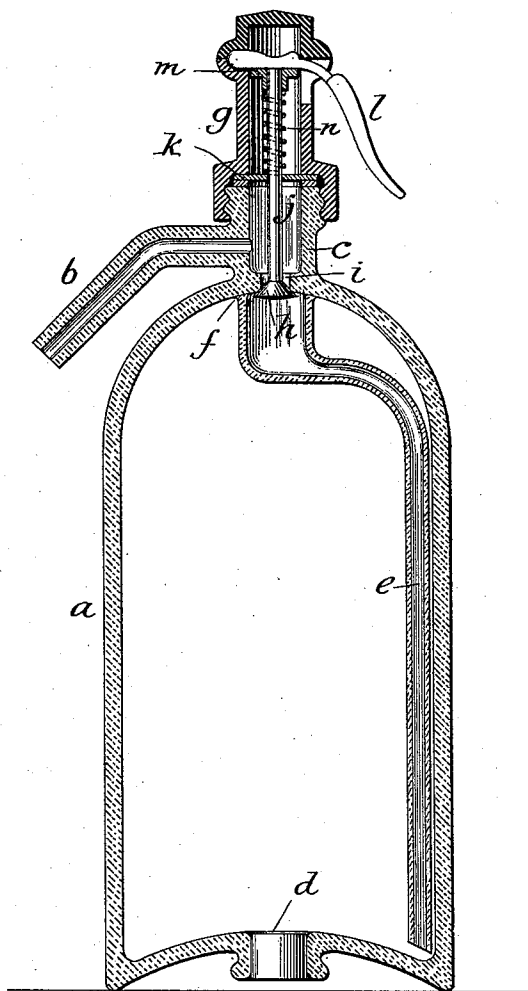


(No Model.)

J. K. WELCH & G. BROWNEN.
SIPHON BOTTLE.

No. 469,878.

Patented Mar. 1, 1892.



Witnesses

Sidney P. Hollingsworth
Baltus DeLong

by

Inventors
James K. Welch
George Brownen
Baldwin Davidson *Night*
Attorneys

UNITED STATES PATENT OFFICE.

JAMES KEMP WELCH AND GEORGE BROWNEN, OF LONDON, ENGLAND.

SIPHON-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 469,878, dated March 1, 1892.

Application filed March 25, 1890. Serial No. 345,282. (No model.) Patented in England March 26, 1889, No. 5,192; in France May 13, 1889, No. 198,165, and in Belgium May 13, 1889, No. 86,225.

To all whom it may concern:

Be it known that we, JAMES KEMP WELCH, of Park Stone, Weybridge, and GEORGE BROWNEN, of Althorp Road, Upper Tooting, both in the county of Surrey, England, and both subjects of the Queen of Great Britain, have invented new and useful Improvements in Siphon-Bottles, (for which we have obtained Letters Patent in Great Britain, No. 5,192, dated March 26, 1889; in France, No. 198,165, dated May 13, 1889, and in Belgium, No. 86,225, dated May 13, 1889,) of which the following is a specification.

The object of our invention is to construct siphon-bottles in such a manner that they may be readily filled, cleaned, and refilled, and may deliver their contents through passages the walls of which consist of vitreous material, and which permit the delivery of the fluid without contamination.

According to our invention we provide a siphon-bottle with a supplemental filling-orifice and with a delivery-spout formed of vitreous material integrally with the neck of the bottle. The spout connects with a delivery-pipe of non-metallic or vitreous material extending to near the bottom of the bottle, and a non-metallic valve is interposed between the delivery-spout and the delivery-pipe.

Among the advantages of the construction above set forth are the following: The spout may be formed or molded during the process of forming the bottle, and in use it contains a passage for the liquid, through which it can flow without any danger whatever of contamination. Where the spout is formed integrally with the neck of the bottle, as in our invention, there is no danger of small particles chipping off, as there would be if the spout were made of metal or other material and simply lined with vitreous material. We provide a passage from the lower end of the delivery-pipe to the outer end of the spout, which is entirely non-metallic, and the liquid is in no way contaminated. Usually siphon-bottles are filled through the spout without removing the cap; but where a glass spout is used, as in our invention, there would be danger of breaking the spout while filling, and so we employ a supplemental filling-orifice,

through which the liquid may be supplied while air escapes from the spout, and there is not that danger of breaking the spout that there would be if the supplemental orifice were not employed.

The accompanying drawing represents a vertical central section through a siphon-bottle embodying our invention.

a is the body or bottle proper of non-metallic or vitreous material.

b is a delivery-spout formed integrally with the neck *c* of the bottle.

d is a filling-orifice.

e is a delivery-tube of non-metallic or vitreous material, which may be blown in or fused at *f* to the bottle near its neck. As shown, it is bent to one side, so as to be out of the way when the bottle is being cleaned.

g is a cap, of suitable material, secured to the neck of the bottle above the spout *b*.

h is a valve of non-metallic or vitreous material, which opens and closes the orifice *i* between the delivery-tube *e* and the inner end of the spout *b*. The valve-stem *j* extends up through a washer *k*, and the upper end of the stem bears against the inner end of a lever *l*. A nut or button *m* is secured to the upper end of the stem, and between this nut or button and the washer is interposed a spring *n*, which normally draws the valve upwardly to seat it. The manner of operating the valve is obvious.

As will be seen, there are very few joints in our siphon-bottle, and there is no danger of the liquid leaking between joints and coming in contact with metal or other material which would contaminate it. The neck of the bottle and the spout being formed integrally there is not that danger of breakage or chipping that there would be if the parts were simply lined with vitreous material, and the bottle may be constantly used without repair and without danger.

One of the ways in which the siphon-vessel shown by the drawing may be put together is the following: A glass bottle is made in the ordinary way and formed with the delivery-spout. The bottle is divided by producing a circular crack immediately below the neck. The neck-piece is ground to seat the valve.

The valve is put into its place. The delivery-tube *e* is fused on. The two parts of the bottle are again put together, (they naturally fit accurately,) and the crack is mended at the
5 blow-pipe.

We claim as our invention—

1. A siphon-bottle of non-metallic or vitreous material with a neck formed integrally with a delivery-spout, in combination with a
10 non-metallic delivery-tube, and a valve of non-metallic or vitreous material for opening and closing communication between the delivery-tube and the delivery-spout.

2. A siphon-bottle of non-metallic or vitreous material with a neck formed integrally
15 with a delivery-spout and having a filling-ori-

fice separate and distinct from the spout, in combination with a non-metallic delivery-tube blown into or fused to the bottle at its neck, and a valve of non-metallic or vitreous material for opening and closing communication
20 between the delivery-tube and the delivery-spout.

JAMES KEMP WELCH.
GEORGE BROWNEN.

Witnesses:

WILMER M. HARRIS,
Notary Public, 17 Gracechurch Street, London.

T. F. BARNES,
Of Same Place, His Clerk.