H. DOWNES.
Vent-Faucets for Bottles.

No. 196,437. Patented Oct. 23, 1877.

Fig. 1.

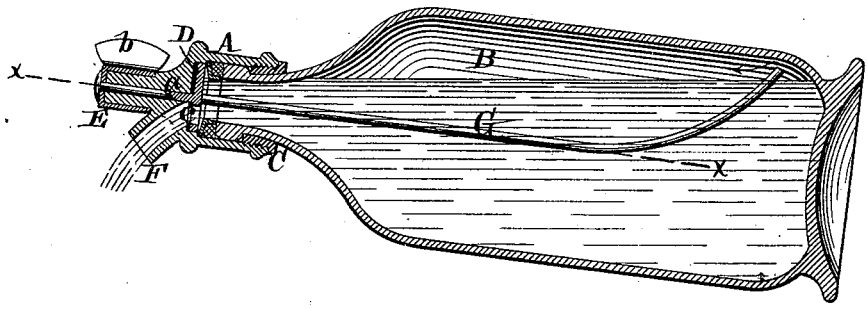


Fig. 2.

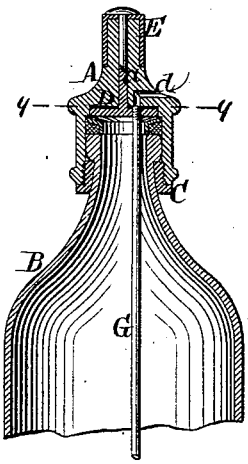


Fig. 3.

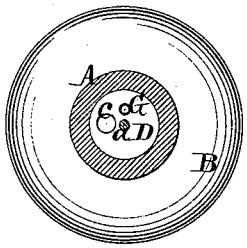
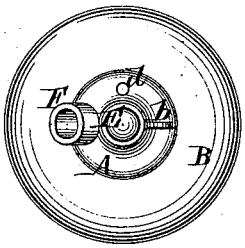


Fig. 4.



Witnesses.
Otto Lufeland
Chas. Wahlers.

Inventor.
Henry Downes
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UNITED STATES PATENT OFFICE.

HENRY DOWNES, OF NEW YORK, N. Y.

IMPROVEMENT IN VENT-FAUCETS FOR BOTTLES.

Specification forming part of Letters Patent No. **196,437**, dated October 23, 1877; application filed May 31, 1877.

To all whom it may concern:

Be it known that I, HENRY DOWNES, of the city, county, and State of New York, have invented a new and useful Improvement in Vent-Faucets for Bottles, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a longitudinal section of a faucet containing my improvement, and applied to a bottle. Fig. 2 is a similar section thereof in the plane of the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same in the plane of the line *y y*, Fig. 2. Fig. 4 is a plan or top view thereof.

Similar letters indicate corresponding parts.

My improvement relates to vent-faucets, especially for bottles for containing effervescent liquids; and consists in a hollow cap which is adapted to be secured to the mouth of a bottle, and provided with a spout and vent-hole, in combination with a valve, in form of a plate, which is arranged within the cap under such spout and vent-hole, and secured to a stem passing through the cap, by which latter the valve-plate can be turned in either direction, the valve-plate being, moreover, provided with a discharge-hole, and carrying a vent-tube, which is secured at one end to the plate, opposite to or in a hole formed in the latter, while its other end is arranged to project into the bottle, to which the hole is applied in such a manner that, when the valve-plate is turned to such a position that its discharge-hole communicates with the spout of the hollow cap, the vent-tube is caused to communicate with the vent-hole of the cap, and thus the contents of the bottle are allowed to escape, while, at the same time, if the bottle is tilted so as to bring the inner end of the vent-tube above the level of the liquid in the bottle, the vent-tube allows of the escape of any superfluous gas from the bottle, or of the admission of air thereto, as the case may be, and thus the liquid is caused to discharge with a steady flow.

In the drawing, the letter A designates a hollow cap, which is fitted over the mouth of a bottle, B, and provided with an internal screw-thread, by which it is screwed to a divided collar, C, placed on the neck of the bottle.

The upper and interior surface of the cap A is made flat, and against such surface is placed a plate, D, which is of circular shape, and is formed on or secured to the lower end of a stem, *a*, the upper end of which is secured to a thimble, E, provided with a finger-piece, *b*, so that the stem *a* and the valve-plate D can be conveniently turned in either direction by turning the thimble E accordingly.

The cap A has a spout F, and in the plate D is formed a hole, *c*, which is so located that by turning this plate the hole *c* can be brought in communication with the spout F, so as to permit of discharging the contents of the bottle.

The head A also has a vent-hole, *d*, and the plate D carries a vent-tube, G, which is soldered or otherwise secured thereto, opposite to or in a suitable opening formed in said plate, and at such a part thereof that, when the plate D is turned so as to bring the discharge-hole *c* in communication with the spout F, as before stated, the vent-tube G is brought in communication with the vent-hole *d*; or, in other words, the vent-tube G is made to communicate with the vent-hole *d* at the same time that the valve-hole *c* is brought under the spout F. The vent-tube G projects into the bottle, and is bent, near its lower end, in an opposite direction to the spout F, so that, if the bottle is tilted during the time the liquid is discharged therefrom, the inner end of the vent-tube G is brought above the level of the liquid in the bottle, as shown in Fig. 1, and thus any gas which is not bound up in the liquid is allowed to escape by said vent-tube and the vent-hole in the cap; or, if the pressure in the bottle is low, atmospheric air is admitted thereto by the same means, and consequently any unevenness in the flow of the liquid is obviated.

What I claim as new, and desire to secure by Letters Patent, is—

The hollow cap A, having the spout F and

vent-opening *d*, in combination with the turning-valve D, having the opening *c*, and the vent-tube G, attached to and moving with the valve, substantially as described, whereby, when the valve is turned to register its opening *c* with the spout, the vent-tube will also be caused to register with the vent-opening, as and for the object set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 28th day of May, 1877.

HENRY DOWNES. [L. S.]

Witnesses:
W. HAUFF,
CHAS. WAHLERS.