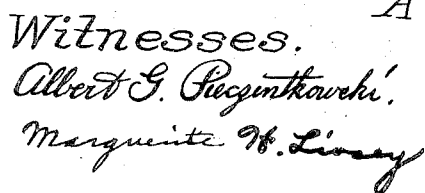


ATOMIZER.
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Inventor.
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ATOMIZER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE J. KELLEY, a citizen of the United States, residing at Attleboro, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Atomizers, of which the following is a specification.

My invention relates to atomizers and has for its essential objects the provision of means in a single receptacle for discharging contents of different characters in such a manner as to dispense with the necessity of transferring the nozzle head to the necks of several individual bottles containing the several liquids intended to be dispensed.

A further object of my invention is to effect the desired end by means of a structure which shall be easy to operate and inexpensive to construct.

To the above enumerated ends essentially my invention consists in combining with a receptacle and its closure a horizontal rotatable valve member, by whose actuation the discharge from the several compartments can be controlled.

In the accompanying drawings which form a part of this specification: Figure 1 is a side elevation of my new atomizer, Fig. 2, a longitudinal central section of the same, Figs. 3, 4, 5 and 6, sections of the same on lines *w w*, *x x*, *y y* and *z z*, of Fig. 2 respectively, and Fig. 7, a plan view of my atomizer.

Like reference characters indicate like parts throughout the views.

My invention is shown in conjunction with a cylindrical receptacle A, which may be of any preferred desired shape in cross section, divided into compartments *a* by converging partitions *a'*. In the present instance the receptacle A is provided upon its upper exterior margin with a plurality of screw threads *a²* to engage the threads *b* of a depending flange *b'* upon a flat body *b²* which constitutes a retaining ring B for the base *c* of a cap or cover C whose head *c'* is in the present instance provided with an opening *c²*, which opening may if desired be dispensed with. The base *c* of the cap C rests upon the tops of the partitions or walls *a'* and beneath the portion *b²* of the retaining ring B; and the cap is therefore tightly clamped to the top of the receptacle A and forms practically a part of the receptacle. A block D is either integral with the portion *c'* of the cap C or is rigidly attached

thereto by screws *d* passing through threaded perforations *d'* in the margin of a base portion *d²* of the block, and also perforated cavities *d³* in the top *c'* of the cap. The base of the block D is provided with a circular recess *e* and with an arcuate slot *e'* leading therefrom to the exterior of the side of the base *d²*, and rotatably mounted in this recess is a flat circular disk F provided with a flat projection *f* extending loosely through the slot *e'*, the outer end of the arm *f* forming a projecting portion exterior of the base to serve as a finger piece to vibrate or rotate the disk F in its seat or recess *e* in the block. The disk F is provided with three openings *g* arranged in a circle concentric with the center of the disk and with three annularly arranged cavities *g'* in its upper face.

In the top *c'* of the cap C are three openings *h* in which are frictionally or otherwise held the upper ends of three pipes or tubes *i* which extend into the three compartments *a* of the receptacle, and the upper ends of these tubes are annularly arranged concentrically with the cap in such a manner as to equal in radial distance the openings *g* of the disk F so as to coincide therewith. The ends of the tubes *i* however are interspaced from each other at distances differing somewhat from the distance between the openings *g* of the disk, so that in the present instance only one of the openings *g* will register with one of the pipes *i* at any given time. In order to temporarily hold the disk F in any one of its three registering positions a checking mechanism is employed which may be of any preferred desired construction. In the present instance this is attained by a spring pin J slidably mounted in a recess *j* in the block D in which orifice is a spring *j²* pressing against the pin J, and forcing a conical end *j³* of the pin against the disk F and into one of the cavities *g'*.

