduated and adapted to receive therein a
 40 portion of the contents of the bottle, wherein it is held by atmospheric pressure, a cap or closure for said reservoir having air-vents therein and figures thereon to represent the dial of a clock, means adjacent said air-vents whereby air is excluded from the interior of
 45 the reservoir and whereby also air may be introduced at will, and a finger arranged adjacent the figures on the dial of the cap and being capable of rotative movement in one direction or the other to indicate any de-
 50 sired figure or figures on the dial.

7. An automatic measuring-cork for bottles or similar vessels comprising a reservoir adapted to the neck and communicating with the interior thereof, a cap or closure for said
 55 reservoir having air-vents therein, and figures thereon to represent the dial of a clock, a valve-seat adjacent to said cap, a valve for said seat, a valve-stem connecting with said valve and having a head thereon, on a spring-
 60 cushion acting upon said valve-stem, whereby the latter is kept elevated and its attached valve normally seated, and a finger arranged adjacent said spring-cushion and being capable of rotative movement in one di-
 65 rection or the other to indicate any desired figure or figures on the dial.

FERNAND SALOMON.

Witnesses:

JOHN A. RENNIE,
 EVA PHILLIPS.