

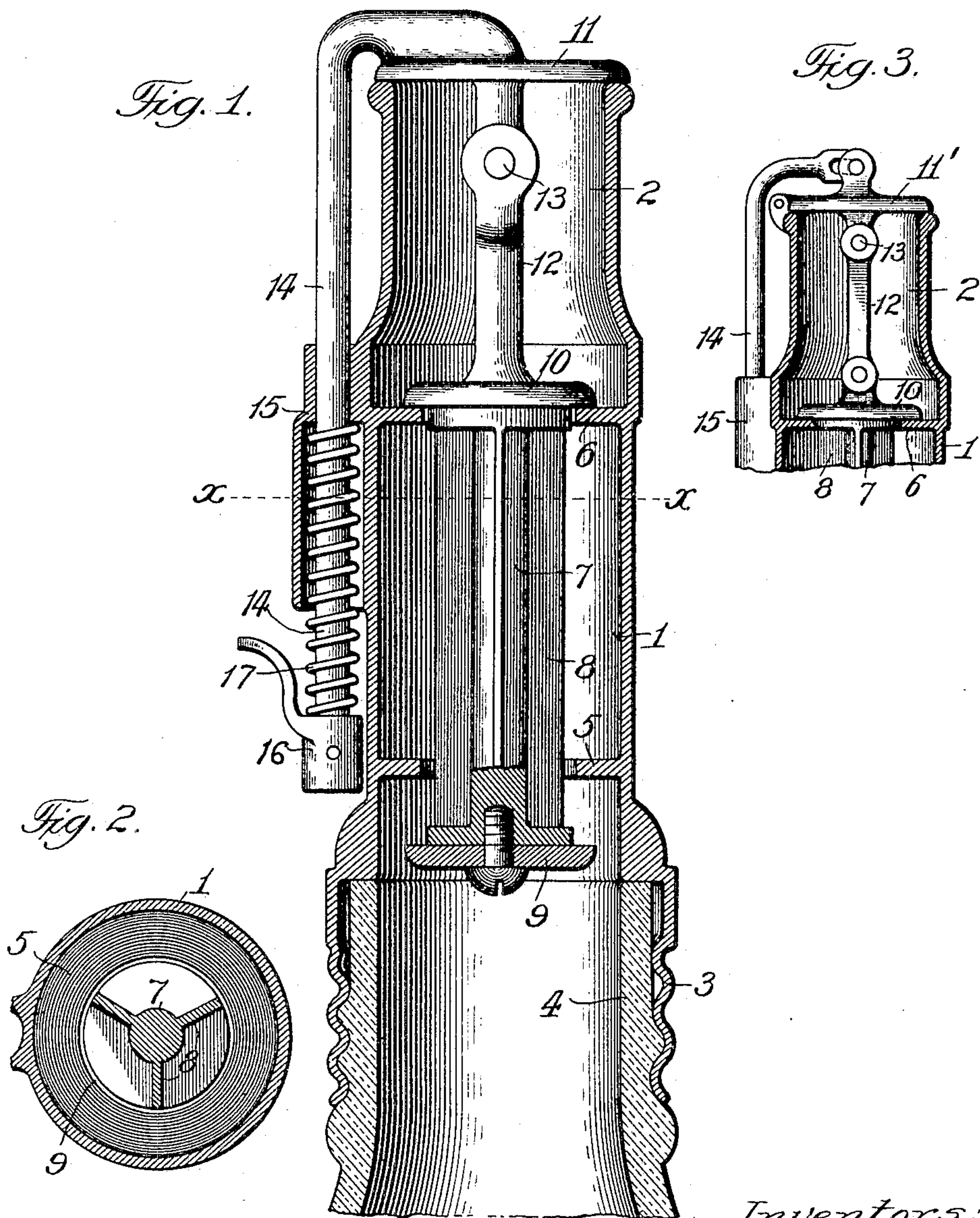
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MEASURING ATTACHMENT.

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# UNITED STATES PATENT OFFICE.

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## MEASURING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 793,154, dated June 27, 1905.

Application filed August 13, 1904. Serial No. 220,631.

*To all whom it may concern:*

Be it known that we, ELWOOD C. PHILLIPS and ANDREW G. CASTOR, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Measuring Attachments, of which the following is a specification.

The present invention relates to a measuring attachment for bottles used in dispensing syrups and the like at soda-fountains and other places, and has for its object to provide a simple, durable, and efficient structural formation of parts whereby a measured quantity of fluid is discharged at each full manipulation of the appliance in a convenient and accurate manner; all as will hereinafter more fully appear, and be more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a central sectional elevation of a measuring attachment embodying the present invention. Fig. 2 is a detail transverse section of the same at line *x x*, Fig. 1. Fig. 3 is a detail central sectional elevation of a modification.

Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 represents the cylindrical casing of the present appliance, one end of which is reduced in diameter to constitute an outlet-nozzle 2, while the other end is screw-threaded to form an attaching extension 3 for engagement with the correspondingly-formed neck 4 of a dispensing-bottle or other like vessel.