The block D is provided with three downwardly inclined passages *k* opening into the recess *e* in the base of the block and converging at the inner end of a tube L fixed by friction or otherwise in the side of the block. The discharge tube L is held at one end in the block inclosed in the present instance by the usual air tube M fixed in a recess *m* in the side of a block D. In the diametrically opposite portion of the block is a recess *n* in which is fixed by friction or otherwise a knob *n'* or retaining flexible tube N upon

whose outer end is attached the bulb O. The nozzle portion of the tubes L and M may be of any preferred or desired construction, and in the present instance the tube M has a closed outer end provided with a small opening *o* concentric with the mouth of the discharge tube L. It will be understood that the ends of the passages *k* at the upper surface of the disk F are circularly arranged and located permanently in vertical alignment with the tops of the three pipes *i*, so that the passages *k* as regards registration with the disk F correspond with the disk nozzle as do the pipes *i*. That is to say when one of the openings *g* of the disk registers with one of the pipes *i*, it also registers with one of the passages *k*.

The block D may be mounted upon the receptacle in any desired manner so long as it is rigid with relation to the same, it only being essential that the disk F be made rotatable therein. If desired there may be integral with the disk a pin P registering loosely in the opening *c*² to center the disk in its rotation, but this may be omitted and in actual use is usually dispensed with.

The operation of my device has been quite amply described in connection with the discussion of the construction and will not be further detailed.

It will be understood that a number of openings in the disk and the number of pipes *i* and the number of passages *k* leading to the discharge tube may be varied to suit the number of compartments *a* which the particular structure may call for without departing from the spirit of the invention. Furthermore if desired the arrangement of the described passages and openings may be so varied as to allow a contemporaneous passage of liquid from more than one compartment *a* without departing from the spirit of my invention. The device will be operative if a single opening only is present in the disk.

What I claim is:—

1. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block fixed to the cap, a discharge tube in the block, said block being provided with passages opening into the tube, and a disk rotatably mounted between the cap and the block provided with openings adapted to successively register with the passages and pipes.

2. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block fixed to the cap, a discharge tube in the block, said block being provided with passages opening into the tube and in alignment at their lower ends with the pipes, and

a disk rotatably mounted between the cap and the block provided with openings arranged to selectively register with a part of the passages and pipes.

3. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block upon the cap, a discharge tube in the block, said block being provided with passages opening into the tube and above the several pipes, a flat disk rotatably mounted between the cap and the block and provided with an opening adapted to register simultaneously with only one pipe and one passage.

4. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block fixed to the cap and provided with a cavity and with a recess extending into the cavity, and provided with passages opening into the cavity, a discharge tube in the block communicating with the passages, a disk rotatably mounted in the cavity and provided with openings corresponding in number with the number of pipes and so arranged with relation to the pipes that less than the whole number of openings simultaneously registers with the pipes, and a projection upon the disk extending through a slot in the base of the block.

5. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block upon the cap provided with a cavity and with a recess extending into the cavity, and provided with passages opening into the cavity and in alignment with the pipes, a discharge tube in the block communicating with the passages, a disk rotatably mounted in the cavity and provided with openings located at the same radial distance from the block of the disk as are the pipes, but interspaced from each other at distances other than the distances between the pipes, and a projection upon the disk extending through a slot in the base of the block.

6. In an atomizer, the combination of a receptacle provided with a plurality of compartments, a cap upon the receptacle, pipes in the cap extending into the compartments, a block upon the cap provided with a cavity and with a recess extending into the cavity, and provided with passages opening into the cavity in alignment with the pipes, a discharge tube in the block communicating with the passages, a disk rotatably mounted in the cavity and provided with openings located at the same radial distance from the center of the disk as are the pipes, but interspaced from each other at distances other than the distances between the pipes, and

provided with a series of cavities corresponding in number with the pipes, and yielding means in the block adapted to successively enter the cavities when the disk is
5 moved to register with the several pipes, and a projection upon the disk extending through a slot in the base of the block.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE J. KELLEY.

Witnesses:

HORATIO E. BELLOWS,
FRED W. PERKINS.