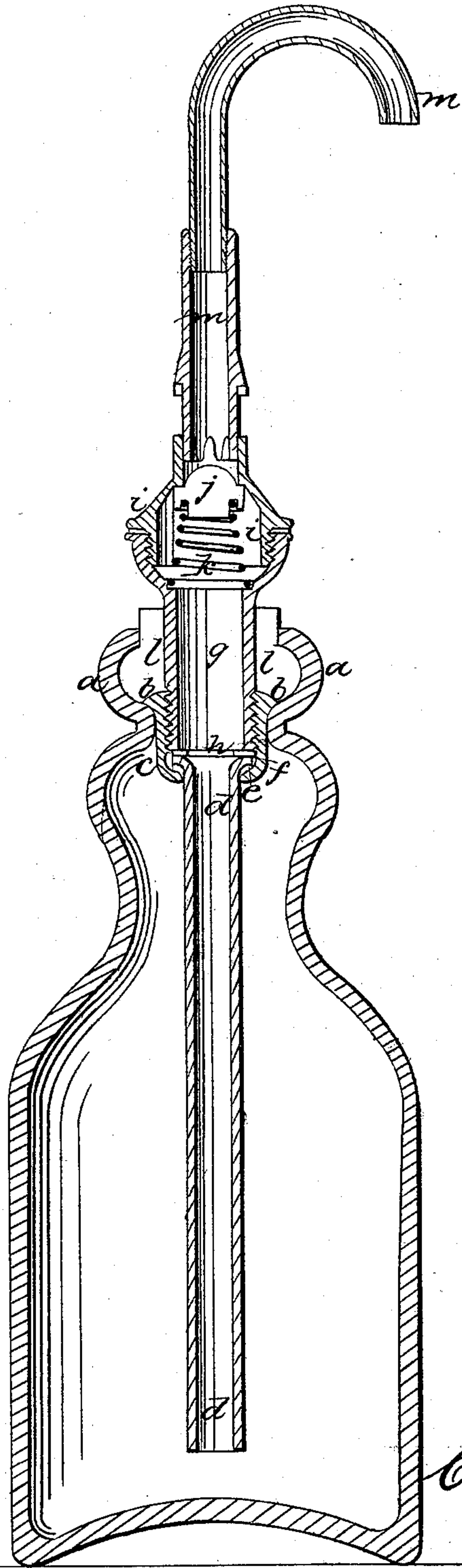


C. J. Converse.

Siphon Bottle.

N^o 88,610.

Patented Apr. 6, 1869.



Witnesses,

*Francis Gould
F. B. Kidder.*

Inventor,

Charles J. Converse

United States Patent Office.

CHARLES J. CONVERSE, OF BOSTON, ASSIGNOR TO HIMSELF AND
JAMES W. TUFTS, OF MEDFORD, MASSACHUSETTS.

Letters Patent No. 88,610, dated April 6, 1869.

IMPROVEMENT IN SIPHON-BOTTLE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHARLES J. CONVERSE, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful improvements in the detail of construction and arrangement of bottles designed to contain liquids under gaseous pressure and to discharge the same upon the opening of a valve in the manner of a fountain.

These peculiarities are shown in the drawing, which represents, in vertical central section, a bottle embodying my improvements.

In this class of fountain-bottles, a tube, open at both ends, is employed, which extends from the neck of the bottle where the tube is confined, by having the flange on its upper end pinched between suitable devices inserted in the neck of the bottle, the lower end of the tube extending nearly to the bottom of the bottle, so that the compressed gas, which occupies the upper part of the bottle, will, when permitted to expand, force nearly all of the liquid out from the bottle through the tube.

Now, my invention relates to specific means, and to their arrangement and combination, for confining this tube and for closing the neck of the bottle, and it also relates to the valvular arrangement and the means for operating it, and for directing the escaping liquid current.

The end of the bottle-neck is made as a concave ring, as seen at *a*, the lower part of which has a less internal diameter, or opening, than the upper part, so that the flange *b* of the metallic cup *c* may pass through the mouth of the bottle-neck and rest on the contraction below.

The bottom of the cup *c* is pierced with an aperture large enough to admit the body of tube *d*, which is preferably of glass, said tube having a soft packing-rim, *e*, located between its flange, *f*, and the metal of the cup.

Nut-threads are made in the upper part of the cup, into which the end of piece *g* is screwed, down upon a washer, *h*, of soft material placed over the flange of the glass tube, so as to hold the tube firmly to the cup *c*, which cup is firmly held in place by the rubber washer or ring *l*, which is made of such shape as to

fit in the space in the neck of the bottle above the cup, into which space it is crowded before the piece *g* is screwed into the cup *c*, and against the washer *h*.

The top of the piece *g* has a cap, *i*, screwed into it, said cap having its outlet controlled by a valve, *j*, preferably made of rubber, of the form shown, which valve is kept against its seat by the spring *k*, securely from accidental displacement and from falling, said spring being seated, as shown on the piece *g*.

The matter so far described completes the closing of the bottle, so that there can be no leakage and no escape of its contents until the valve is forcibly pressed away from its seat; and it will be seen that the pressure within the bottle will keep the valve constantly forced toward its seat.

The washers or packing-rings *e* and *h*, and the rubber packing-ring *l*, effectually prevent all leakage about the bottle-neck and the parts inserted therein under all the contingencies of transportation and handling.

To depress the valve *j*, to cause a flow from the bottle of its contents, and to give such a direction to the escaping current that it may be caught in a vessel held or placed at the side of the bottle, I make use of the curved tube *m*, the lower end of which fits in the orifice of the cap *i*, so that it can be moved freely up and down therein, said end of the tube being notched where it comes into contact with the valve to allow free passage from the bottle.

1. I claim, in combination with a bottle, having its neck formed substantially as shown, the elastic ring *l* of corresponding formation, the flanged nut-threaded cup *c*, the screw-threaded piece *g*, and the tube *d*.

2. Also, in combination with a valve-chamber, made in two parts, *g* and *i*, a valve supported by a spring resting on one part and forcing the valve against its seat, made in the other part, substantially as described.

3. Also, the tube *m*, curved at one end and notched at the other, so as to act upon the valve and direct the escaping current, substantially as described.

CHARLES J. CONVERSE.

Witnesses:

FRANCIS GOULD,
S. B. KIDDER.