5 and 6 are transverse diaphragms arranged in separated relation within the casing aforesaid to form within the central portion of the same a measuring-chamber of the required capacity. Such diaphragms are provided with central orifices and constitute the hereinafter-described controlling-valve of the appliance.

7 is the duplex controlling-valve of the appliance arranged to move longitudinally in the casing 1 and consisting of a central connecting member 8 and valve-heads 9 and 10 at the respective ends of such central member. The valve-heads are adapted to seat upon the respective diaphragms 5 and 6, as shown, and

in the preferred construction of the present invention one of said valve-heads is detachably secured in place to permit of the assembly of the valve-posts with the casing, while the central connecting member 7 is formed with radial guide-wings, as shown, the outer edges of which are in sliding engagement with the orifices of the diaphragms to longitudinally guide the valve as it moves from one position to another in actual use.

11 is a movable cap or cover fitting the outer end of the outlet-nozzle 2 to close the opening of the same against the entrance of dust and other matters during the non-use of the appliance, and such movable cap may be a reciprocating cap 11, as illustrated in Fig. 1, or a hinged cap 11', as illustrated in Fig. 3, and in either case will have operative connection with the controlling-valve 7 to open and close in unison therewith.

12 is a connecting-stem between the valve 7 and cap 11 to impose movement in unison between the same, and it is material to the practical working of the present appliance and the proper seating of the valve-heads that said stem is of a sectional form and connected together by one or more hinge connections 13, as shown.

14 is a reciprocating rod moving longitudinally in a guide 15 at one side of the casing 1 and having operative connection with the cap or cover 11 and through the stem 12 with the controlling-valve.

16 is a thumb-piece secured to the free end of the rod 14 for the convenient forward and active movement of the same by the thumb of the operator.

17 is a spring engaging the rod 14 and adapted to return the same into its normal rearward or inactive position.

In the practical operation of the present appliance the valve-head 9 normally occupies a position away from its seat, with the measuring-chamber in communication with the interior of the bottle and so that by a tilting movement of the bottle the operator will cause said chamber to fill with the fluid to be dispensed. The operator then forces the valve-operating rod 14 forward to open the cap 11 and move the controlling-valve, so that its



valve-head 9 will be seated upon the diaphragm 5 and the valve-head 10 in a position away from its seat on the diaphragm 6, with the measuring-chamber closed from communication with the interior of the bottle and in communication with the outlet-neck. The operator by tilting the appliance to a further extent can pour the contents of the measuring-chamber into a glass or other receiver.

10 While extremely close measurements cannot be attained with the present appliance, owing to the fact that in the interval between the closing of the valve 9 and the opening of the valve 10 the liquid in the bottle has a free  
15 passage through the measuring-chamber, in practical use, however, it has been found that fairly close measurements are attained in dispensing soda-fountain syrups and the like, owing to the fact that the above-mentioned  
20 change in the position of the valves can be effected in so rapid a manner by hand that little, if any, free passage of the liquid through the measuring-chamber takes place.

Having thus fully described our invention, 25 what we claim as new, and desire to secure by Letters Patent, is—

1. In a measuring attachment for bottles, the combination of a casing provided with an outlet-nozzle at one end and with an attaching extension at the other end, a pair of orificed diaphragms arranged in separated relation in the casing to form a central measuring-chamber and constitute valve-seats, a longitudinally-arranged valve having valve-heads  
35 seating upon said diaphragms, a valve-operating rod arranged along the exterior of the casing and having connection with the valve through the outlet-nozzle of the casing, a guide on the side of the casing imposing longitudinal movement on said rod, and a spring for moving said rod in one direction, substantially as set forth.

2. In a measuring attachment for bottles, the combination of a casing provided with an outlet-nozzle at one end and with an attaching extension at the other end, a pair of orificed diaphragms arranged in separated relation in the casing to form a central measuring-chamber and constitute valve-seats, a longitudinally-arranged valve having valve-heads  
50 seating upon said diaphragms, a valve-operating rod arranged along the exterior of the casing and having connection in a pivotal manner with the valve through the outlet-nozzle of the casing, a guide on the side of the casing imposing longitudinal movement on said rod, and a spring for moving said rod in one direction, substantially as set forth.

3. In a measuring attachment for bottles, the combination of a casing provided with an outlet-nozzle at one end and with an attaching extension at the other end, a pair of orificed diaphragms arranged in separated relation in the casing to form a central measuring-chamber and constitute valve-seats, a longitudinally-arranged valve having valve-heads  
65 seating upon said diaphragms, a cap closing the outlet-opening of the nozzle, a valve arranged longitudinally in the casing and having valve-heads seating upon said diaphragms  
70 and operatively connected to the cap as aforesaid by a connecting-stem, an operating-rod connected to said cap and arranged at one side of the casing, a guide on said casing for said rod, and a spring for moving said rod in one direction, substantially as set forth.

In testimony whereof witness our hands this 2d day of August, 1904.

ELWOOD C. PHILLIPS.  
ANDREW G. CASTOR.

In presence of—

ROBERT BURNS,  
M. H. HOLMES.